SDMS US EPA REGION V -1

SOME IMAGES WITHIN THIS DOCUMENT MAY BE ILLEGIBLE DUE TO BAD SOURCE DOCUMENTS.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

153706

August 9, 1991

Mr. Joe Grana
Cerro Copper Products
Route 3 and A & S Tracks
Sauget, IL 62201

Dear Mr. Grana:

Please find enclosed the analytical report for the samples submitted to Weston/Gulf Coast laboratories for analyses. They were identified with RFW Batch # 9106G820.

The TCLP results have been bias corrected as specified in the June 29, 1990 Federal Register. The bias correcting procedure requires analyzing each sample twice, once as extracted and once with the extract spiked with all TCLP compounds. The percent recovery of the spike sample is then used as the correction factor for the original sample extracts concentration. Analyses which are already above the hazardous limit are not bias corrected.

Note: the bias correction calculations are performed after the generation of the raw data. Therefore, the final reported result may not match the raw concentration in the instrument data.

If you have any questions, please contact Sheryl Johnson or Kate Caldwell at our laboratories.

Sincerely,

WESTON/GULF COAST LABORATORIES

Michael J. Healy

Michael J. Healy
Laboratory Manager

kac

Enclosures

C07992

WESTON

DATA QUALIFIERS

B - Indicates the compound was found in the blank and the sample.

E - Concentrations exceed calibration range of the instrument.

I - Indicates Interference.

J - Indicates an estimated value for either a TIC or an analyte that meets the identification criteria but the result is less than the specified detection limit.

T - Indicates the compound was found in the TCLP extraction blank and the sample.

u - Indicates an inorganic compound was analyzed for but not detected.

U - Indicates an organic compound was analyzed for but not detected.

BS - Indicates matrix analyses were conducted on reagent grade water.

BSD - Blank Spike Duplicate

BDL - Below Detection Limit

D - Indicates that surrogate/matrix spike recoveries were not obtained because the extract had to be diluted for analysis.

DL - Indicates a secondary dilution

DF - Dilution factor

LCS - Laboratory Control Sample

MB - Method Blank

MS - Matrix Spike

MSD - Matrix Spike Duplicate

NA - Not Applicable

X - Result is by calculation

NOTES:

Solid, sediment and sludge results are reported on a dry weight basis except when analyzed for Landfill disposal parameters (such as incineration or Illinois Green Sheet parameters). All other mg/kg results are reported on an "as received" basis.

Reporting limits are detection limits adjusted for sample size used, dilutions made, and in the case of dry weight results, the moisture content of the sample.

Revised 04/05/91

PO: 1093

CHAIN OF CUSTODY - SOLID WASTE
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

SAMPLE NAME: Truckload Discharge #2 SAMPLE I.D. #: _____

SAMPLING DATE: 6/13/91 TIME: _____ SAMPLER'S INITIALS: JWS

Fed Ex

SAMPLE TRANSPORTATION

SAMPLE CARRIER: NA (sign) DATE: _____ TIME: _____

SAMPLES REC'D By Lab: R. Bond (sign) DATE: [illegible] TIME: [illegible]

LABORATORY WORK

LABORATORY: Weston Gulf Coast
ADDRESS: 117 Bond Street
University Park, IL

PHONE: (708)534-5200
CONTACT: Karen LeChai
LAB I.D.: _____

✓ TCLP METALS (8)	____ PAINT FILTER TEST	____ Phenol
✓ TCLP ORGANICS (25)	____ IGNITABILITY (<140F)	____ TOC
✓ TCLP PESTICIDES(4)	____ CORROSIVITY (pH OF 10% SOLN.)	____ TOX or EOX
✓ TCLP HERBICIDES(2)	____ REACTIVITY (CN & Sulfide)	____ Cr+6
____ Arsenic (T)	____ Total Solids (%)	✓ PCB
____ Barium (T)	____ Mercury (T)	✓ Semi-Volatile
____ Cadmium (T)	____ Nickel (T)	✓ Volatiles
____ Chromium (T)	____ Selenium (T)	____ _____
____ Copper (T)	____ Silver (T)	____ _____
____ Lead (T)	____ Zinc (T)	____ _____

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH SW846

Analysis Requested by: [signature]

Mailing Address
P.O. Box 6620
St. Louis MO.
63166

Problems or Question Please Call Representatives Below
Cerro Copper: Joseph Grana or Joe Burroughs (618)337-6000

Copy Distribution of Chain-of-Custody
Goldenrod: Sampler's Copy
Yellow: Lab's Copy
Pink: Transporter leaves @ Cerro after signing
White: Lab returns to Cerro after analysis

Standard Deliverable

TO: 92894

CHAIN OF CUSTODY - SOLID WASTE
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

SAMPLE NAME: Truck Lot Discoloration SAMPLE I.D. #: NA

SAMPLING DATE: 10-7-91 TIME: pm SAMPLER'S INITIALS: WDS

SAMPLE TRANSPORTATION

SAMPLE CARRIER: See FedEx Sheet (sign) DATE: _____ TIME: _____

SAMPLES REC'D By Lab: [illegible] (sign) DATE: [illegible] TIME: [illegible]

LABORATORY WORK

LABORATORY: Weston Gulf Coast Lab
ADDRESS: 417 Bond Street
University Park, IL.

PHONE: (708) 534-5200
CONTACT: Karenda Clair
LAB I.D.: _____

____ TCLP METALS (8)	____ PAINT FILTER TEST	____ Phenol
✓ TCLP ORGANICS (25)	____ IGNITABILITY (<140F)	____ TOC
✓ TCLP PESTICIDES(4)	____ CORROSIVITY (pH OF 10% SOLN.)	____ TOX or EOX
✓ TCLP HERBICIDES(2)	____ REACTIVITY (CN & Sulfide)	____ Cr+6
____ Arsenic (T)	____ Total Solids (%)	✓ PCB
____ Barium (T)	____ Mercury (T)	✓ Semi-Volatiles
____ Cadmium (T)	____ Nickel (T)	✓ Volatiles
____ Chromium (T)	____ Selenium (T)	____ _____
____ Copper (T)	____ Silver (T)	____ _____
____ Lead (T)	____ Zinc (T)	____ _____

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH SW846

Analysis Requested by: J M Grana (Joe GRANA)

Problems or Question Please Call Representatives Below
Cerro Copper: Joseph Grana ~~or Joe Burroughs~~ (618)337-6000

Mailing Address
P.O. Box 66800
St. Louis MO 63166

Copy Distribution of Chain-of-Custody
Goldenrod: Sampler's Copy
Yellow: Lab's Copy
Pink: Transporter leaves @ Cerro after signing
White: Lab returns to Cerro after analysis

Standard Deliverables

Roy F. Weston, Inc. - Gulf Coast Laboratories
INORGANIC ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot DiscolTCLP						
SILVER, TCLP LEACHAT	002	W	91G0614	06/13/91	06/21/91	06/24/91
SILVER, TCLP LEACHAT	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
ARSENIC, TCLP LEACHA	002	W	91G0614	06/13/91	06/21/91	06/24/91
ARSENIC, TCLP LEACHA	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
BARIUM, TCLP LEACHAT	002	W	91G0614	06/13/91	06/21/91	06/24/91
BARIUM, TCLP LEACHAT	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
CADMIUM, TCLP LEACHA	002	W	91G0614	06/13/91	06/21/91	06/24/91
CADMIUM, TCLP LEACHA	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
CHROMIUM, TCLP LEACH	002	W	91G0614	06/13/91	06/21/91	06/24/91
CHROMIUM, TCLP LEACH	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
MERCURY, TCLP LEACHA	002	W	91HG198	06/13/91	06/26/91	06/27/91
MERCURY, TCLP LEACHA	002 MS	W	91HG198	06/13/91	06/26/91	06/27/91
LEAD, TCLP LEACHATE	002	W	91G0614	06/13/91	06/21/91	06/24/91
LEAD, TCLP LEACHATE	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91
SELENIUM, TCLP LEACH	002	W	91G0614	06/13/91	06/21/91	06/24/91
SELENIUM, TCLP LEACH	002 MS	W	91G0614	06/13/91	06/21/91	06/24/91

SIGNATURE [illegible] DATE [illegible]

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Wednesday July 3rd, 1991

RE: **Truck Lot DiscolTCLP**
Project # 0000-00-00-0000
Lab ID: **9106G820-002**
Sample Date: 06/13/91
Date Received: 06/14/91

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
Silver, TCLP Leachate	0.386		mg/L	0.288
Arsenic, TCLP Leachate	0.979		mg/L	0.588
Barium, TCLP Leachate	19.4		mg/L	0.294
Cadmium, TCLP Leachate	0.353		mg/L	0.292
Chromium, TCLP Leachate	0.888		mg/L	0.284
Mercury, TCLP Leachate	0.011	u	mg/L	0.011
Lead, TCLP Leachate	1.37		mg/L	0.293
Selenium, TCLP Leachate	0.50	u	mg/L	0.50

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 3rd, 1991

Project # 0000-00-00-0000
Lab Batch: 9106G820

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 2	91G0614-MB2	Silver, TCLP Leachate	0.050	u	mg/L	0.050
		Arsenic, TCLP Leachate	0.10	u	mg/L	0.10
		Barium, TCLP Leachate	0.25		mg/L	0.050
		Cadmium, TCLP Leachate	0.050	u	mg/L	0.050
		Chromium, TCLP Leachate	0.050	u	mg/L	0.050
		Lead, TCLP Leachate	0.050	u	mg/L	0.050
		Selenium, TCLP Leachate	0.10	u	mg/L	0.10

WESTON-GULF COAST LABORATORIES, INC.
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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 3rd, 1991

Project # 0000-00-00-0000
Lab Batch: 9106G820

Inorganic Method Blank Data Report

Sample	Lab ID	Parameter	Result		Units	Reporting Limit
Blank 2	91HG198-MB2	Mercury, Total	0.010	u	mg/L	0.010

WESTON/GULF COAST LABORATORIES, INC. 2..0

TCLP EXTRACTION

RFW #	Blank #1			
RFW # Used for Bias Correction	—			
Group #	T505 VOA			
Client Name	—			
Sample Description	Extraction Fluid #1			
Sample Weight (g)	NA			
Liquid-Solid Separation (Yes/No)	NO			
Volume of Mother Liquid (mls)	NA			
Solid Extraction Material (g)	NA			
Sample Size Specifications	NA			
Extraction Fluid Selection pH of Initial Solution If <5.0 use Extraction Fluid #1	NA			
pH of Acid/Heat Treated Soln. If <5.0 use Extraction Fluid #1 If >5.0 use Extraction Fluid #2	NA			
Extraction Fluid Type (1 or 2)	1			
Extraction Vessel Type	ZHE			
Extraction Fluid Volume (mls)	500			
Extract Filtered (Yes or No)	YES			
Mother Liquid Added (mls)	NA			
Combined Filtrate Volume (mls)	500			
Final pH Reading	NA			
Spike Solution Added (mls)	NA			
Spike Source ID #	NA			
Filtrate Preserved	NO			
Start Date/Time	6-17-91 2:05P			
Start Temperature °C	23.5			
End Date/Time	6-18-91 7:00A			
End Temperature °C	22.7			

Extraction Vessel Codes: T = Teflon; ZHE = Zero Headspace; HDPE = High Density Polyethylene

Analyst: Joan M Dieter / Joan M Dieter Date: 6-17-91 / 6-18 91

Reviewer: [signature] Date: 06/19/91

WESTON/GULF COAST LABORATORIES, INC.
TCLP EXTRACTION

RFW #	91066820-002			
RFW # Used for Bias Correction	↓			
Group #	T506 M,B,P,H			
Client Name	Cerro Copper Products			
Sample Description	Solid			
Sample Weight (g)	100			
Liquid-Solid Separation (Yes/No)	NO			
Volume of Mother Liquid (mls)	NA			
Solid Extraction Material (g)	100			
Sample Size Specifications	<9.5mm			
Extraction Fluid Selection				
pH of Initial Solution If <5.0 use Extraction Fluid #1	9.55			
pH of Acid/Heat Treated Soln. If <5.0 use Extraction Fluid #1 If >5.0 use Extraction Fluid #2	1.49			
Extraction Fluid Type (1 or 2)	1			
Extraction Vessel Type	T x2			
Extraction Fluid Volume (mls)	2000			
Extract Filtered (Yes or No)	Yes			
Mother Liquid Added (mls)	NA			
Combined Filtrate Volume (mls)	2000			
Final pH Reading	4.86			
Spike Solution Added (mls)	1			
Spike Source ID #	249, 250			
Filtrate Preserved	Yes			
Start Date/Time	6-19-91 12:28P			
Start Temperature °C	23.0			
End Date/Time	6-20-91 7:08A			
End Temperature °C	20.3			

Extraction Vessel Codes: T = Teflon; ZHE = Zero Headspace; HDPE = High Density Polyethylene

Analyst: Joan M Dieter / Joan M Dieter Date: 6-19-91/6-20-91

Reviewer: [signature] Date: 06/21/91

WESTON/GULF COAST LABORATORIES, INC.

TCLP EXTRACTION

C

RFW #	Blank #1	Blank #2		
RFW # Used for Bias Correction	—	—		
Group #	T506 mBPH	T506 m		
Client Name	—	—		
Sample Description	Extraction Fluid #1	Extraction Fluid #2		
Sample Weight (g)	NA	NA		
Liquid-Solid Separation (Yes/No)	NO	NO		
Volume of Mother Liquid (mls)	NA	NA		
Solid Extraction Material (g)	NA	NA		
Sample Size Specifications	NA	NA		
Extraction Fluid Selection pH of Initial Solution If <5.0 use Extraction Fluid #1	NA	NA		
pH of Acid/Heat Treated Soln. If <5.0 use Extraction Fluid #1 If >5.0 use Extraction Fluid #2	NA	NA		
Extraction Fluid Type (1 or 2)	1	2		
Extraction Vessel Type	T x2	T		
Extraction Fluid Volume (mls)	2000	2000		
Extract Filtered (Yes or No)	Yes	Yes		
Mother Liquid Added (mls)	NA	NA		
Combined Filtrate Volume (mls)	2000	2000		
Final pH Reading	4.85	2.76		
Spike Solution Added (mls)	NA	NA		
Spike Source ID #	NA	NA		
Filtrate Preserved	Yes	Yes		
Start Date/Time	6-19-91 12:28 P	6-19-91 12:28 P		
Start Temperature °C	23.0	23.0		
End Date/Time	6-20-91 7:08A	6-20-91 7:08A		
End Temperature °C	20.3	20.3		

Extraction Vessel Codes: T = Teflon; ZHE = Zero Headspace; HDPE = High Density Polyethylene

Analyst: Joan M Dietz Date: 6-21-91

Reviewer: [illegible] Date: 06/21/91

Roy F. Weston, Inc. - Gulf Coast Laboratories
VOA ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #		MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot Discolor.	001		SO	91GVC203	06/13/91	N/A	06/27/91
Truck Lot Discolor.	001	R1	SO	91GVC216	06/13/91	N/A	07/13/91
LAB QC:							
VBLK	MB1		S	91GVC203	N/A	N/A	06/27/91
VBLK	MB1	BS	S	91GVC203	N/A	N/A	06/27/91
VBLK	MB1		S	91GVC216	N/A	N/A	07/12/91

SIGNATURE Jeff A. Kazinski DATE 7-26-91

WESTON

CASE NARRATIVE
VOA, BNA GC/MS

WESTON/Gulf Coast
Cerro Copper
RFW# 9106G820
VOA DATA:

1. All initial analyses were performed within the recommended hold time. The reanalyses for sample 001 was analyzed beyond the recommended hold time.

2. All Method Blank target compounds were below Contract Required Quantitation Limits (CRQL). (** or five times the CRQL for the following compounds: methylene chloride, acetone, toluene, 2-butanone) except for acetone contamination at 140ppb in GVC206. The reanalyses of sample 001 is associated with this blank.

3. All LCS (Method Blank Spike) recoveries were within recommended limits.

4. Matrix spike analyses were conducted on sample 9106G820-003 for the purpose of bias corrections. There was one low % recovery for the compound vinyl chloride.

5. All of the surrogate recoveries in the volatile analyses were within USEPA QC limits.

6. Weston-Gulf Coast uses the following GC/MS systems which can be identified on all raw data by either the Instrument ID or the quantitation file ID:

ID #	Instrument	Quant ID File
GCL#1	Hewlett Packard 5970 MSD	ID_MS1
GCL#2	Hewlett Packard 5996	ID_MS2
GCL#3	Hewlett Packard 5996	ID_MS3
GCL#4	Hewlett Packard 5970 MSD	ID_MS4

All analyses were performed using Method SW846-8240 unless otherwise noted. The Internal Standard and Surrogate peaks are labeled by name.

7. All of the samples were analyzed as either low level waters following an initial TCLP extraction and a 1/20 dilution or as low level soils and therefore normal detection limits apply. Sample 001 was originally analyzed at a 1/1000 dilution due to the nature of the sample but was later reanalyzed more concentrated to meet PQLs.

Jeff A. Kaynski / GC/MS Unit Leader — 7-26-91
Name/Title — Date

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Thursday July 25th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Reporting Limit	Flag
Chloromethane	BDL	10000	U
Bromomethane	BDL	10000	U
Vinyl Chloride	BDL	10000	U
Chloroethane	BDL	10000	U
Methylene Chloride	5300	5000	B
Acetone	6700	10000	JB
Carbon Disulfide	BDL	5000	U
1,1-Dichloroethene	BDL	5000	U
1,1-Dichloroethane	BDL	5000	U
1,2-Dichloroethene (total)	BDL	5000	U
Chloroform	BDL	5000	U
1,2-Dichloroethane	BDL	5000	U
2-Butanone	BDL	10000	U
1,1,1-Trichloroethane	BDL	5000	U
Carbon Tetrachloride	BDL	5000	U
Vinyl Acetate	BDL	10000	U
Bromodichloromethane	BDL	5000	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Thursday July 25th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Reporting Limit	Flag
1,2-Dichloropropane	BDL	5000	U
cis-1,3-Dichloropropene	BDL	5000	U
Trichloroethene	BDL	5000	U
Dibromochloromethane	BDL	5000	U
1,1,2-Trichloroethane	BDL	5000	U
Benzene	BDL	5000	U
Trans-1,3-Dichloropropene	BDL	5000	U
Bromoform	BDL	5000	U
4-Methyl-2-pentanone	BDL	10000	U
2-Hexanone	BDL	10000	U
Tetrachloroethene	BDL	5000	U
1,1,2,2-Tetrachloroethane	BDL	5000	U
Toluene	BDL	5000	U
Chlorobenzene	BDL	5000	U
Ethylbenzene	BDL	5000	U
Styrene	BDL	5000	U
Xylene (total)	BDL	5000	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Thursday July 25th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

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2417 Bond St., University Park, Illinois 60466
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ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Thursday July 25th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001 REPREP**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Reporting Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	110	5	B
Acetone	370	10	B
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	BDL	5	U
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Thursday July 25th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001 REPREP
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Reporting Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	12	5	
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	5	5	
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	30	5	
1,1,2,2-Tetrachloroethane	49	5	
Toluene	19	5	
Chlorobenzene	5	5	
Ethylbenzene	BDL	5	U
Styrene	3	5	J
Xylene (total)	6	5	

Roy F. Weston, Inc. - Gulf Coast Laboratories
VOLATILES BY GC/MS, HSL LIST

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/25/91 14:56 Page: 1a

Sample Information	Cust ID:	Truck Lot Discolor		Truck Lot Discolor		VBLK		VBLK BS		VBLK	
	RFW#:	001		001		91GVC203-MB1		91GVC203-MB1		91GVC216-MB1	
	Matrix:	SOLID		SOLID		SOIL		SOIL		SOIL	
	D.F.:	1000		1.00		1.00		1.00		1.00	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
				REPREP							
Surrogate Recovery	Toluene-d8	89	%	113	%	96	%	85	%	95	%
	Bromofluorobenzene	98	%	78	%	101	%	101	%	101	%
	1,2-Dichloroethane-d4	105	%	102	%	107	%	107	%	103	%
Chloromethane		10000	U	10	U	10	U	10	U	10	U
Bromomethane		10000	U	10	U	10	U	10	U	10	U
Vinyl Chloride		10000	U	10	U	10	U	10	U	10	U
Chloroethane		10000	U	10	U	10	U	10	U	10	U
Methylene Chloride		5300	B	110	B	6		6	B	19	
Acetone		6700	JB	370	B	34		15	B	140	
Carbon Disulfide		5000	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene		5000	U	5	U	5	U	90	%	5	U
1,1-Dichloroethane		5000	U	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)		5000	U	5	U	5	U	5	U	5	U
Chloroform		5000	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane		5000	U	5	U	5	U	5	U	5	U
2-Butanone		10000	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane		5000	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride		5000	U	5	U	5	U	5	U	5	U
Vinyl Acetate		10000	U	10	U	10	U	10	U	10	U
Bromodichloromethane		5000	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane		5000	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene		5000	U	5	U	5	U	5	U	5	U
Trichloroethene		5000	U	12		5	U	102	%	5	U
Dibromochloromethane		5000	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane		5000	U	5	U	5	U	5	U	5	U
Benzene		5000	U	5		5	U	100	%	5	U
Trans-1,3-Dichloropropene		5000	U	5	U	5	U	5	U	5	U
Bromoform		5000	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone		10000	U	10	U	10	U	10	U	10	U
2-Hexanone		10000	U	10	U	10	U	10	U	10	U
Tetrachloroethene		5000	U	30		5	U	5	U	5	U
1,1,2,2-Tetrachloroethane		5000	U	49		5	U	5	U	5	U

*= Outside of EPA CLP QC limits.

Cust ID:	Truck Lot Discolor	Truck Lot Discolor	VBLK	VBLK BS	VBLK
RFW#:	001	001 REPREP	91GVC203-MB1	91GVC203-MB1	91GVC216-MB1
Toluene	5000 U	19	5 U	98 %	5 U
Chlorobenzene	5000 U	5	5 U	96 %	5 U
Ethylbenzene	5000 U	5 U	5 U	5 U	5 U
Styrene	5000 U	3 J	5 U	5 U	5 U
Xylene (total)	5000 U	6	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

RFW Lot No.: 9106G820

	CLIENT SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	Truck Lot Discolor.	89	98	105		0
02	Truck Lot Discolor.RE	113	78	102		0
03	VBLKGVC203-MB1	96	101	107		0
04	VBLKGVC203-MB1 BS	85	101	107		0
05	VBLKGVC216-MB1	95	101	103		0

	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

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

3B
SOIL VOLATILE MATRIX SPIKE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: LAB RFW Lot No.: 9106G820

MATRIX Spike - Sample No.: VBLKGVC203-MB1 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
1,1-Dichloroethene	50.0	0	45.2	90	59-172
Trichloroethene	50.0	0	51.0	102	62-137
Benzene	50.0	0	49.8	100	66-142
Toluene	50.0	0	48.8	98	59-139
Chlorobenzene	50.0	0	47.9	96	60-133

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLKMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL

Lab Sample ID: 91GVC203-MB1 BS

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CMB627

Level: (low/med) LOW

Date Received: 06/27/91

% Moisture: not dec. 0

Date Analyzed: 06/27/91

Column: (pack/cap) CAP

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	B
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene		S
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene		S
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene		S
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene		S
108-90-7	Chlorobenzene		S
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

S: SPIKE COMPOUND

MGIC

QUANT REPORT

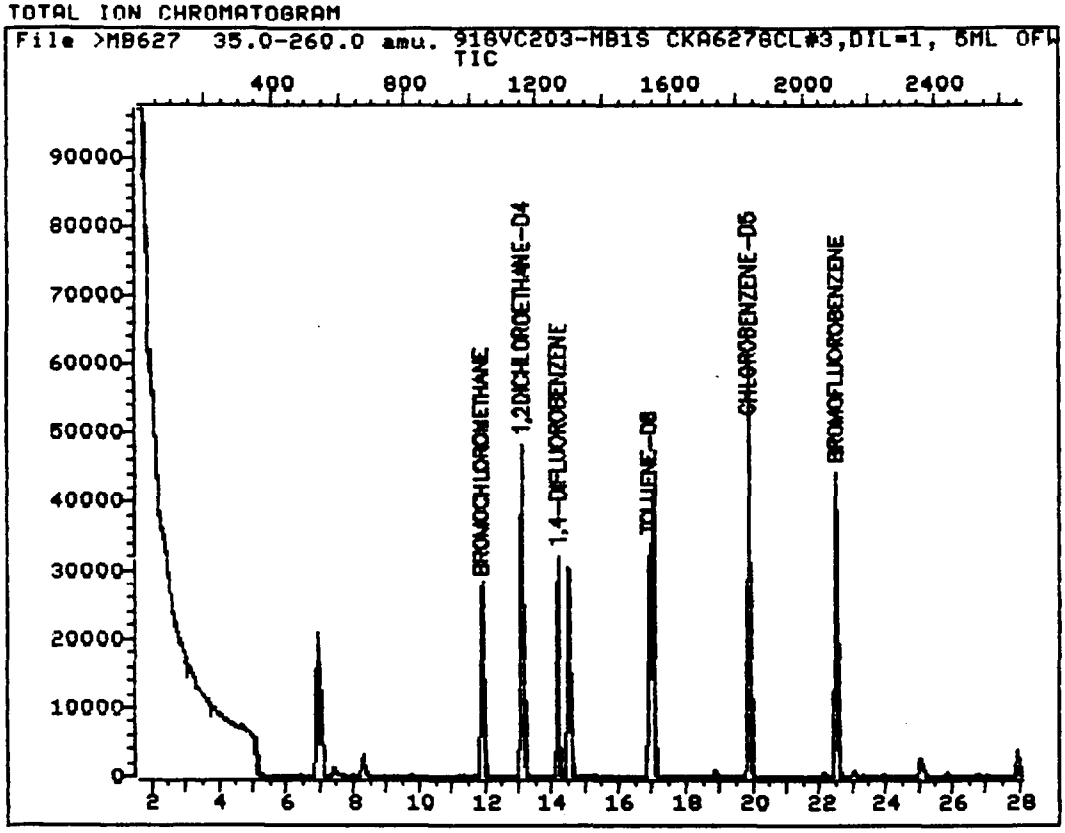
Operator ID: USER8 Quant Rev: 6 Quant Time: 910627 18:17
Output File: ^MB627::E1 Injected at: 910627 17:46
Data File: >MB627::L2 Dilution Factor: 1.00000
Name: 91GVC203-MB1S CKA627
Misc: GCL#3,DIL=1, 5ML OFW + 5UL ISS + 10UL 987

ID File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	11.89	128.0	16856	50.00	PPB	98
4)	VINYL CHLORIDE	6.97	61.8	4874	11.18	PPB	57
7)	METHYLENE CHLORIDE	8.26	83.8	4181	5.62	PPB	92
8)	ACETONE	7.45	42.8	5087	14.76	PPB	86
9)	1,1-DICHLOROETHENE	6.96	95.8	29008	45.18	PPB	97
11)	1,2-DICHLOROETHENE (TOTAL)	6.96	95.8	29008	53.77	PPB	86
13)	1,2-DICHLOROETHANE	14.16	61.8	2915	3.72	PPB	50
14)	1,2-DICHLOROETHANE-D4	13.10	64.8	32803	53.54	PPB	95
15)	*1,4-DIFLUOROBENZENE	14.17	114.1	57520	50.00	PPB	98
23)	TRICHLOROETHENE	14.51	129.8	23147	50.96	PPB	96
25)	BENZENE	13.10	77.8	68586	49.82	PPB	96
29)	*CHLOROBENZENE-D5	19.84	116.8	59073	50.00	PPB	98
33)	1,1,2,2-TETRACHLOROETHANE	23.05	82.8	1198	1.58	PPB	98
34)	TOLUENE	17.02	90.8	76498	48.83	PPB	96
35)	CHLOROBENZENE	19.90	111.8	57964	47.92	PPB	96
38)	BROMOFLUOROBENZENE	22.48	95.0	34077	50.69	PPB	87
39)	TOLUENE-D8	16.90	98.0	49727	42.44	PPB	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >MB627::L2 Quant Output File: ^MB627::E1
Name: 91GVC203-MB1S CKA627
Misc: GCL#3,DIL=1, 5ML OFW + 5UL ISS + 10UL 987

Id File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

Operator ID: USER8
Quant Time: 910627 18:17
Injected at: 910627 17:46

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: CMA627 Lab Sample ID: 91GVC203-MB1

Date Analyzed: 06/27/91 Time Analyzed: 1055

Matrix:(Soil/Water) SOIL Level:(low/med) LOW

Instrument ID: GCL#3

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLKGVC203-MB1 BS	91GVC203-MB1S	CMB627	1746
02	Truck Lot Discolor.	9106G820-001	CNQS02	1558

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GVC203-MB1

Sample wt/vol: 5.00 (g/mL) G Lab File ID: CMA627

Level: (low/med) LOW Date Received: 06/27/91

% Moisture: not dec. 0 Date Analyzed: 06/27/91

Column: (pack/cap) CAP Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	
67-64-1	Acetone	34	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL

Lab Sample ID: 91GVC203-MB1

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CMA627

Level: (low/med) LOW

Date Received: 06/27/91

% Moisture: not dec. 0

Date Analyzed: 06/27/91

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

mac

QUANT REPORT

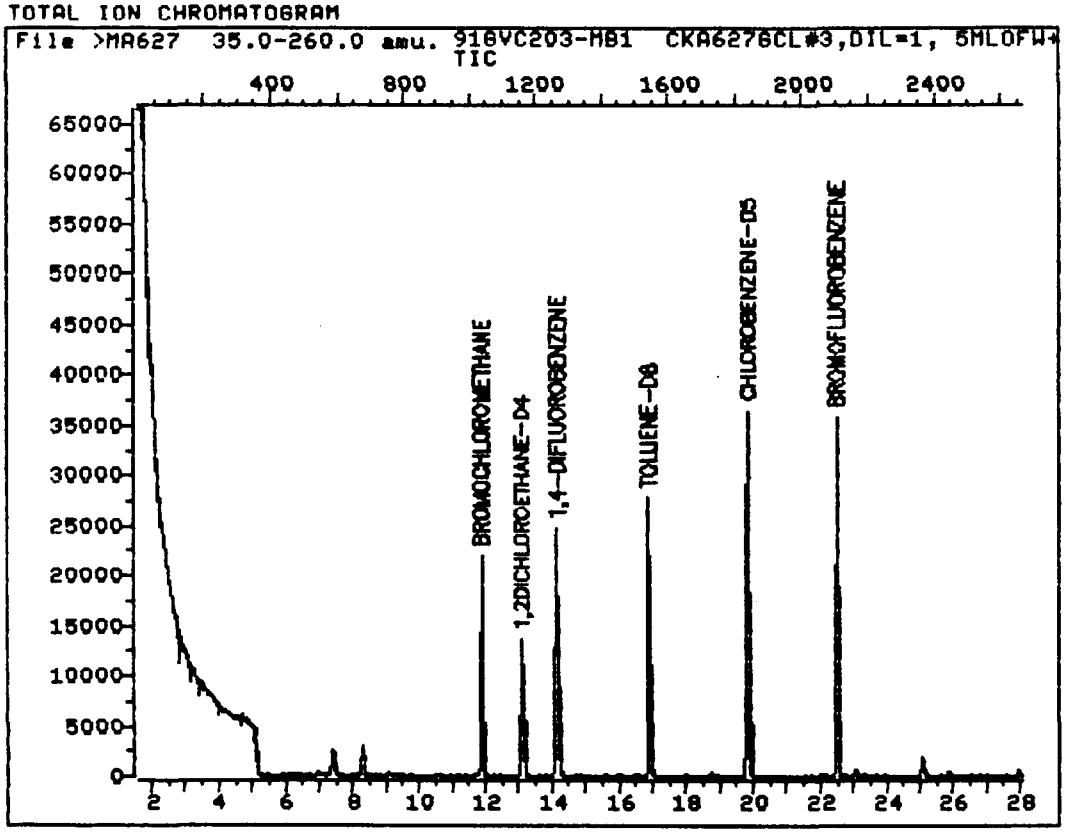
Operator ID: USER8 Quant Rev: 6 Quant Time: 910627 11:26
Output File: ^MA627::E1 Injected at: 910627 10:55
Data File: >MA627::L2 Dilution Factor: 1.00000
Name: 91GVC203-MB1 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A

ID File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	11.88	128.0	13038	50.00	PPB	97
7)	METHYLENE CHLORIDE	8.26	83.8	3428	5.96	PPB	91
8)	ACETONE	7.37	42.8	9144	34.30	PPB	96
14)	1,2-DICHLOROETHANE-D4	13.09	64.8	25432	53.67	PPB	94
15)	*1,4-DIFLUOROBENZENE	14.15	114.1	43350	50.00	PPB	98
29)	*CHLOROBENZENE-D5	19.85	116.8	46991	50.00	PPB	99
38)	BROMOFLUOROBENZENE	22.49	95.0	27122	50.72	PPB	89
39)	TOLUENE-D8	16.90	98.0	44808	48.08	PPB	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM

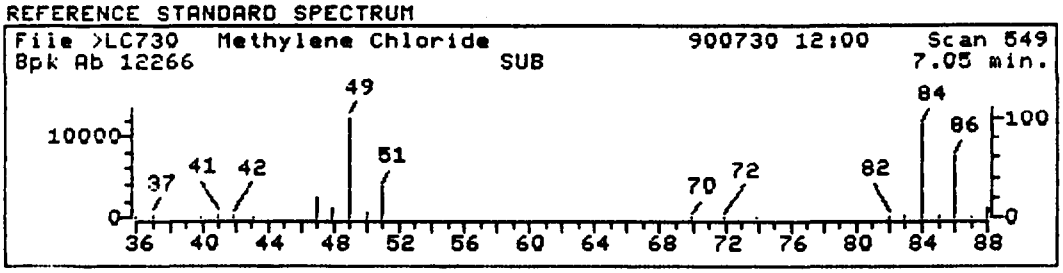


Data File: >MA627::L2 Quant Output File: ^MA627::E1
Name: 91GVC203-MB1 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A

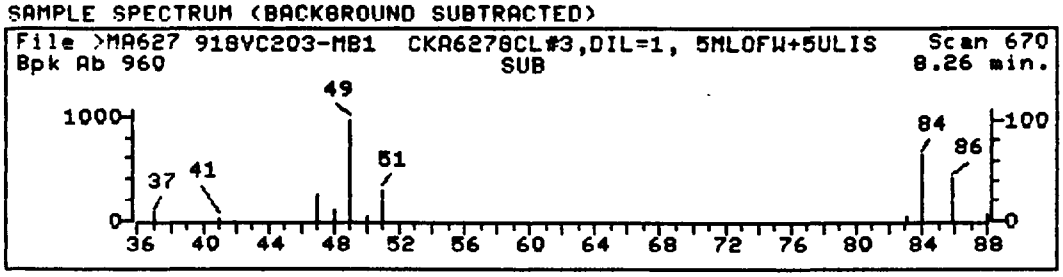
Id File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

Operator ID: USER8
Quant Time: 910627 11:26
Injected at: 910627 10:55

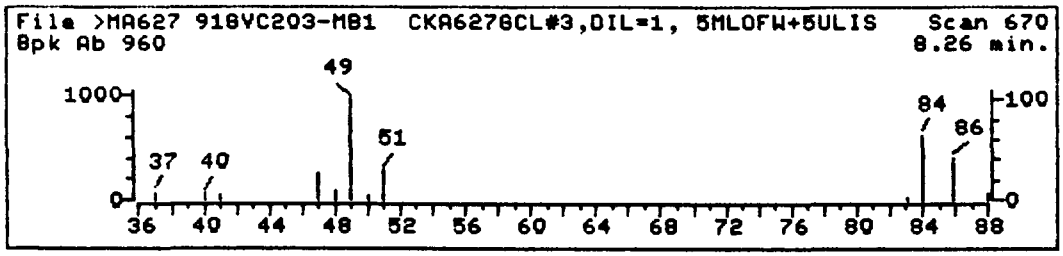
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



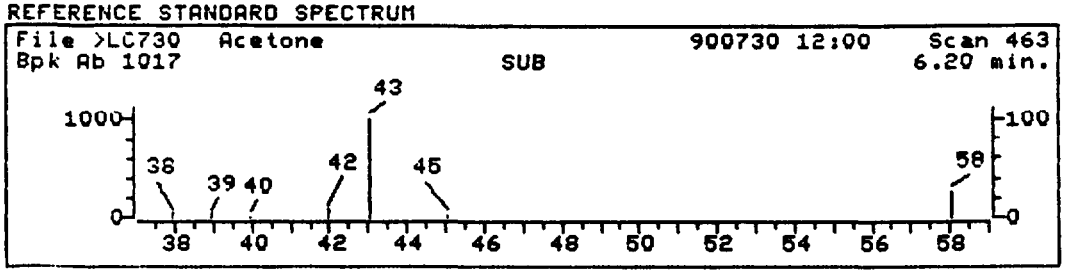
SAMPLE SPECTRUM (UNALTERED)



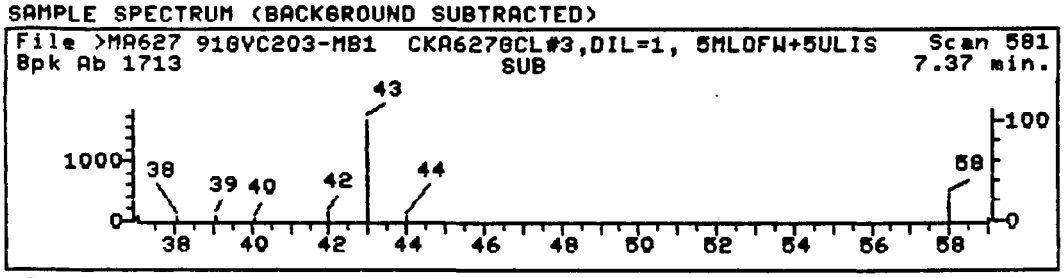
Data File: >MA627::L2 Quant Output File: ^MA627::E1
Name: 91GVC203-MB1 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A
Quant Time: 910627 11:26 Quant ID File: ID_MS3::U2
Injected at: 910627 10:55 Last Calibration: 910627 10:45

Compound No: 7
Compound Name: METHYLENE CHLORIDE
Scan Number: 670
Retention Time: 8.26 min.
Quant Ion: 83.8
Area: 3428
Concentration: 5.96 PPB
q-value: 91

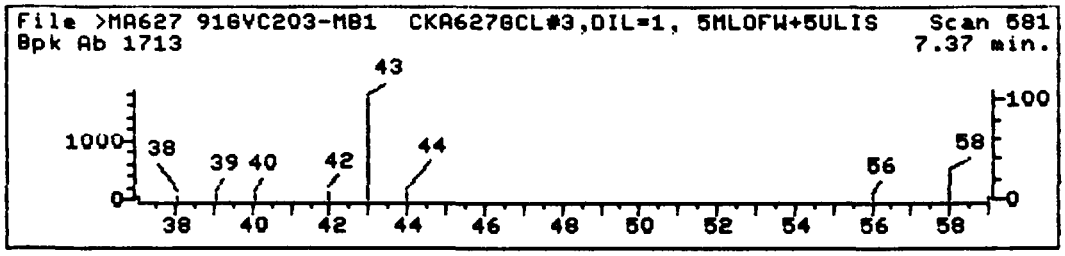
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >MA627::L2 Quant Output File: ^MA627::E1
Name: 91GVC203-MB1 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A
Quant Time: 910627 11:26 Quant ID File: ID_MS3::U2
Injected at: 910627 10:55 Last Calibration: 910627 10:45

Compound No: 8
Compound Name: ACETONE
Scan Number: 581
Retention Time: 7.37 min.
Quant Ion: 42.8
Area: 9144
Concentration: 34.30 PPB
q-value: 96

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: CMA712 Lab Sample ID: 91GVC216-MB1

Date Analyzed: 07/12/91 Time Analyzed: 1542

Matrix:(Soil/Water) SOIL Level:(low/med) LOW

Instrument ID: GCL#3

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	Truck Lot Discolor.RE	9106G820-001	CNQS06	0034

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GVC216-MB1

Sample wt/vol: 5.00 (g/mL) G Lab File ID: CMA712

Level: (low/med) LOW Date Received: 07/12/91

% Moisture: not dec. 0 Date Analyzed: 07/12/91

Column: (pack/cap) CAP Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	19	
67-64-1	Acetone	140	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL

Lab Sample ID: 91GVC216-MB1

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CMA712

Level: (low/med) LOW

Date Received: 07/12/91

% Moisture: not dec. 0

Date Analyzed: 07/12/91

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

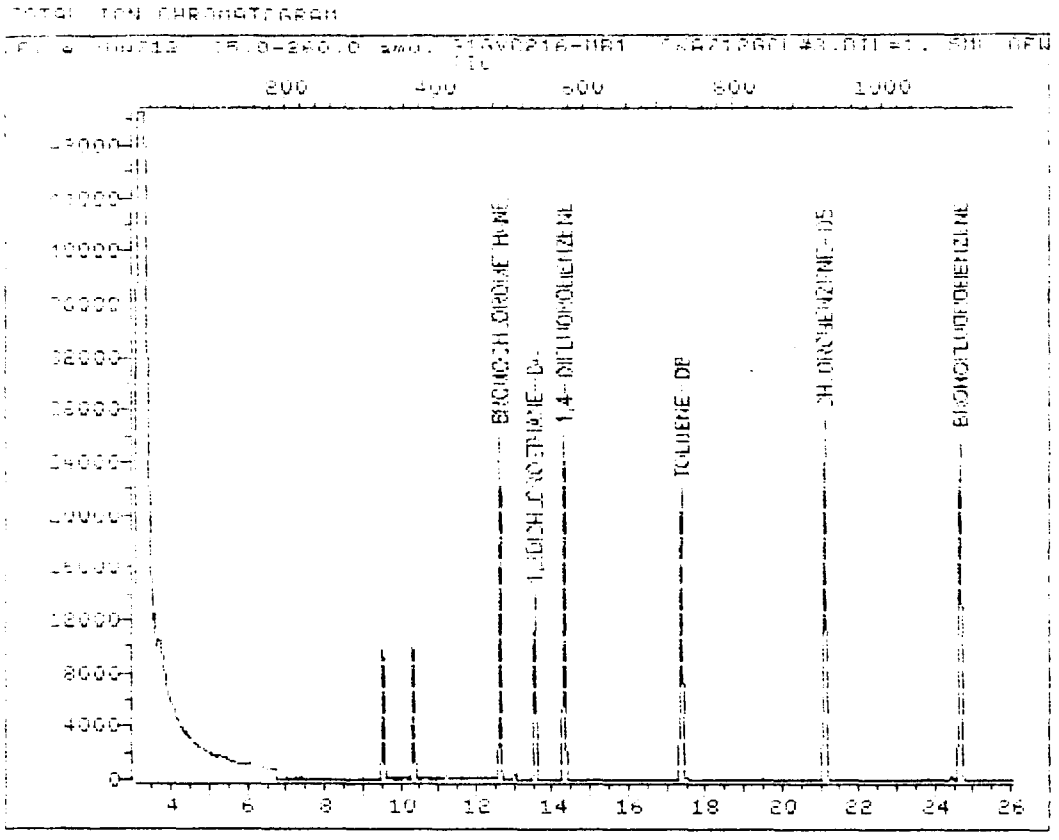
QUANT REPORT

Operator ID: USER4 Quant Rev: 5 Quant Time: [illegible]/12 [illegible]
Output File: [illegible]/12::02 Injected at: [illegible]/12 16:42
Data File: [illegible]/12::02 Dilution Factor: 1.00[illegible]00
Name: [illegible]-MB1 [illegible]/12
Misc: GCL#3,DIL=1, 5ML DRW + 50UL ISS

ID File: ID_LIN::01
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: [illegible]10/12 15:20

	Compound	R.T.	Q ion	Area	Conc	Units	Q
[illegible]	*BROMOCHLOROMETHANE	12.69	128.0	11[illegible]	[illegible].00	ppb	86
10[illegible]	METHYLENE CHLORIDE	10.92	83.8	6252	17.0[illegible]	ppb	70
[illegible]	ACETONE	7.54	42.0	20[illegible]	140.2[illegible]	ppb	71
[illegible]	1,2-DICHLOROETHANE	14.[illegible]	61.8	1712	[illegible].99	ppb	[illegible]1
24[illegible]	1,2-DICHLOROETHANE-D4	12.55	64.0	22206	91.00	ppb	7[illegible]
25[illegible]	*1,4-DIFLUOROBENZENE	14.[illegible]	114.1	4[illegible]	[illegible].00	ppb	[illegible]6
4[illegible]	*CHLOROBENZENE-D5	21.11	116.0	40[illegible]	[illegible].00	ppb	9[illegible]
94[illegible]	BROMOFLUOROBENZENE	24.67	95.0	24949	[illegible].67	ppb	[illegible]5
99[illegible]	TOLUENE-D8	17.40	98.0	36508	47.5[illegible]	ppb	96

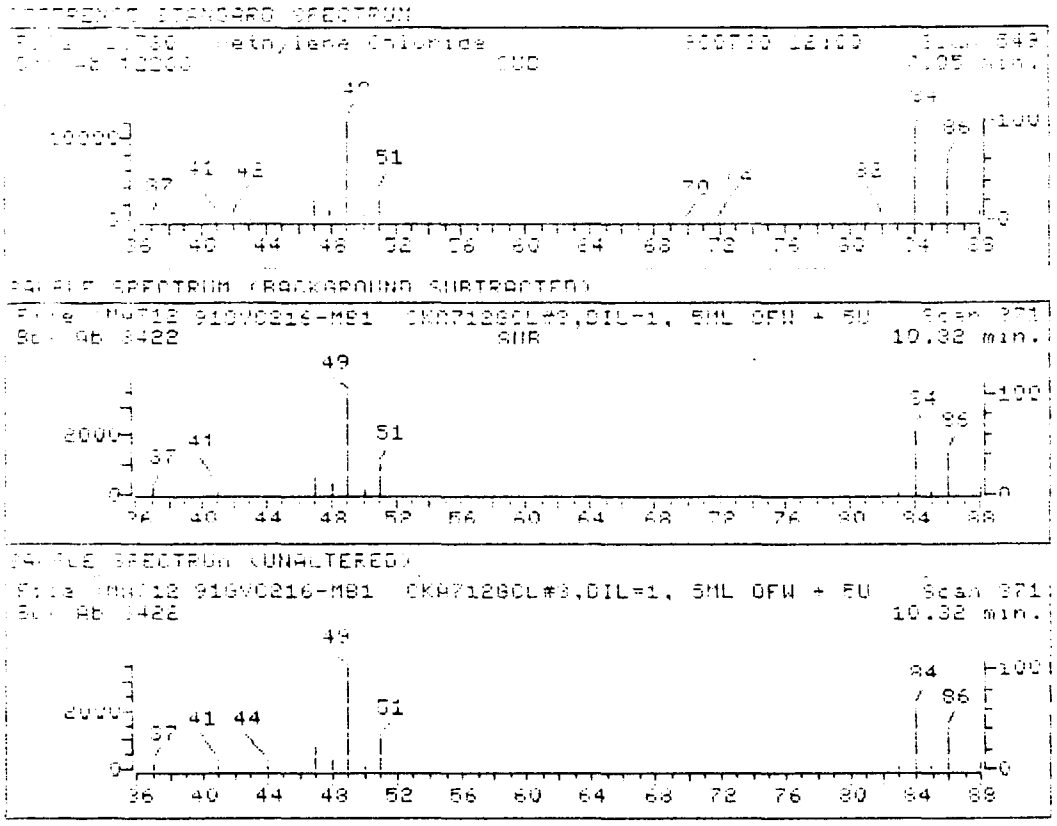
* Compound is ISTD



Data File: MA/12::L2 Quant Output File: MA/12::E2
Name: 910VL216-MB1 LKA/12
Misc: GCL#3,DIL=1, 5ML DHW + 5UL 1&5

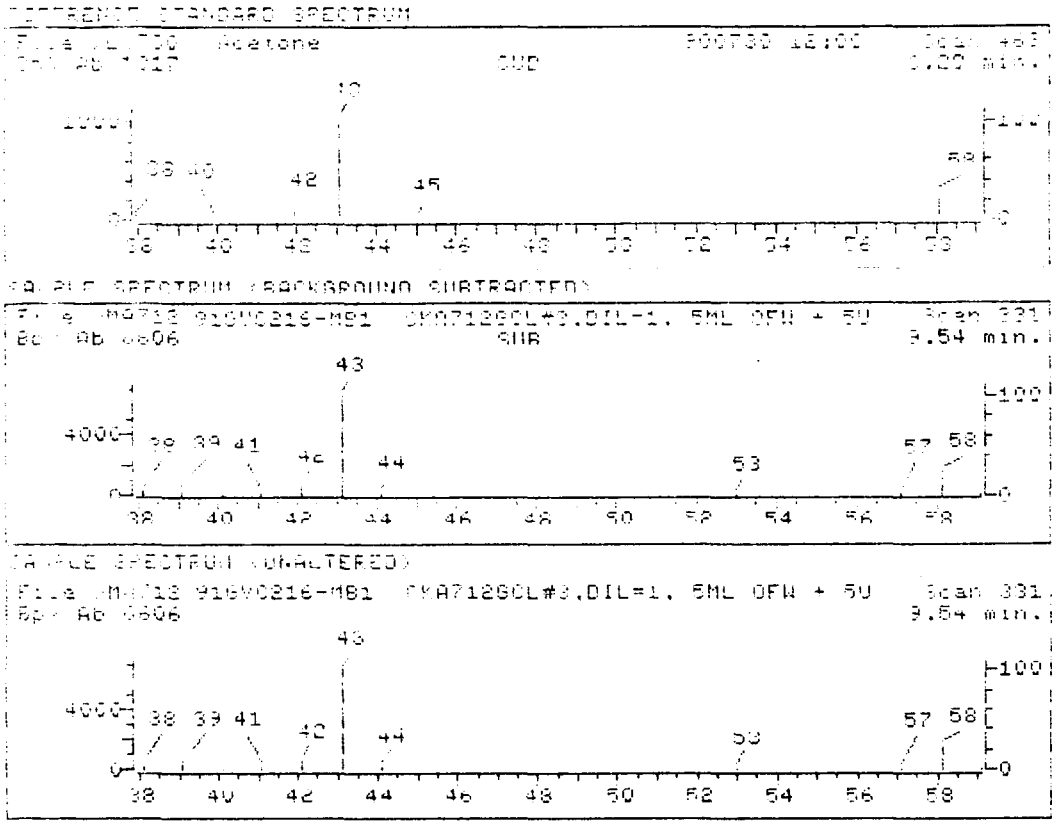
Id File: ID_LIM::U1
Title: LAB.LIBRARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/12 15:20

Operator ID: User4
Quant Time: 910/12 16:11
Injected at: 910/12 15:42



Data File: /MA/12::E2 Quant Output File: MA/12::E2
Name: 916VC216-MB1 CKA/12
Misc: GCL#3,DIL=1, 5ML DFW + 5UL 155
Quant Time: 910/12 16:11 Quant ID File: ID_L.M::01
Injected at: 910/12 15:42 Last Calibration: 910/12 15:20

Compound No: 16
Compound Name: METHYLENE CHLORIDE
Scan Number: 371
Retention Time: 10.32 min.
Quant Ion: 85.8
Area: 8252
Concentration: 19.07 ppb
q-value: 90



Data File: >MA712::L2 Quant Output File: 'MA712::E2
Name: 916VC216-MB1 CKA712
Misc: 6CL#3,DIL=1, 5ML DFW + 5UL 155
Quant Time: 910/12 16:11 Quant ID File: ID_LIM::C1
Injected at: 910/12 15:42 Last Calibration: 910/12 15:20

Compound No: 17
Compound Name: ACETONE
Scan Number: 331
Retention Time: 9.54 min.
Quant Ion: 42.8
Area: 26928
Concentration: 140.27 ppb
q-value: 91

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: CKA627 BFB Injection Date: 6/27/91

Instrument ID: GCL#3 BFB Injection Time: 917

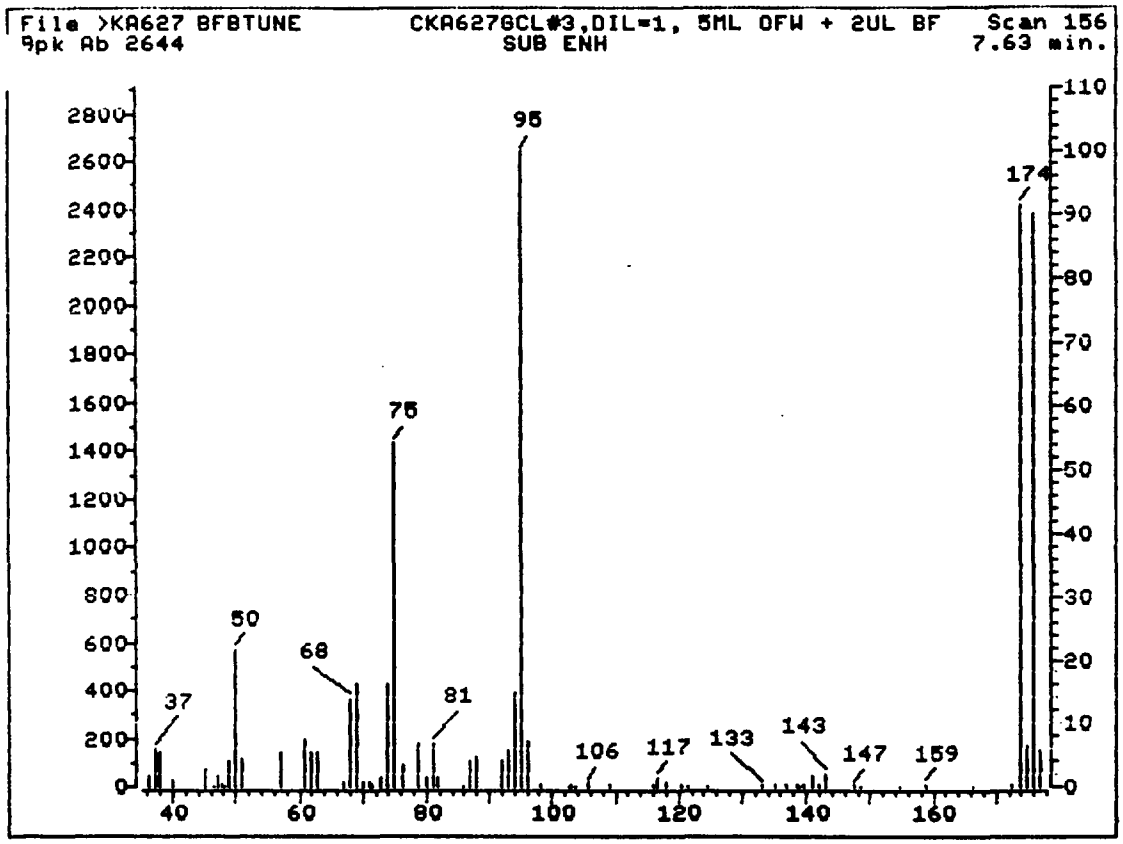
Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	54.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.1(0.12)1
174	Greater than 50.0% of mass 95	91.4
175	5.0 - 9.0% of mass 174	6.4(7.0)1
176	Greater than 95.0% but less than 101.0% of mass 174	90.2(98.6)1
177	5.0 - 9.0% of mass 176	6.1(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	CLA627	06/27/91	0947
02	VBLKGVC203-MB1	91GVC203-MB1	CMA627.	06/27/91	1055
03	Truck Lot Discolor.	9106G820-001	CNQS02.	06/27/91	1558
04	VBLKGVC203-MB1 BS	91GVC203-MB1S	CMB627.	06/27/91	1746
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



MS data file header from : >KA627

Sample: BFBTUNE CKA627 Operator: USER4 MS 6/27/91 9:17
Misc : GCL#3,DIL=1, 5ML OFW + 2UL BFBTUNE SOLN 972
Sys. #: 3 MS model: 96 SW/HW rev.: IA ALS # : 0
Method file: DON Tuning file: TUNE3 No. of extra records: 2
Source temp.: 150 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	50.	140.	0.	0.	0.
Chromatographic times, min. :	2.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	10.0	0.0	0.0	0.0	0.0

>KA627 BFBTUNE CKA627GCL#3,DIL=1, 5ML DFW + 2UL BFBTUNE SOLN

156 SUB NRM ENH

File: >KA627 Scan #: 156 Retn. time: 7.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.740	67.10	.802	87.90	4.568	121.35	.189	166.15	.098
37.05	6.074	68.00	13.879	92.00	4.213	124.45	.166	172.45	.424
38.05	5.416	69.00	16.111	93.00	5.756	133.25	.303	172.65	.113
39.95	.930	70.00	.817	94.00	14.704	135.05	.393	173.95	91.408
45.00	2.836	71.10	.703	95.00	100.000	136.85	.234	174.95	6.376
46.40	.091	71.60	.499	96.00	6.959	138.55	.227	175.95	90.167
47.00	1.838	73.00	1.543	98.20	.265	138.85	.121	176.95	6.066
48.00	.416	74.00	16.073	102.70	.151	139.75	.295	182.15	.189
48.30	.159	75.00	54.323	103.00	.287	140.85	1.838	185.35	.091
49.00	4.221	76.10	3.298	103.80	.174	141.95	.340	195.95	.098
50.00	21.678	78.80	6.853	105.70	.688	142.95	2.095	215.10	.091
51.00	4.523	80.00	1.346	109.20	.310	147.65	.325	215.40	.098
57.00	5.370	80.90	6.860	116.10	.477	148.55	.197	224.50	.159
61.00	7.443	81.90	1.399	116.80	1.407	154.65	.166	231.10	.113
62.00	5.446	85.70	.144	117.90	.711	158.95	.408	259.20	.098
63.00	5.332	87.00	3.986	120.40	.303				

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.68	21.68	Ok
75	30-60% of mass 95	54.32	54.32	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.96	6.96	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	91.41	91.41	Ok
175	5-9% of mass 174	6.38	6.98	Ok
176	95-101% of mass 174	90.17	98.64	Ok
177	5-9% of mass 176	6.07	6.73	Ok

Injection Date: 06/27/91
Injection Time: 09:17
Data File: >KA627
Scan: 156

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:GULF COAST LABORATORIES Contract:000

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 3 Calibration Date(s):06/25/9q --/--/--

Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>LC625 RRF50 =>LB625
RRF100=>LD625 RRF150=>LE625 RRF200=>LG625

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	1.519	1.436	1.240	1.213	1.076	1.297	13.8#
Bromomethane	1.740	1.649	1.443	1.417	1.515	1.553	8.9
Vinyl_Chloride *	1.792	1.718	1.501	1.452	1.400	1.573	11.0*
Chloroethane	1.178	1.134	.991	.956	.981	1.048	9.6
Methylene_Chloride	2.242	1.966	1.811	1.818	1.863	1.940	9.3
Acetone	.748	.501	.503	.500	.354	.521	27.2
Carbon_Disulfide	5.348	5.467	5.052	5.312	4.982	5.232	3.9
1,1-Dichloroethene *	1.973	1.944	1.845	1.973	1.111	1.769	21.0*
1,1-Dichloroethane #	3.401	3.160	3.031	3.016	2.832	3.088	6.8#
1,2-Dichloroethene_(total)	1.797	1.723	1.620	1.643	1.674	1.691	4.2
Chloroform *	3.521	3.199	3.108	3.106	2.948	3.176	6.7*
1,2-Dichloroethane	2.564	2.350	2.380	2.341	2.056	2.338	7.8
2-Butanone	.214	.181	.220	.220	.144	.196	16.8
1,1,1-Trichloroethane	.912	.844	.836	.857	.764	.842	6.3
Carbon_Tetrachloride	.883	.811	.811	.822	.712	.808	7.6
Vinyl_Acetate	1.227	1.150	1.164	1.122	.901	1.113	11.2
Bromodichloromethane	.636	.589	.611	.629	.565	.606	4.8
1,2-Dichloropropane *	.365	.336	.339	.343	.321	.341	4.7*
cis-1,3-Dichloropropene	.766	.712	.854	1.073	1.030	.887	17.9
Trichloroethene	.443	.411	.407	.405	.367	.407	6.7
Dibromochloromethane	.762	.688	.718	.694	.616	.696	7.7
1,1,2-Trichloroethane	.462	.403	.415	.407	.382	.414	7.1
Benzene	1.342	1.250	1.222	1.242	1.199	1.251	4.4
trans-1,3-Dichloropropene	.401	.372	.395	.388	.362	.383	4.3
Bromoform #	.571	.524	.571	.537	.469	.534	7.9#
4-Methyl-2-pentanone	.547	.483	.516	.508	.372	.485	13.9
2-Hexanone	.358	.316	.344	.331	.216	.313	18.0
Tetrachloroethene	.469	.438	.428	.428	.404	.433	5.4
1,1,2,2-Tetrachloroethane #	.727	.651	.678	.669	.623	.670	5.8#
Toluene *	1.468	1.365	1.294	1.358	1.329	1.363	4.8*
Chlorobenzene #	1.127	1.021	.992	.993	.973	1.021	6.0#
Ethylbenzene *	.530	.485	.467	.468	.457	.482	6.0*
[illegible]yrene	1.048	.979	.932	.911	.944	.963	5.6
[illegible]ylene_(total)	1.386	1.286	1.199	1.187	1.165	1.245	7.4
Toluene-d8	2.425	.972	.492	.347	.265	.900	99.5
Bromofluorobenzene	1.413	.576	.293	.188	.146	.523	100.3
1,2-Dichloroethane-d4	4.598	1.770	.887	.567	.383	1.641	105.8

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 3 Calibration Date: 6/27/91 Time: 9:47

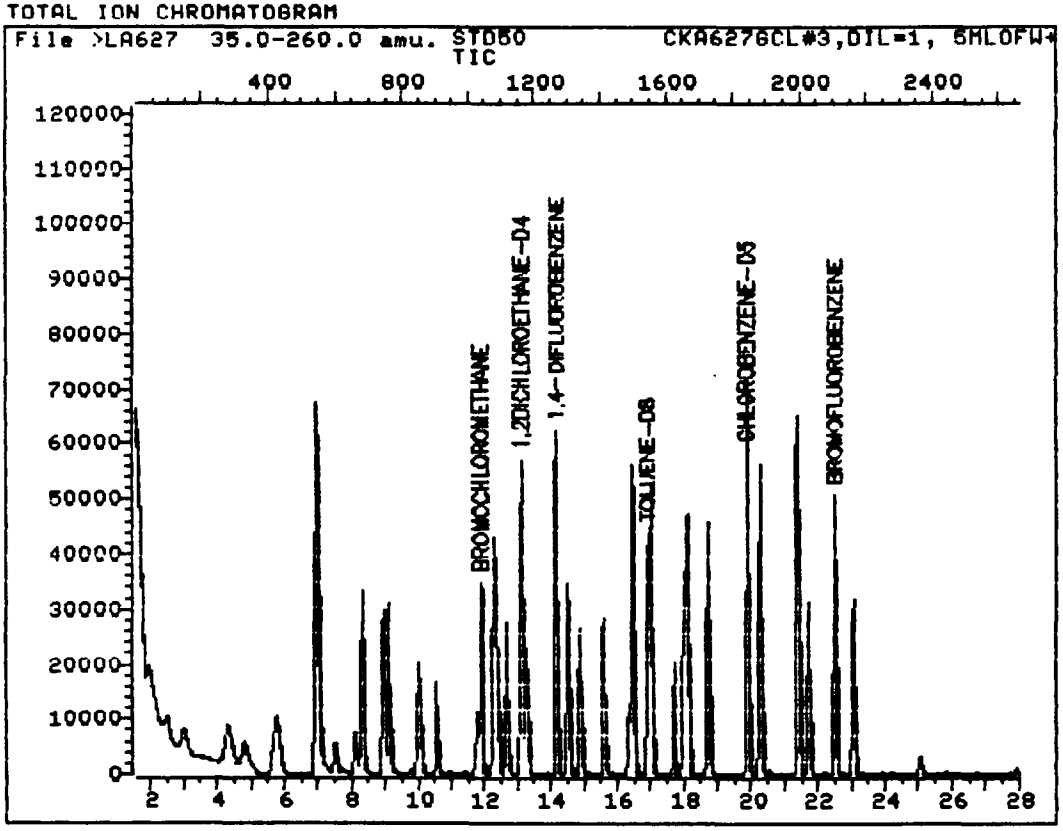
Lab File ID: >LA627 Init. Calib. Date(s): 06/25/91 --/--/--

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND		RRF	RRF50	%D	
Chloromethane	#	1.297	1.084	16.4	#
Bromomethane		1.553	1.303	16.1	
Vinyl Chloride	*	1.573	1.293	17.8	*
Chloroethane		1.048	.919	12.3	
Methylene_Chloride		1.940	2.206	13.7	
Acetone		.521	1.022	96.2	
Carbon_Disulfide		5.232	4.583	12.4	
1,1-Dichloroethene	*	1.769	1.905	7.7	*
1,1-Dichloroethane	#	3.088	2.999	2.9	#
1,2-Dichloroethene_(total)		1.691	1.600	5.4	
Chloroform	*	3.176	3.088	2.8	*
1,2-Dichloroethane		2.338	2.322	.7	
2-Butanone		.196	.194	.9	
1,1,1-Trichloroethane		.842	.792	6.0	
Carbon_Tetrachloride		.808	.752	6.9	
Vinyl Acetate		1.113	1.049	5.7	
Bromodichloromethane		.606	.586	3.4	
1,2-Dichloropropane	*	.341	.335	1.8	*
cis-1,3-Dichloropropene		.887	.994	12.1	
Trichloroethene		.407	.395	2.9	
Dibromochloromethane		.696	.676	2.8	
1,1,2-Trichloroethane		.414	.394	4.9	
Benzene		1.251	1.197	4.3	
trans-1,3-Dichloropropene		.383	.366	4.5	
Bromoform	#	.534	.485	9.2	#
4-Methyl-2-pentanone		.485	.482	.6	
2-Hexanone		.313	.320	2.2	
Tetrachloroethene		.433	.411	5.0	
1,1,2,2-Tetrachloroethane	#	.670	.643	4.0	#
Toluene	*	1.363	1.326	2.7	*
Chlorobenzene	#	1.021	1.024	.2	#
Ethylbenzene	*	.482	.469	2.7	*
Styrene		.963	.962	.1	
Xylene_(total)		1.245	1.223	1.8	
Toluene-d8		.900	.992	10.2	
Bromofluorobenzene		.523	.569	8.8	
1,2-Dichloroethane-d4		1.641	1.817	10.7	

TOTAL ION CHROMATOGRAM



Data File: >LA627::L2 Quant Output File: ^LA627::E1
Name: STD50 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A+2.5UL015,016,003+10UL 8

Id File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910626 22:09

Operator ID: USER4
Quant Time: 910627 10:18
Injected at: 910627 09:47

QUANT REPORT

Operator ID: USER4 Quant Rev: 6 Quant Time: 910627 10:18
Output File: ^LA627::E1 Injected at: 910627 09:47
Data File: >LA627::L2 Dilution Factor: 1.00000
Name: STD50 CKA627
Misc: GCL#3,DIL=1, 5MLOFW+5ULISS017A+2.5UL015,016,003+10UL 8

ID File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910626 22:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	11.89	128.0	21075	50.00	PPB	93
2)	CHLOROMETHANE	2.50	49.8	22854	44.44	PPB	96
3)	BROMOMETHANE	4.31	93.8	27461M	42.97	PPB	98
4)	VINYL CHLORIDE	3.00	61.8	27249M	42.75	PPB	
5)	CHLOROETHANE	4.82	63.8	19376M	43.50	PPB	
6)	CARBON DISULFIDE	7.03	75.8	96598	46.83	PPB	99
7)	METHYLENE CHLORIDE	8.29	83.8	46500	56.04	PPB	95
8)	ACETONE	7.48	42.8	21544	54.99	PPB	95
9)	1,1-DICHLOROETHENE	6.96	95.8	40141	50.89	PPB	93
10)	1,1-DICHLOROETHANE	10.02	62.8	63200	46.76	PPB	99
11)	1,2-DICHLOROETHENE (TOTAL)	8.92	95.8	33727	46.65	PPB	97
12)	CHLOROFORM	12.28	82.8	65083	47.03	PPB	94
13)	1,2-DICHLOROETHANE	13.25	61.8	48945	46.11	PPB	96
14)	1,2-DICHLOROETHANE-D4	13.10	64.8	38299	48.33	PPB	97
15)	*1,4-DIFLUOROBENZENE	14.16	114.1	68721	50.00	PPB	95
16)	2-BUTANONE	11.71	42.8	13332	41.30	PPB	90
17)	1,1,1-TRICHLOROETHANE	12.35	96.8	54449	49.18	PPB	98
18)	CARBON TETRACHLORIDE	12.66	116.8	51665	49.39	PPB	97
19)	VINYL ACETATE	10.56	42.8	72096	44.60	PPB	98
20)	BROMODICHLOROMETHANE	15.59	82.8	40237	48.98	PPB	99
21)	1,2-DICHLOROPROPANE	14.90	62.8	22991	48.16	PPB	92
22)	TRANS-1,3-DICHLOROPROPENE	17.69	74.8	25170	50.09	PPB	95
23)	TRICHLOROETHENE	14.50	129.8	27131	47.84	PPB	97
24)	DIBROMOCHLOROMETHANE	18.72	128.8	46445	49.26	PPB	86
25)	BENZENE	13.10	77.8	82243	49.12	PPB	97
26)	1,1,2-TRICHLOROETHANE	18.01	96.8	27069	47.78	PPB	95
27)	CIS-1,3-DICHLOROPROPENE	16.48	74.8	68316	68.07	PPB	98
28)	BROMOFORM	21.70	172.8	33344	45.66	PPB	95
29)	*CHLOROBENZENE-D5	19.84	116.8	67933	50.00	PPB	99
30)	2-HEXANONE	18.71	42.8	21761	37.72	PPB	94
31)	4-METHYL-2-PENTANONE	16.97	42.8	32741M	39.96	PPB	
32)	TETRACHLOROETHENE	18.10	163.7	27951	49.17	PPB	93
33)	1,1,2,2-TETRACHLOROETHANE	23.04	82.8	43664	44.17	PPB	99
34)	TOLUENE	17.02	90.8	90078	49.65	PPB	95
35)	CHLOROBENZENE	19.90	111.8	69548	50.24	PPB	96
36)	ETHYLBENZENE	20.25	106.0	31841	49.04	PPB	98
37)	STYRENE	21.41	104.0	65365	48.88	PPB	96
38)	BROMOFLUOROBENZENE	22.49	95.0	38651	49.34	PPB	87
39)	TOLUENE-D8	16.91	98.0	67366	51.72	PPB	96
40)	XYLENE (TOTAL)	21.35	91.0	83048	47.67	PPB	97

* Compound is ISTD

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: CKA712 BFB Injection Date: 7/12/91

Instrument ID: GCL#3 BFB Injection Time: 1240

Matrix:(soil/water) SOIL Level:(low/med) LOW Column:(pack/cap) CAP

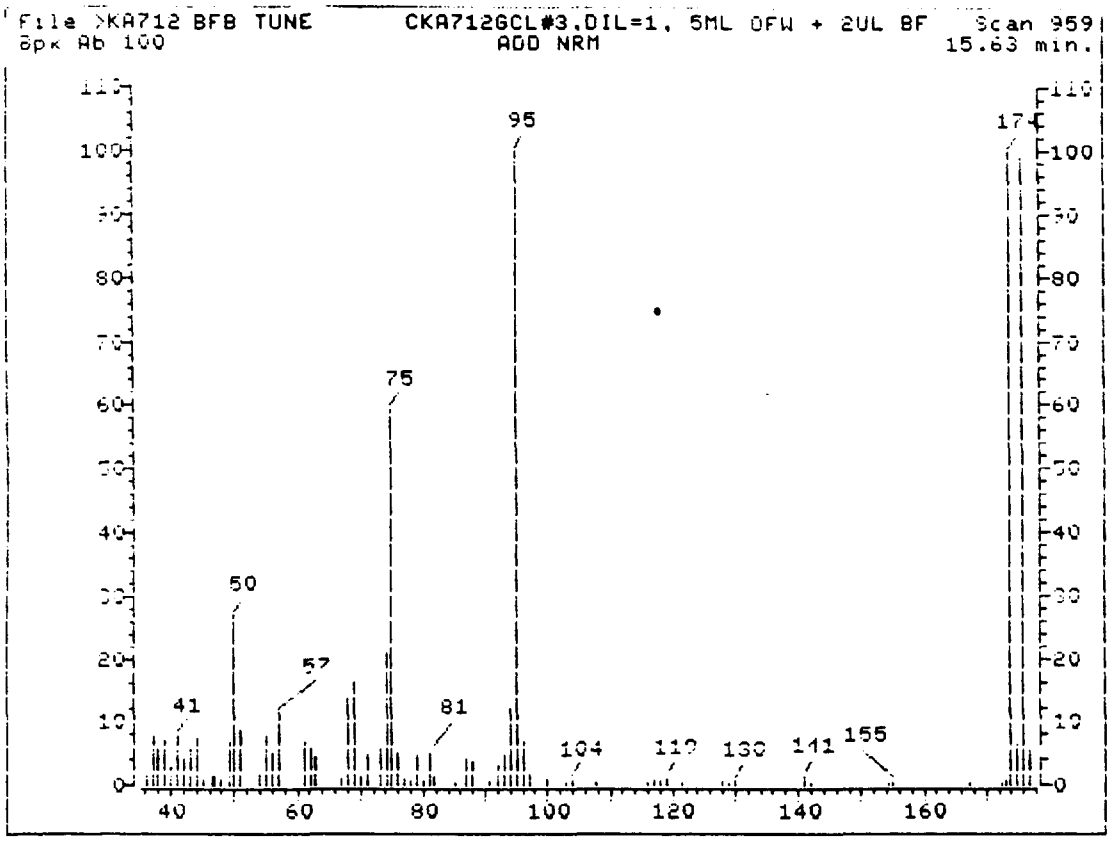
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.8
75	30.0 - 60.0% of mass 95	59.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.6(0.64)1
174	Greater than 50.0% of mass 95	100.0
175	5.0 - 9.0% of mass 174	6.4(6.4)1
176	Greater than 95.0% but less than 101.0% of mass 174	99.2(99.2)1
177	5.0 - 9.0% of mass 176	5.9(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD 50	STD 50	CLA712	07/12/91	1329
02	VBLKGVC216-MB1	91GVC216-MB1	CMC712.	07/12/91	1628
03	Truck Lot Discolor.RE	9106G820-001	CNQS06.	07/13/91	0034
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

8



MS data file header from : >KA712

Sample: BFB TUNE CKA712 Operator: MANAGER MS 2/12/91 12:40
Misc : GCL#3,DIL=1, 5ML DFW + 2UL BFB #022
Sys. #: 3 MS model: 96 SW/HW rev.: 1A ALS # : 0
Method file: DUN Tuning file: TUNE3 No. of extra records: 2
Source temp.: 150 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	20.	160.	0.	0.	0.
Chromatographic times, min. :	2.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	10.0	0.0	0.0	0.0	0.0

/KA/12 BFB TUNE LKA/12GCL#3,DIL=1, 5ML UFW + 20L BFB #022
959 AUD NRM

File: /KA/12 Scan #: 959 Retn. time: 15.63

m/z	int.	m/z	int.	m/z	int.	m/z	int.	m/z	int.
36.05	1.735	51.05	8.738	74.05	20.944	93.00	4.883	127.90	.642
37.05	7.645	54.05	1.927	75.05	59.235	94.00	12.207	129.00	.385
38.05	6.071	55.15	7.806	76.00	5.075	95.00	100.000	130.00	.707
39.05	7.164	56.05	5.140	76.90	.964	96.00	6.682	140.90	1.253
40.05	2.602	57.05	11.404	77.90	.610	97.10	1.735	142.10	.450
41.05	7.870	61.05	6.682	78.90	4.690	100.00	.964	154.20	.450
42.15	4.048	62.05	5.943	79.90	.707	103.10	.321	155.00	.514
43.05	5.879	63.05	4.272	80.90	5.011	103.90	.803	167.50	.353
44.05	7.420	67.05	.899	81.90	1.349	107.90	.418	172.40	.321
45.05	1.189	68.05	13.781	85.10	.482	115.90	.482	173.00	.642
46.35	1.253	69.05	16.062	86.90	4.112	117.00	.707	174.00	100.000
46.95	1.285	70.05	1.221	88.00	3.791	118.00	.610	175.00	6.425
47.95	1.092	71.15	4.594	90.80	.578	119.00	.996	176.00	99.197
49.05	6.842	73.05	5.879	92.00	3.180	121.30	.482	177.00	5.879
50.05	26.791								

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	26.79	26.79	Ok
75	30-60% of mass 95	59.24	59.24	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.68	6.68	Ok
173	Less than 2% of mass 174	.64	.64	Ok
174	Greater than 50% of mass 95	100.00	100.00	Ok
175	5-9% of mass 174	6.42	6.42	Ok
176	95-101% of mass 174	99.20	99.20	Ok
177	5-9% of mass 176	5.88	5.93	Ok

Injection Date: 07/12/91
Injection Time: 12:40
Data File: >KA/12
Scan: 959

QUANT REPORT

Operator ID: USER4 Quant Rev: 6 Quant Time: 910/12 14:59
Output File: ^LA/12::E2 Injected at: 910/12 13:29
Data File: >LA/12::L2 Dilution Factor: 1.00000
Name: STD 50 + NITR KA/12
Misc: GCL#3,DIL=1, 5ML DFW + 2.5UL 015,016 + 100UL 8/3

ID File: ID_LIM::U1
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/06 15:01

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	12.62	128.0	22757	50.00	ppb	98
3)	CHLOROMETHANE	5.01	49.8	6124	18.48	ppb	98
4)	BROMOMETHANE	6.86	93.8	15107	32.78	ppb	96
5)	VINYL CHLORIDE	5.59	61.8	11038	22.26	ppb	98
6)	CHLOROETHANE	7.21	63.8	5751	37.67	ppb	97
8)	TRICHLOROFLUOROMETHANE	8.07	101.0	28187	31.44	ppb	99
9)	ACROLEIN	9.19	56.0	75041	75041.00	NO CALIB	95
10)	ACRYLONITRILE	10.77	53.0	64384	64384.00	NO CALIB	92
11)	ACETONITRILE	10.09	41.0	30530M	30530.00	NO CALIB	
15)	CARBON DISULFIDE	9.62	75.8	61669	38.41	ppb	99
16)	METHYLENE CHLORIDE	10.32	83.8	42510	66.31	ppb	83
17)	ACETONE	9.58	42.8	18435	65.53	ppb	94
19)	1,1-DICHLOROETHENE	9.28	95.8	24251	41.86	ppb	98
20)	1,1-DICHLOROETHANE	11.41	62.8	36545	44.42	ppb	98
21)	1,2-DICHLOROETHENE (TOTAL)	10.75	95.8	17469	44.26	ppb	83
22)	CHLOROFORM	12.75	82.8	66299	38.82	ppb	96
23)	1,2-DICHLOROETHANE	13.67	61.8	52873	36.56	ppb	94
24)	1,2-DICHLOROETHANE-D4	13.53	64.8	42268	39.91	ppb	96
25)	*1,4-DIFLUOROBENZENE	14.30	114.1	89107	50.00	ppb	97
27)	2-BUTANONE	12.32	42.8	7695	29.16	ppb	82
28)	1,1,1-TRICHLOROETHANE	13.01	96.8	58667	45.58	ppb	95
29)	CARBON TETRACHLORIDE	13.26	116.8	56311	46.14	ppb	98
30)	VINYL ACETATE	11.55	42.8	44254	43.71	ppb	89
31)	CROTONONITRILE	14.32	67.0	29697	29697.00	NO CALIB	80
32)	BROMODICHLOROMETHANE	15.80	82.8	57838	42.96	ppb	99
33)	1,2-DICHLOROPROPANE	15.23	62.8	30329	38.71	ppb	92
34)	TRANS-1,3-DICHLOROPROPENE	18.07	74.8	25915	39.19	ppb	96
35)	TRICHLOROETHENE	14.78	129.8	37121	46.76	ppb	95
36)	DIBROMOCHLOROMETHANE	19.52	128.8	51968	49.03	ppb	88
37)	BENZENE	13.61	77.8	83841	40.65	ppb	98
38)	1,1,2-TRICHLOROETHANE	18.52	96.8	29079	46.63	ppb	97
39)	CIS-1,3-DICHLOROPROPENE	16.76	74.8	76634	40.29	ppb	97
40)	BROMOFORM	23.60	172.8	44256	57.22	ppb	96
41)	2-CHLOROETHYLVINYLETHER	16.45	63.0	22106M	40.54	ppb	
43)	*CHLOROBENZENE-D5	21.08	116.8	81591	50.00	ppb	97
44)	2-HEXANONE	19.18	42.8	19424	41.18	ppb	85
45)	4-METHYL-2-PENTANONE	17.13	42.8	29292	41.40	ppb	94
46)	TETRACHLOROETHENE	18.85	163.7	36766	50.15	ppb	87
49)	1,1,2,2-TETRACHLOROETHANE	25.20	82.8	45317	47.91	ppb	97
50)	TOLUENE	17.52	91.0	98788	42.94	ppb	97
51)	CHLOROBENZENE	21.16	112.0	77135	44.49	ppb	98
52)	ETHYLBENZENE	21.49	91.0	126024	43.20	ppb	98
53)	STYRENE	23.07	104.0	71659	46.96	ppb	90

	Compound	R.I.	U ion	Area	Conc	Units	q
54)	BROMOFLUOROBENZENE	24.66	95.0	49526	43.28	ppb	85
55)	TOLUENE-D8	17.56	98.0	77234	46.14	ppb	96
56)	XYLENE (TOTAL)	23.01	91.0	95611	44.62	ppb	99

* Compound is ISTD

QUANT REPORT

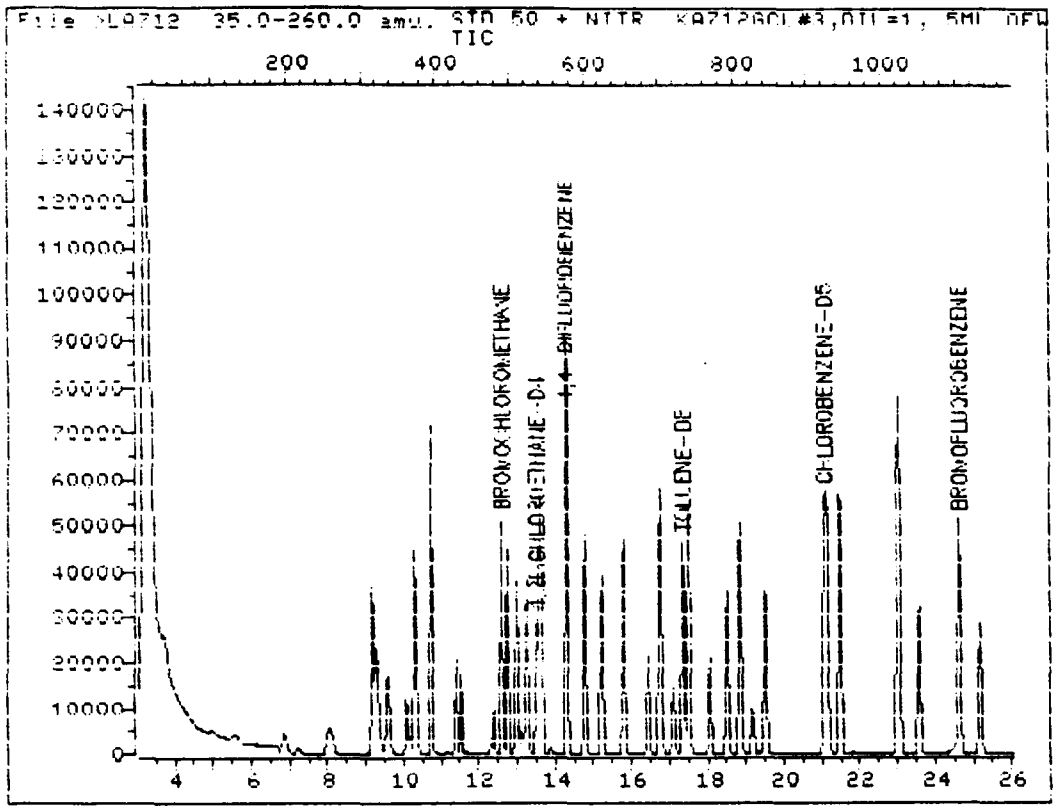
Operator ID: USER4 Quant Rev: 6 Quant Time: 910/12 14:03
Output File: ^LA/12::E2 Injected at: 910/12 13:29
Data File: >LA/12::L2 Dilution Factor: 1.00000
Name: STD 50 + NITR KA/12
Misc: GCL#3,DIL=1, 5ML DFW + 2.5UL 015,016 + 100UL 8/3

ID File: ID_MS3::D2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/11 23:33

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	12.62	128.0	22757	50.00	PPB	94
2)	CHLOROMETHANE	5.01	49.8	6124	41.41	PPB	98
3)	BROMOMETHANE	6.86	93.8	15107	39.49	PPB	96
4)	VINYL CHLORIDE	5.59	61.8	11038	38.71	PPB	98
5)	CHLOROETHANE	7.21	63.8	5751	34.63	PPB	97
6)	CARBON DISULFIDE	9.62	75.8	61669	43.27	PPB	99
7)	METHYLENE CHLORIDE	10.32	83.8	42510	59.46	PPB	83
8)	ACETONE	9.58	42.8	18435	66.84	PPB	94
9)	1,1-DICHLOROETHENE	9.28	95.8	24251	42.78	PPB	98
10)	1,1-DICHLOROETHANE	11.41	62.8	36545	41.11	PPB	98
11)	1,2-DICHLOROETHENE (TOTAL)	10.75	95.8	17469	36.50	PPB	83
12)	CHLOROFORM	12.75	82.8	66299	42.94	PPB	96
13)	1,2-DICHLOROETHANE	13.67	61.8	52873	42.99	PPB	94
14)	1,2-DICHLOROETHANE-D4	13.53	64.8	42268	48.90	PPB	96
15)	*1,4-DIFLUOROBENZENE	14.30	114.1	89107	50.00	PPB	97
16)	2-BUTANONE	12.32	42.8	7695	39.05	PPB	82
17)	1,1,1-TRICHLOROETHANE	13.01	96.8	58667	44.58	PPB	95
18)	CARBON TETRACHLORIDE	13.26	116.8	56311	43.38	PPB	98
19)	VINYL ACETATE	11.55	42.8	44254	42.75	PPB	89
20)	BROMODICHLOROMETHANE	15.80	82.8	57838	44.24	PPB	99
21)	1,2-DICHLOROPROPANE	15.23	62.8	30329	44.42	PPB	92
22)	TRANS-1,3-DICHLOROPROPENE	18.07	74.8	25915	43.64	PPB	96
23)	TRICHLOROETHENE	14.78	129.8	37121	43.88	PPB	95
24)	DIBROMOCHLOROMETHANE	19.52	128.8	51968	43.81	PPB	88
25)	BENZENE	13.61	77.8	83841	43.97	PPB	98
26)	1,1,2-TRICHLOROETHANE	18.52	96.8	29079	44.62	PPB	97
27)	CIS-1,3-DICHLOROPROPENE	16.76	74.8	76634	43.64	PPB	97
28)	BROMOFORM	23.60	172.8	44256	42.49	PPB	96
29)	*CHLOROBENZENE-D5	21.08	116.8	81591	50.00	PPB	99
30)	2-HEXANONE	19.18	42.8	19424	42.65	PPB	85
31)	4-METHYL-2-PENTANONE	17.13	42.8	29292	44.07	PPB	94
32)	TETRACHLOROETHENE	18.85	163.7	56766	44.75	PPB	87
33)	1,1,2,2-TETRACHLOROETHANE	25.20	82.8	45317	42.80	PPB	97
34)	TOLUENE	17.52	90.8	98788	45.12	PPB	97
35)	CHLOROBENZENE	21.16	111.8	77135	43.45	PPB	98
36)	ETHYLBENZENE	21.49	106.0	34807	43.68	PPB	98
37)	STYRENE	23.07	104.0	71659	44.40	PPB	90
38)	BROMOFLUOROBENZENE	24.66	95.0	49526	50.64	PPB	85
39)	TOLUENE-D8	17.36	98.0	77234	51.79	PPB	96
40)	XYLENE (TOTAL)	23.01	91.0	95611	44.46	PPB	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >LA712::L2 Quant Output File: ^LA712::E2
Name: STD 50 + NITR KA712
Misc: GCL#3,DIL=1, 5ML DFW + 2.5UL U15,U16 + 10UL 8/3

Id File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/11 23:33

Operator ID: USER4
Quant Time: 910/12 14:03
Injected at: 910/12 13:29

2A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESTL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 3 Calibration Date: 7/12/91 Time: 13:29

Lab File ID: >LA712 Init. Calib. Date(s): 07/09/91 --/--/--

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane #	.3791	.2691	28.9 #
Bromomethane	.7931	.6641	16.3
Vinyl Chloride *	.6471	.4851	25.0 *
Chloroethane	.4641	.2531	45.5
Methylene Chloride	2.5431	1.8681	26.5
Acetone	1.4201	.8101	42.9
Carbon Disulfide	3.1761	2.7101	14.7
1,1-Dichloroethene *	1.1971	1.0661	11.0 *
1,1-Dichloroethane #	2.4271	1.6061	33.8 #
1,2-Dichloroethene (total)	1.1241	.7681	31.7
Chloroform *	3.3061	2.9131	11.9 *
1,2-Dichloroethane	3.0651	2.3231	24.2
2-Butanone	.1671	.0861	48.3
1,1,1-Trichloroethane	.7541	.6581	12.7
Carbon Tetrachloride	.7341	.6321	13.9
Vinyl Acetate	.7341	.4971	32.3
Bromodichloromethane	.7431	.6491	12.6
1,2-Dichloropropane *	.3861	.3401	11.9 *
cis-1,3-Dichloropropene	.9651	.8601	10.9
Trichloroethene	.4021	.4171	3.7
Dibromochloromethane	.5991	.5831	2.7
1,1,2-Trichloroethane	.3281	.3261	.6
Benzene	.9961	.9411	5.6
trans-1,3-Dichloropropene	.3451	.2911	15.8
Bromoform #	.4801	.4971	3.5 #
4-Methyl-2-pentanone	.4511	.3591	20.4
2-Hexanone	.3221	.2381	26.0
Tetrachloroethene	.4291	.4511	5.0
1,1,2,2-Tetrachloroethane #	.6291	.5551	11.8 #
Toluene *	1.2691	1.2111	4.6 *
Chlorobenzene #	.9781	.9451	3.3 #
Ethylbenzene *	.4481	.4271	4.9 *
Styrene	.8801	.8781	.2
Xylene (total)	1.2271	1.1721	4.5
Toluene-d8	.9131	.9471	3.7
Bromofluorobenzene	.6181	.6071	1.9
1,2-Dichloroethane-d4	2.2651	1.8571	18.0

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 S Calibration Date(s): 07/09/91 --/--/--

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>LB/09 RRF50 =>LA/09
RRF100=>LC/09 RRF150=>LD/09 RRF200=>LE/09

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.389	.317	.421	.378	.390	.379	10.1#
Bromomethane	.854	.736	.842	.749	.782	.793	6.8
Vinyl Chloride *	.691	.534	.712	.633	.666	.647	10.8*
Chloroethane	.481	.521	.457	.415	.445	.464	8.5
Methylene Chloride	4.457	3.191	1.964	1.500	1.600	2.543	49.7
Acetone	1.872	2.865	.788	.703	.870	1.420	66.0
Carbon Disulfide	3.104	2.983	3.395	3.056	3.341	3.176	5.7
1,1-Dichloroethene *	1.222	1.186	1.264	1.066	1.249	1.197	6.6*
1,1-Dichloroethane #	2.568	2.666	2.459	2.158	2.284	2.427	8.5#
1,2-Dichloroethene (total)	1.222	1.240	1.141	.998	1.019	1.124	10.0
Chloroform *	3.482	3.353	3.441	3.000	3.254	3.306	5.8*
1,2-Dichloroethane	3.361	3.106	3.082	2.874	2.902	3.065	6.4
2-Butanone	.234	.118	.166	.196	.122	.167	29.5
1,1,1-Trichloroethane	.835	.777	.764	.690	.704	.754	7.8
Carbon Tetrachloride	.811	.721	.745	.667	.674	.734	8.5
Vinyl Acetate	.806	.674	.726	.777	.688	.734	7.7
Bromodichloromethane	.800	.735	.757	.695	.727	.743	5.2
1,2-Dichloropropane *	.403	.358	.403	.363	.405	.386	6.2*
cis-1,3-Dichloropropene	1.010	.932	1.008	.918	.956	.965	4.4
Trichloroethene	.443	.411	.413	.374	.378	.402	7.0
Dibromochloromethane	.671	.591	.600	.574	.562	.599	7.1
1,1,2-Trichloroethane	.360	.307	.330	.321	.324	.328	6.0
Benzene	1.067	.962	1.039	.926	.986	.996	5.7
trans-1,3-Dichloropropene	.358	.325	.353	.331	.361	.345	4.7
Bromoform #	.554	.466	.473	.474	.432	.480	9.4#
4-Methyl-2-pentanone	.546	.336	.453	.524	.397	.451	19.4
2-Hexanone	.415	.224	.326	.382	.262	.322	24.8
Tetrachloroethene	.479	.437	.439	.392	.397	.429	8.3
1,1,2,2-Tetrachloroethane #	.746	.558	.617	.632	.594	.629	11.3#
Toluene *	1.346	1.210	1.335	1.163	1.290	1.269	6.3*
Chlorobenzene #	1.068	.952	1.013	.889	.968	.978	6.8#
Ethylbenzene *	.471	.437	.468	.411	.454	.448	5.5*
Styrene	.945	.818	.922	.878	.837	.880	6.1
Xylene (total)	1.368	1.180	1.326	1.078	1.180	1.227	9.7
Toluene-d8	2.459	.997	.508	.339	.260	.913	99.8
Bromofluorobenzene	1.661	.694	.334	.228	.175	.618	99.8
1,2-Dichloroethane-d4	6.133	2.522	1.207	.842	.620	2.265	100.9

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID Lab Sample ID: 9106G820-001

Sample wt/vol: 5.00 (g/mL) G Lab File ID: CNQS02

Level: (low/med) LOW Date Received: 06/14/91

% Moisture: not dec. 0 Date Analyzed: 06/27/91

Column: (pack/cap) CAP Dilution Factor: 1000

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10000	U
74-83-9	Bromomethane	10000	U
75-01-4	Vinyl Chloride	10000	U
75-00-3	Chloroethane	10000	U
75-09-2	Methylene Chloride	5300	B
67-64-1	Acetone	6700	JB
75-15-0	Carbon Disulfide	5000	U
75-35-4	1,1-Dichloroethene	5000	U
75-34-3	1,1-Dichloroethane	5000	U
540-59-0	1,2-Dichloroethene (total)	5000	U
67-66-3	Chloroform	5000	U
107-06-2	1,2-Dichloroethane	5000	U
78-93-3	2-Butanone	10000	U
71-55-6	1,1,1-Trichloroethane	5000	U
56-23-5	Carbon Tetrachloride	5000	U
108-05-4	Vinyl Acetate	10000	U
75-27-4	Bromodichloromethane	5000	U
78-87-5	1,2-Dichloropropane	5000	U
10061-01-5	cis-1,3-Dichloropropene	5000	U
79-01-6	Trichloroethene	5000	U
124-48-1	Dibromochloromethane	5000	U
79-00-5	1,1,2-Trichloroethane	5000	U
71-43-2	Benzene	5000	U
10061-02-6	Trans-1,3-Dichloropropene	5000	U
75-25-2	Bromoform	5000	U
108-10-1	4-Methyl-2-pentanone	10000	U
591-78-6	2-Hexanone	10000	U
127-18-4	Tetrachloroethene	5000	U
79-34-5	1,1,2,2-Tetrachloroethane	5000	U
108-88-3	Toluene	5000	U
108-90-7	Chlorobenzene	5000	U
100-41-4	Ethylbenzene	5000	U
100-42-5	Styrene	5000	U
1330-20-7	Xylene (total)	5000	U

1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

Truck Lot Discolor.

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID

Lab Sample ID: 9106G820-001

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CNQS02

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. 0

Date Analyzed: 06/27/91

Column: (pack/cap) CAP

Dilution Factor: 1000

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

Kue

mac

QUANT REPORT

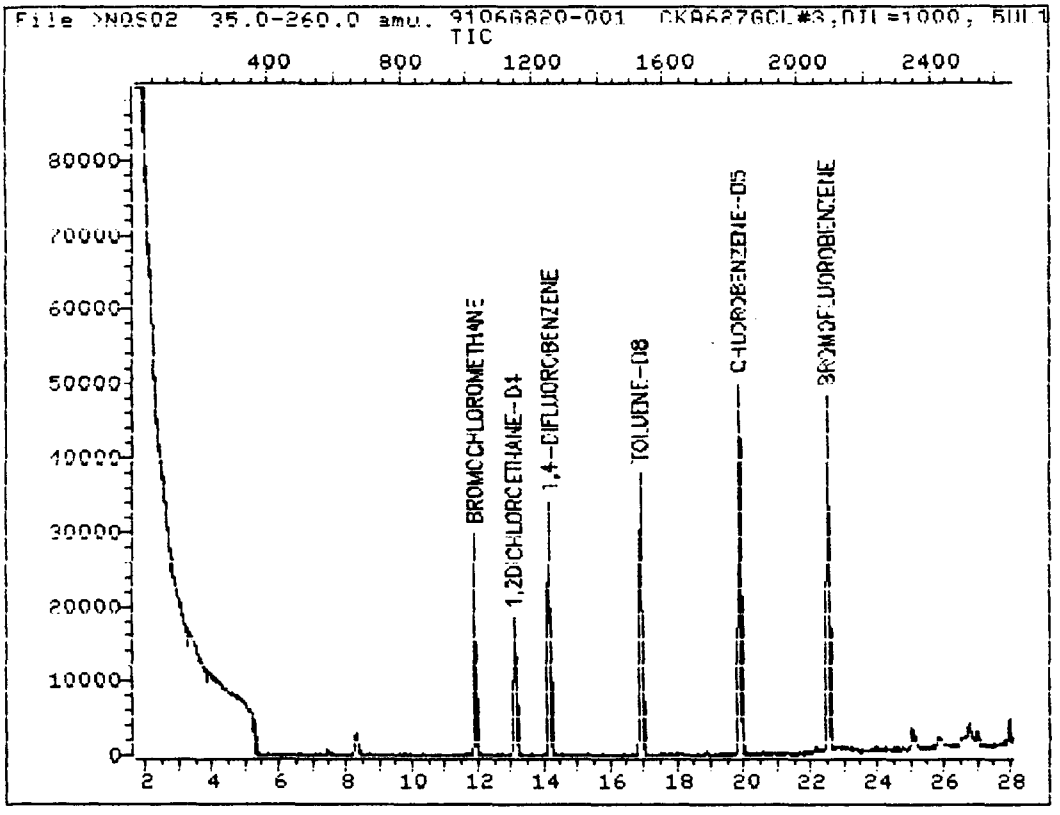
Operator ID: USER8 Quant Rev: 6 Quant Time: 910627 16:29
Output File: ^NQS02::E1 Injected at: 910627 15:58
Data File: >NQS02::L2 Dilution Factor: 1.00000
Name: 9106G820-001 CKA627
Misc: GCL#3,DIL=1000, 50L1/1 + 5ML DFW + 5UL ISS

ID File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	11.88	128.0	18101	50.00	PPB	96
2)	METHYLENE CHLORIDE	8.29	83.8	4261	5.33	PPB	97
8)	ACETONE	7.43	42.8	2470	6.67	PPB	89
~~13)~~	1,2-DICHLOROETHANE	14.14	61.8	3154	3.75	PPB	45
14)	1,2-DICHLOROETHANE-D4	13.08	64.8	34418	52.32	PPB	95
15)	*1,4-DIFLUOROBENZENE	14.14	114.1	62969	50.00	PPB	98
29)	*CHLOROBENZENE-D5	19.82	116.8	66438	50.00	PPB	99
~~34)~~	TOLUENE	17.01	90.8	1286	.73	PPB	96
38)	BROMOFLUOROBENZENE	22.46	95.0	37042	49.00	PPB	90
39)	TOLUENE-D8	16.87	98.0	58569	44.45	PPB	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM

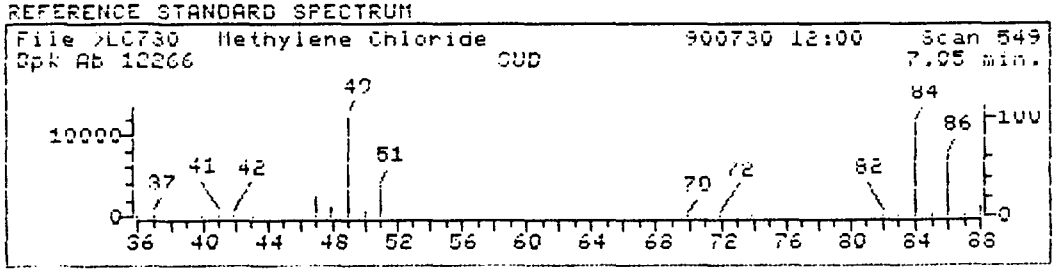


Data File: >NQS02::L2 Quant Output File: ^NQS02::E1
Name: 9106G820-001 CKA627
Misc: GCL#3,DIL=1000, 5UL1/1 + 5ML DFW + 5UL ISS

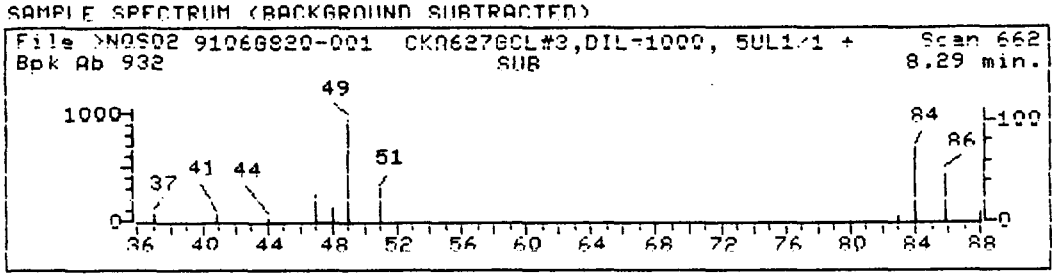
Id File: ID_MS3::U2
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910627 10:45

Operator ID: USER8
Quant Time: 910627 16:29
Injected at: 910627 15:58

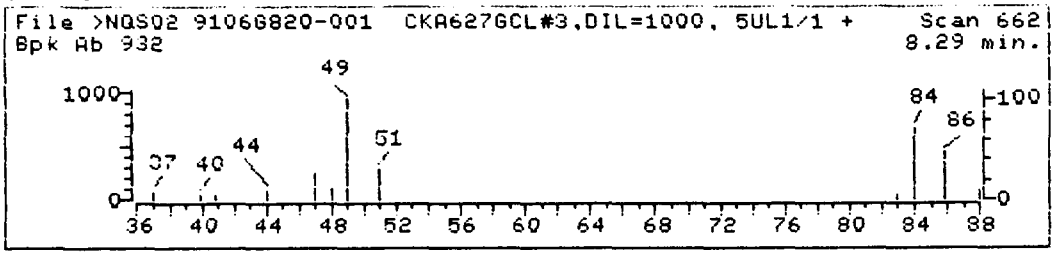
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



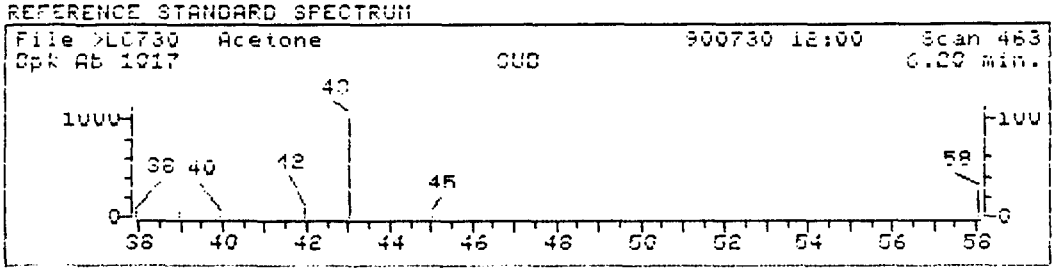
SAMPLE SPECTRUM (UNALTERED)



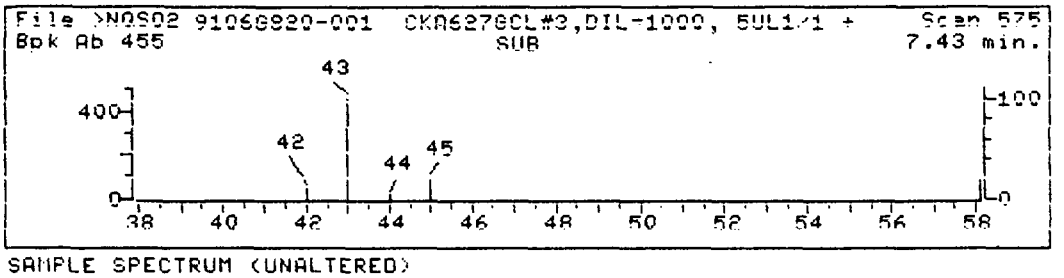
Data File: >NQS02::L2 Quant Output File: ^NQS02::E1
Name: 9106G820-001 CKA627
Misc: GCL#3,DIL=1000, 5UL1/1 + 5ML DFW + 5UL ISS
Quant Time: 910627 16:29 Quant ID File: ID_MS3::U2
Injected at: 910627 15:58 Last Calibration: 910627 10:45

Compound No: 7
Compound Name: METHYLENE CHLORIDE
Scan Number: 662
Retention Time: 8.29 min.
Quant Ion: 83.8
Area: 4261
Concentration: 5.33 PPB
q-value: 97

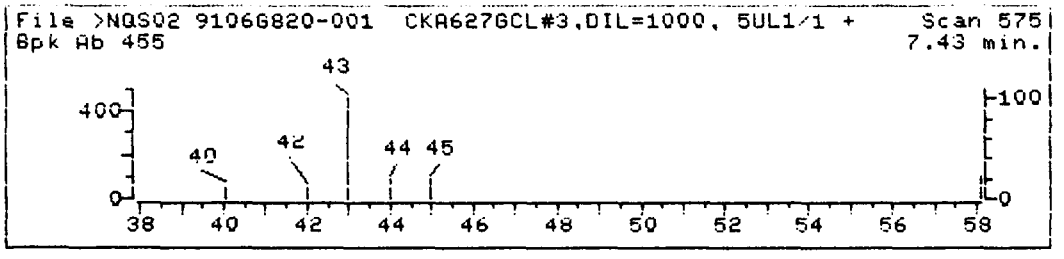
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >NQS02::L2 Quant Output File: ^NQS02::E1
Name: 9106G820-001 CKA627
Misc: GCL#3,DIL=1000, 5UL1/1 + 5ML DFW + 5UL ISS
Quant Time: 910627 16:29 Quant ID File: ID_MS3::U2
Injected at: 910627 15:58 Last Calibration: 910627 10:45

Compound No: 8
Compound Name: ACETONE
Scan Number: 575
Retention Time: 7.43 min.
Quant Ion: 42.8
Area: 2470
Concentration: 6.67 PPB
q-value: 89

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.RE

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID

Lab Sample ID: 9106G820-001

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CNQS06

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. 0

Date Analyzed: 07/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	110	B
67-64-1	Acetone	370	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	12	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	30	
79-34-5	1,1,2,2-Tetrachloroethane	49	
108-88-3	Toluene	19	
108-90-7	Chlorobenzene	5	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	3	J
1330-20-7	Xylene (total)	6	

1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

Truck Lot Discolor.RE

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID

Lab Sample ID: 9106G820-001

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: CN0S06

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. 0

Date Analyzed: 07/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ACETONITRILE	10.07	300	J
2.	ACRYLONITRILE	10.74	200	J

Quant report

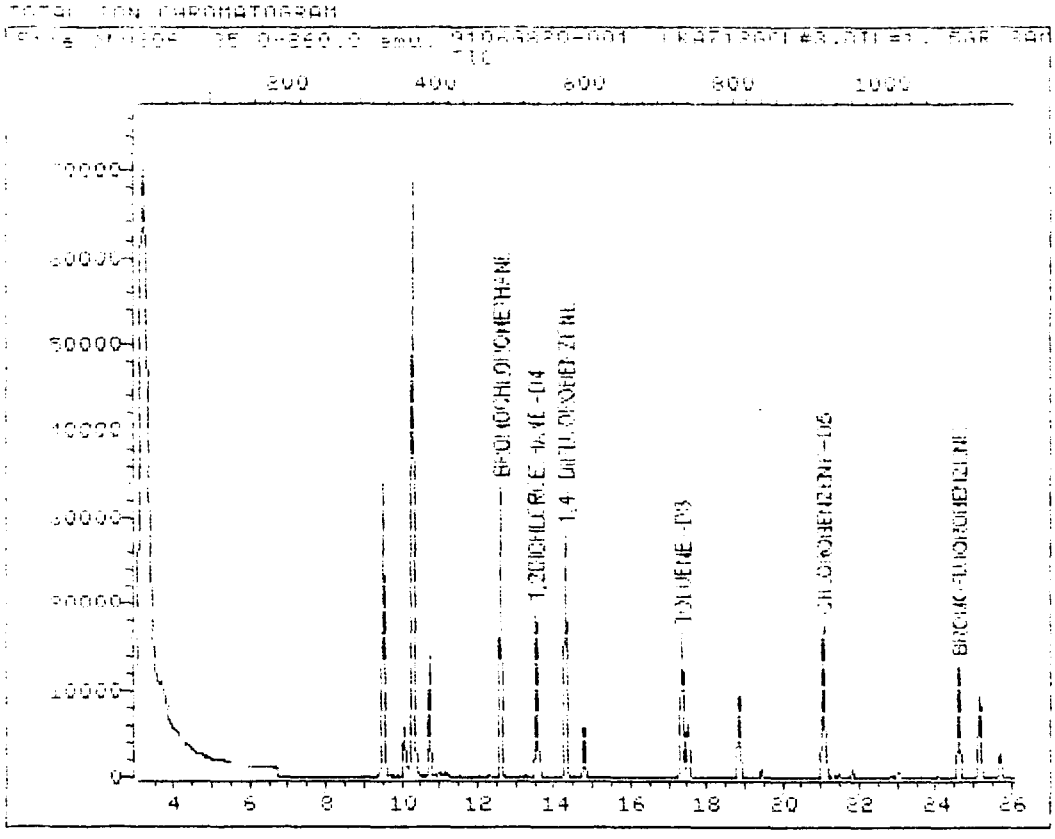
Operator ID: GERO Quant rev: 0 Quant time: 910/14 15:26
Output file: 7NW506::E Injected at: 910/13 08:34
Data file: 7NW506::L2 Dilution factor: 1.00000
Name: 91066820-001 CRA/12
Misc: GCL#3,DIL=1, 35R SHIP + 5ML DRW + 5UL TSS DI/E

ID file: ID_LIM::U1
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/12 15:20

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	12.62	126.0	15269	50.00	ppb	99
10)	ACRYLONITRILE	10.74	53.0	18689	171.97	ppb	74
11)	ACETONITRILE	10.07	41.0	14226	276.66	ppb	64
16)	METHYLENE CHLORIDE	10.91	83.6	62705	189.24	ppb	92
17)	ACETONE	9.91	42.0	75210	374.47	ppb	99
24)	1,2-DICHLOROETHANE-D4	13.54	64.0	29153	51.08	ppb	93
25)	*1,4-DIFLUOROBENZENE	14.32	114.1	46477	50.00	ppb	96
39)	TRICHLOROETHENE	14.79	129.0	4759	12.24	ppb	93
37)	BENZENE	13.64	77.0	4076	4.06	ppb	96
43)	*CHLOROBENZENE-D5	21.08	116.0	26104	50.00	ppb	98
46)	TETRACHLOROETHENE	18.83	163.7	6965	29.61	ppb	83
49)	1,1,2,2-TETRACHLOROETHANE	25.18	83.0	14261	49.16	ppb	98
50)	TOLUENE	17.53	91.0	11734	18.55	ppb	95
51)	CHLOROBENZENE	21.14	112.0	2348	4.76	ppb	98
52)	ETHYLBENZENE	2nd XYL ~~21.49~~	91.0	1197	~~1.46~~	ppb	99
53)	STYRENE	23.05	104.0	1202	2.62	ppb	83
54)	BROMOFLUOROBENZENE	24.64	95.0	12372	39.04	ppb	82
55)	TOLUENE-D8	17.37	98.0	28039	36.74	ppb	75
56)	XYLENE (TOTAL)	21.32	91.0	2273	3.73	ppb	97
		~ 21.56			5.68 ppb		

* Compound is ISTD

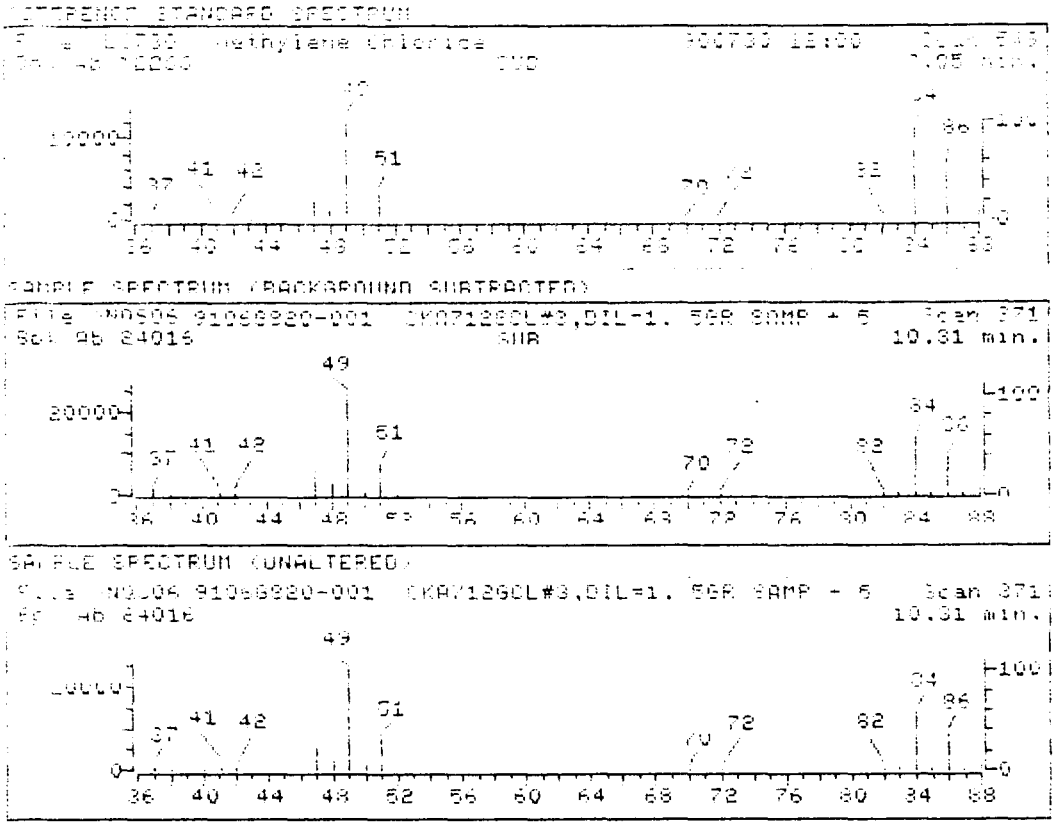
Total Xylene:



Data File: >NW506::L2 Quant Output File: >NW506::L2
Name: 910668 20-001 LKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DPW + 5UL ISO DI/B

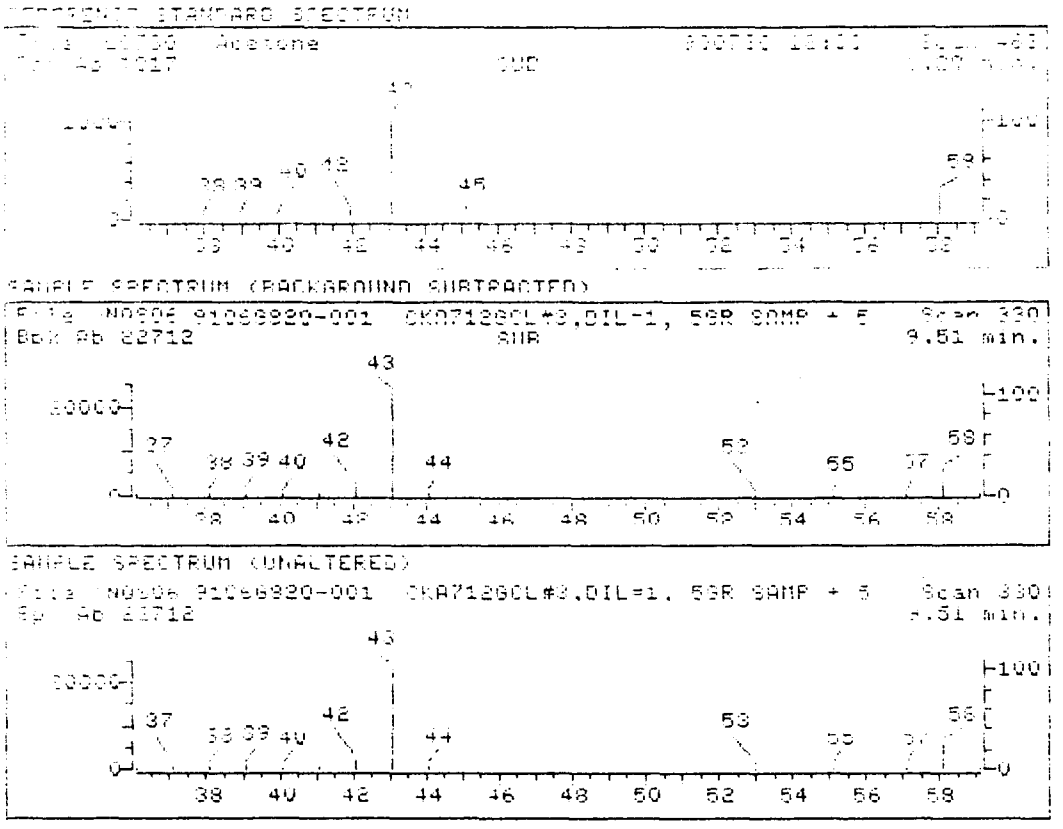
Id File: ID_LIM::D1
Title: CAPILLARY ID FILE FOR INSTRUMENT GCL #3
Last Calibration: 910/12 15:20

Operator ID: USER6
Quant Time: 910/14 16:26
Injected at: 910/13 00:34



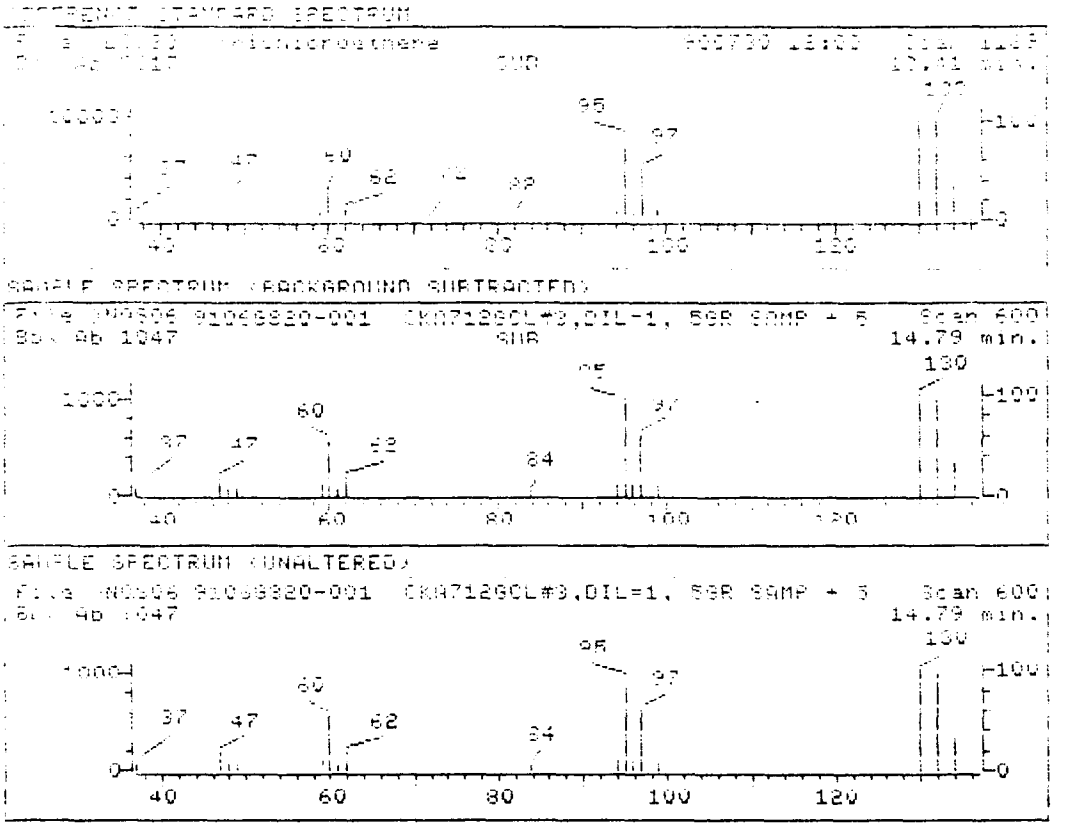
Data File: >NW506::L2 Quant Output File: ^NW506::E/
Name: 91066820-001 CKA/12
Misc: GCL#3,DIL=1, 5GR 5AMP + 5ML DFW - 5UL ISS 01/3
Quant Time: 910/14 18:26 Quant ID File: ID_LIM:.01
Injected at: 910/13 08:34 Last Calibration: 910/12 19:20

Compound No: 16
Compound Name: METHYLENE CHLORIDE
Scan Number: 371
Retention Time: 10.31 min.
Quant Ion: 85.8
Area: 62709
Concentration: 109.24 ppb
q-value: 82



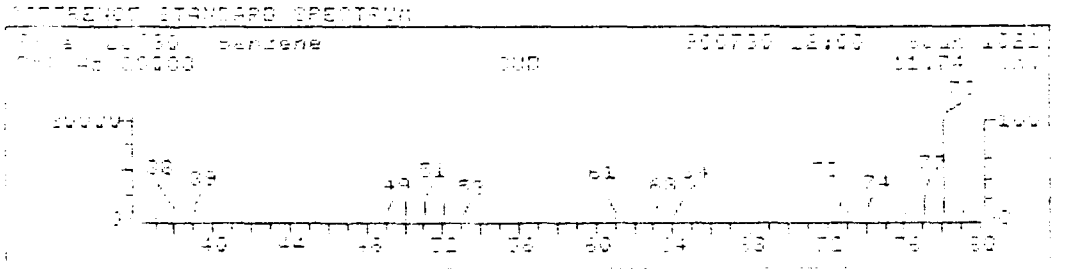
Data File: :NW506::L2 Quant Output File: :NW506::E7
Name: 91066820-001 CKA712
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DRW + 50L ISS 01/6
Quant Time: 910/14 18:26 Quant ID File: ID_LIM:.01
Injected at: 910/13 00:34 Last Calibration: 910/12 19:20

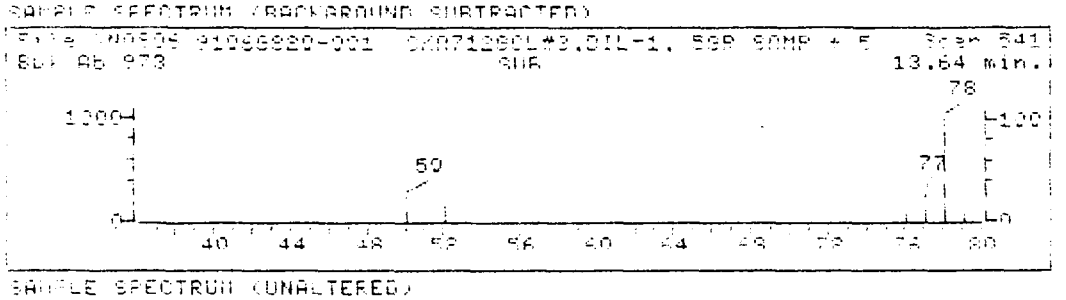
Compound No: 17
Compound Name: ACETONE
Scan Number: 330
Retention Time: 9.51 min.
Quant Ion: 42.8
Area: 95210
Concentration: 374.49 ppb
q-value: 99

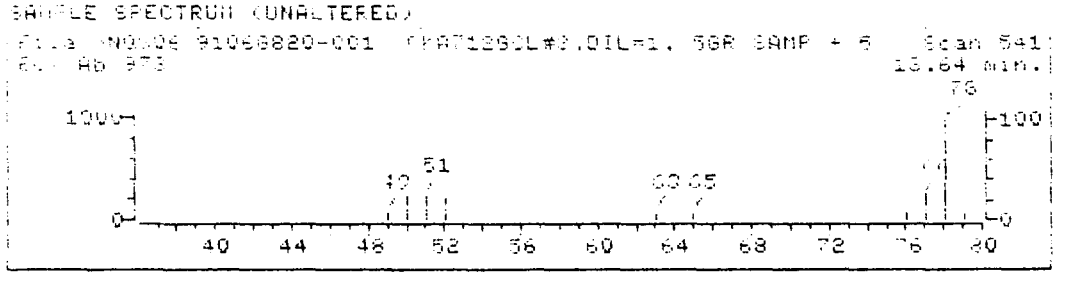


Data File: /NW506::L2 Quant Output File: /NW506::E/
Name: 910668820-001 CKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DFW + 50L 155 DI/d
Quant Time: 910/14 18:26 Quant ID File: ID_LIM::01
Injected at: 910/13 00:54 Last Calibration: 910/12 15:20

Compound No: 35
Compound Name: TRICHLOROETHENE
Scan Number: 600
Retention Time: 14.79 min.
Quant Ion: 129.8
Area: 4799
Concentration: 12.24 ppb
q-value: 99

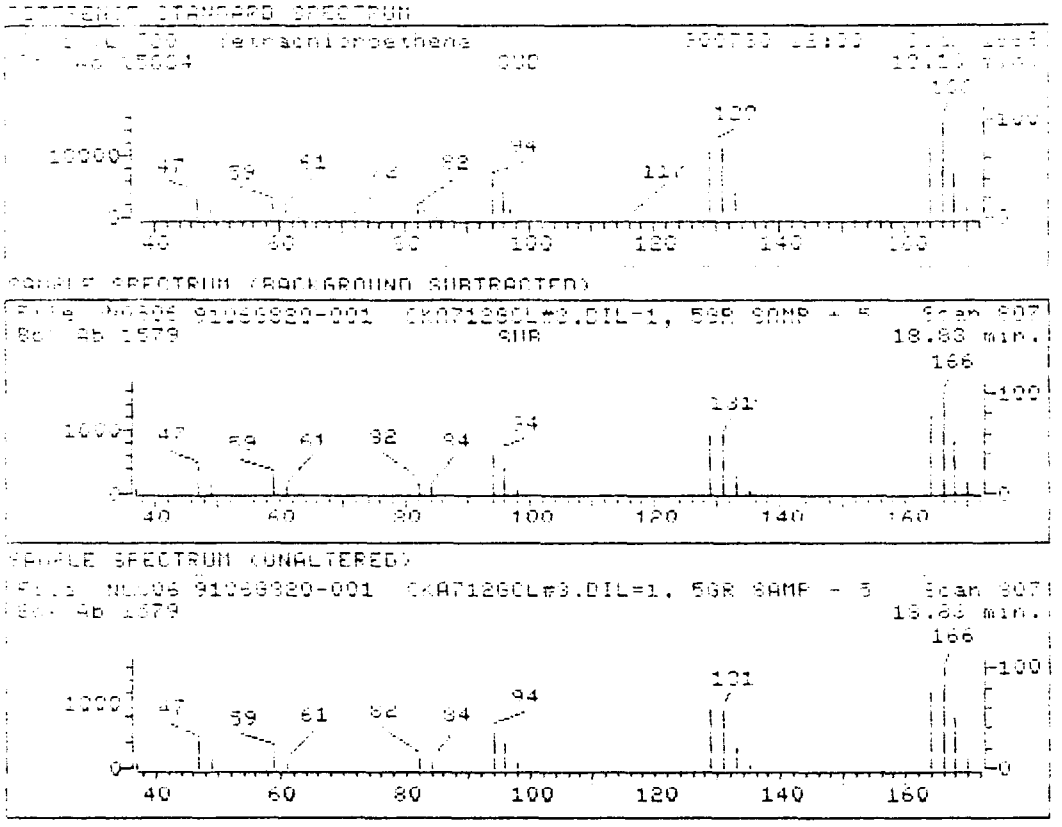






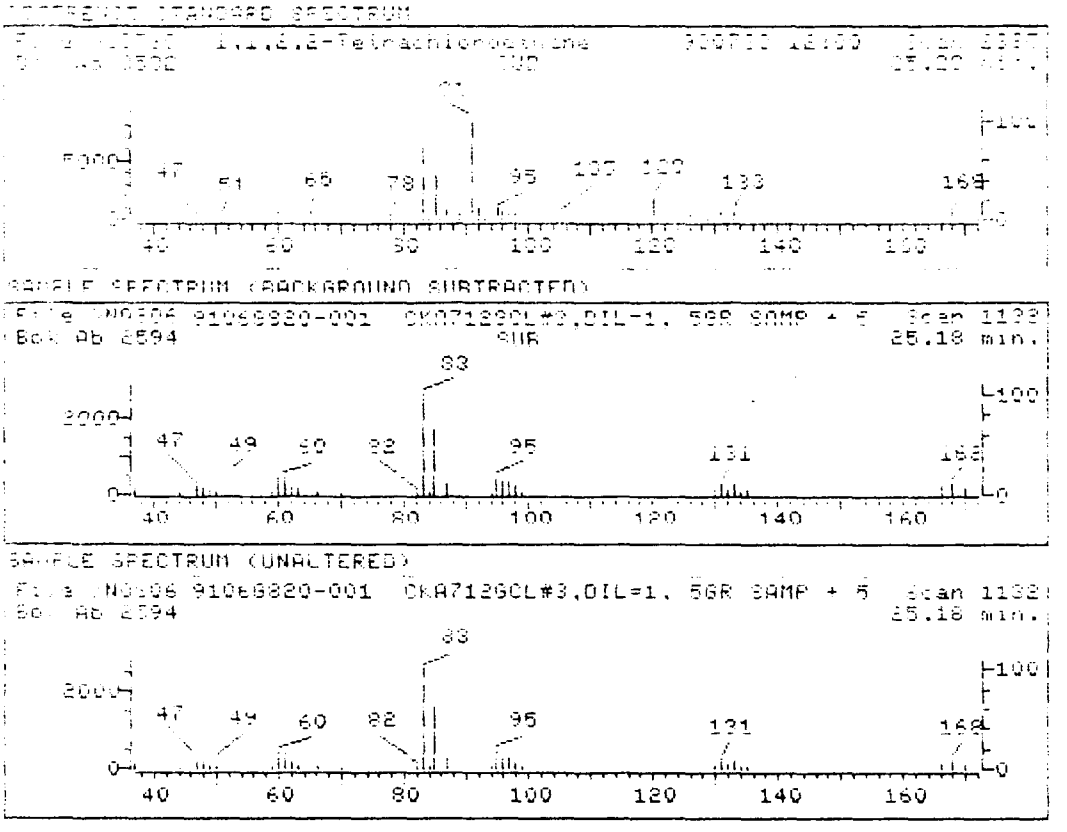
Data File: >NW506::L2 Quant Output File: >NW506::E2
Name: 910668820-001 LKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DRW + 5UL ISO 01/8
Quant Time: 910/14 18:26 Quant ID File: ID_LIM::01
Injected at: 910/13 00:34 Last Calibration: 910/12 15:20

Compound No: 32
Compound Name: BENZENE
Scan Number: 541
Retention Time: 13.64 min.
Quant Ion: 77.6
Area: 4076
Concentration: 4.66 ppb
q-value: 76



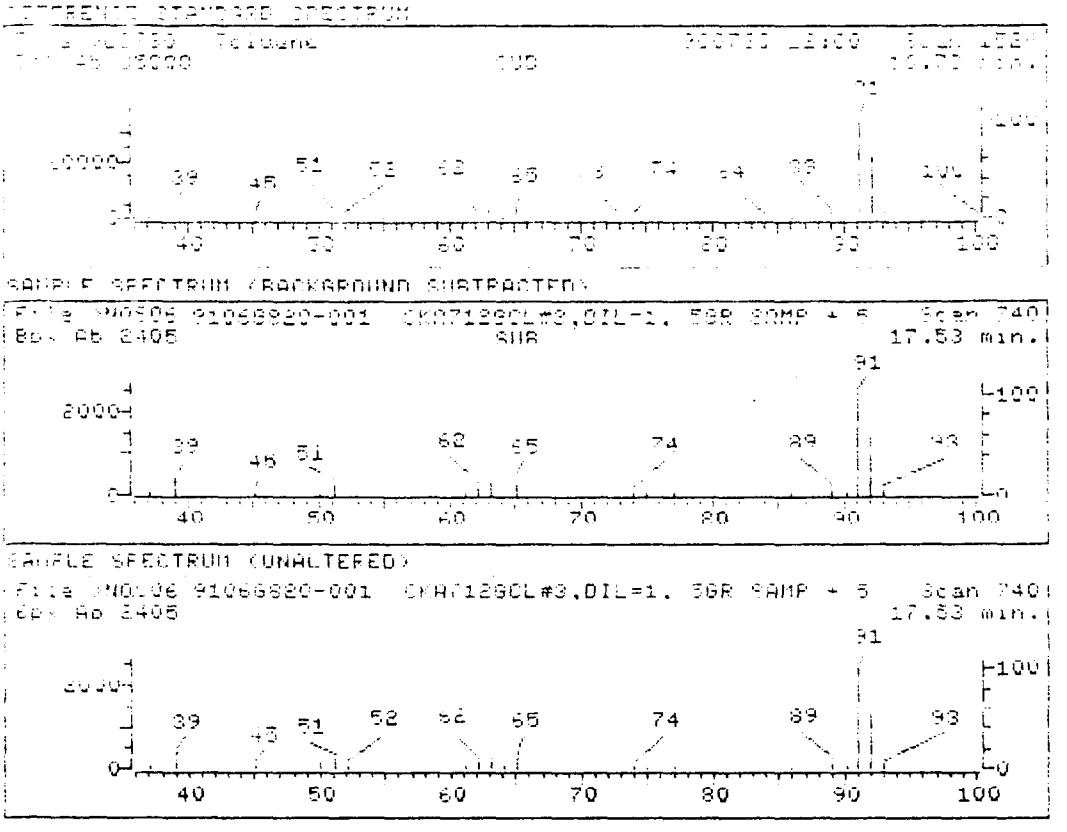
Data File: NW506::L2 Quant Output File: NW506::E2
Name: 910668Z0-001 CKA712
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DHW + 5UL 155 DI/B
Quant Time: 910714 16:26 Quant ID File: ID_LIM::D1
Injected at: 910713 00:34 Last Calibration: 910712 19:20

Compound No: 46
Compound Name: TETRACHLOROETHENE
Scan Number: 807
Retention Time: 18.83 min.
Quant Ion: 163.7
Area: 6965
Concentration: 27.61 ppb
q-value: 83



Data File: >NW506::L2 Quant Output File: >NW506::L2
Name: 91060820-001 CKA712
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DHW + 5UL 155 01/8
Quant Time: 910/14 16:26 Quant ID File: ID_LIM::01
Injected at: 910/13 00:34 Last Calibration: 910/12 19:10

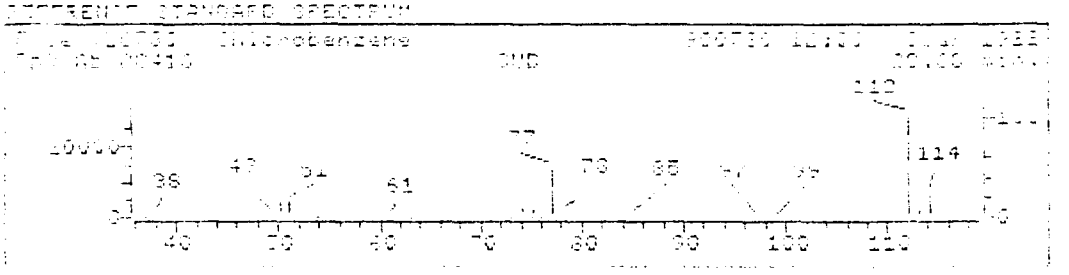
Compound No: 49
Compound Name: 1,1,2,2-TETRACHLOROETHANE
Scan Number: 1132
Retention Time: 25.18 min.
Quant Ion: 82.8
Area: 14261
Concentration: 49.18 ppb
q-value: 98



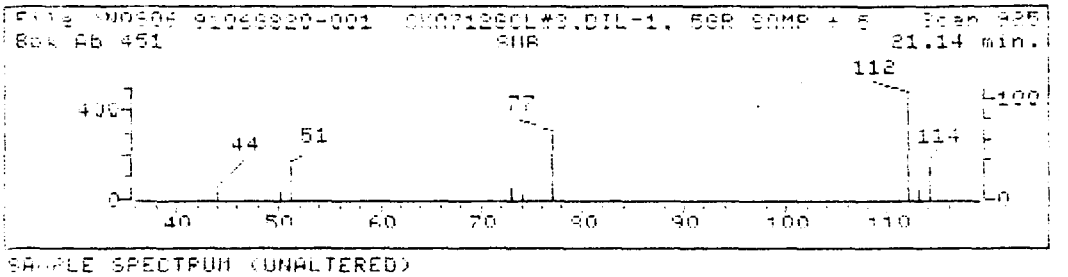
Data File: /NW506::L2 Quant Output File: /NW506::E/
Name: 910668Z0-001 CKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DHW + 5UL ISS 01/B
Quant Time: 910/14 16:26 Quant ID File: ID_LIM::01
Injected at: 910/13 00:54 Last Calibration: 910/12 15:20

Compound No: 50
Compound Name: TOLUENE
Scan Number: 740
Retention Time: 17.53 min.
Quant Ion: 91.0
Area: 11754
Concentration: 18.56 ppb
q-value: 95

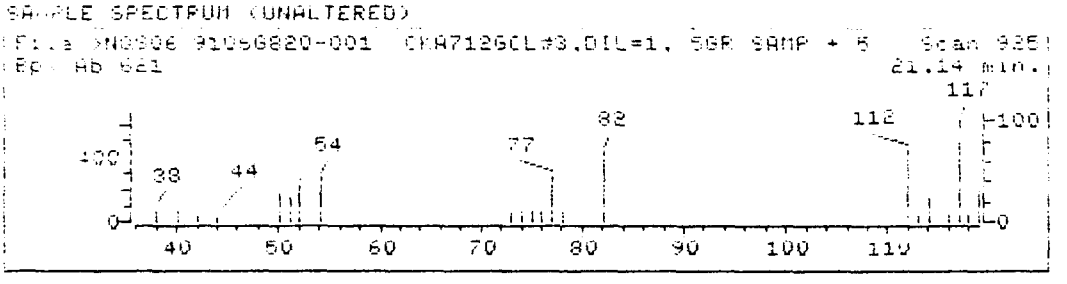
DIFFERENT STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

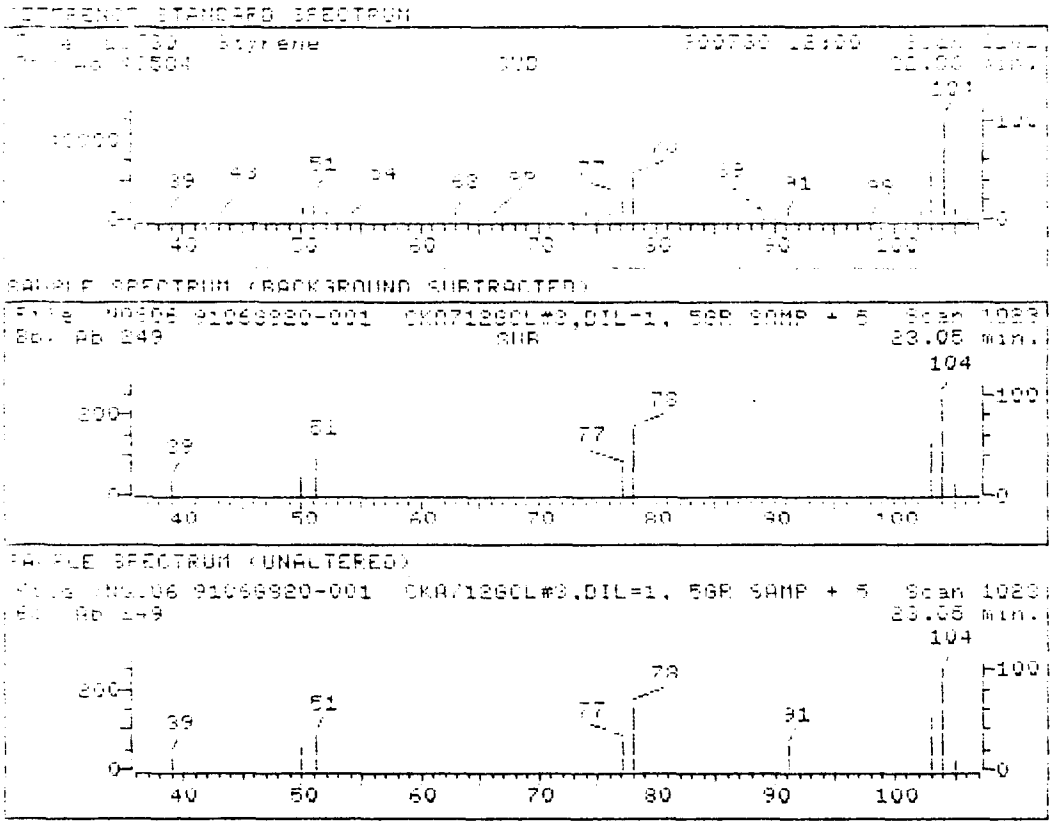


SAMPLE SPECTRUM (UNALTERED)



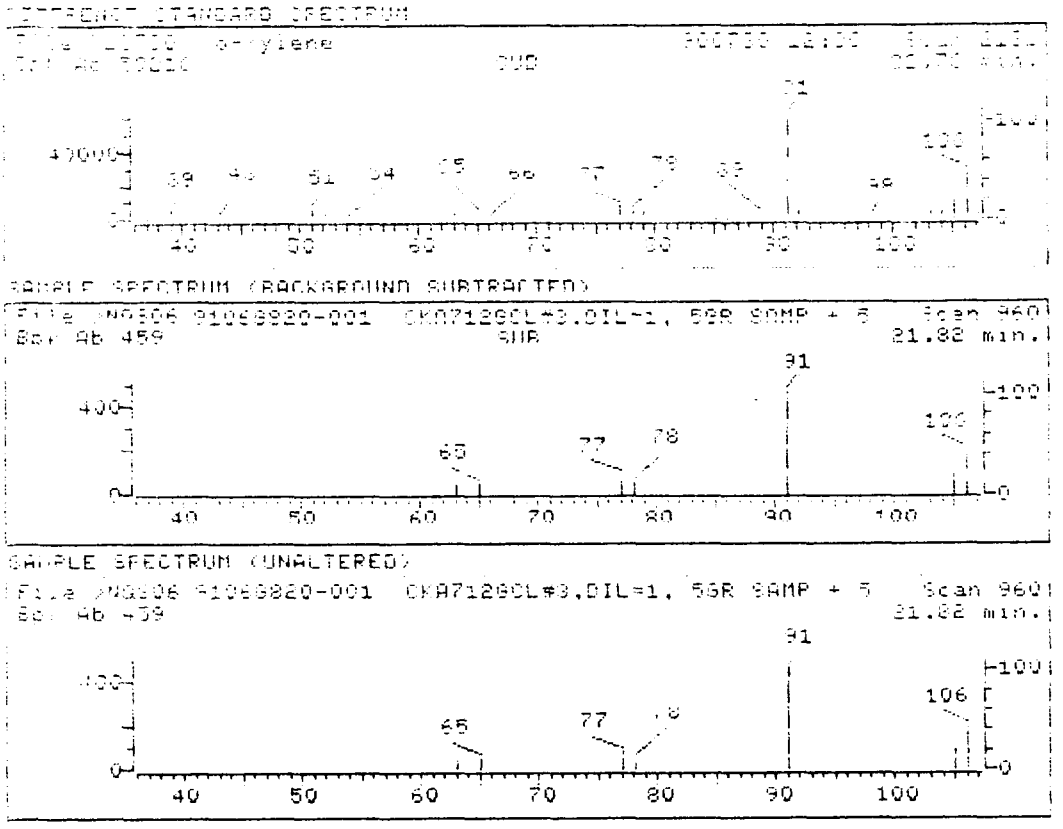
Data File: NW506::L2 Quant Output File: NW506::E2
Name: 91066820-001 CKA712
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DRW + 5UL ISS 01/B
Quant Time: 910/14 18:26 Quant ID File: ID_LIM::U1
Injected at: 910/13 00:34 Last Calibration: 910/12 19:20

Compound No: 91
Compound Name: CHLOROBENZENE
Scan Number: 925
Retention Time: 21.14 min.
Quant Ion: 112.0
Area: 2348
Concentration: 4.76 ppb
q-value: 98



Data File: >NW506::L2 Quant Output File: ^NW506::E>
Name: 910668Z0-001 CKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DRW + 50UL ISS 01/6
Quant Time: 910/14 16:26 Quant ID File: ID_LIM::01
Injected at: 910/15 00:34 Last Calibration: 910/12 19:20

Compound No: 99
Compound Name: STYRENE
Scan Number: 1029
Retention Time: 23.05 min.
Quant Ion: 104.0
Area: 1202
Concentration: 2.62 ppb
q-value: 89



Data File: >NW506::L2 Quant Output File: NW506::E>
Name: 910666820-001 CKA>12
Misc: 6LL#3,DIL=1, 5GR SAMP + 5ML UHW + 5UL 155 01>8
Quant Time: 910>14 18:26 Quant ID File: ID_LIM::01
Injected at: 910>12 00:>4 Last Calibration: 910>12 1>:20

Compound No: 56
Compound Name: >YLENE (TOTAL)
Scan Number: 960
Retention Time: 21.82 min.
Quant Ion: 91.0
Area: 22>9
Concentration: 5.>3 ppb
q-value: 99

. data file header from : >NQ506

Sample: 9106G820-001 CKA/12 Operator: USER6 MS 7/13/91 0:34
Misc : GCL#3,DIL=1, 5GR SAMP + 5ML DFW + 5UL IS5 01/B
Sys. #: 3 MS model: 96 SW/HW rev.: 1A ALS # : 0
Method file: JOHN Tuning file: TUNE3 No. of extra records: 2
Source temp.: 150 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	0.	80.	170.	0.	0.
Chromatographic times, min. :	4.0	2.0	10.0	0.0	0.0
Chromatographic rate, deg/min:	10.0	4.0	0.0	0.0	0.0

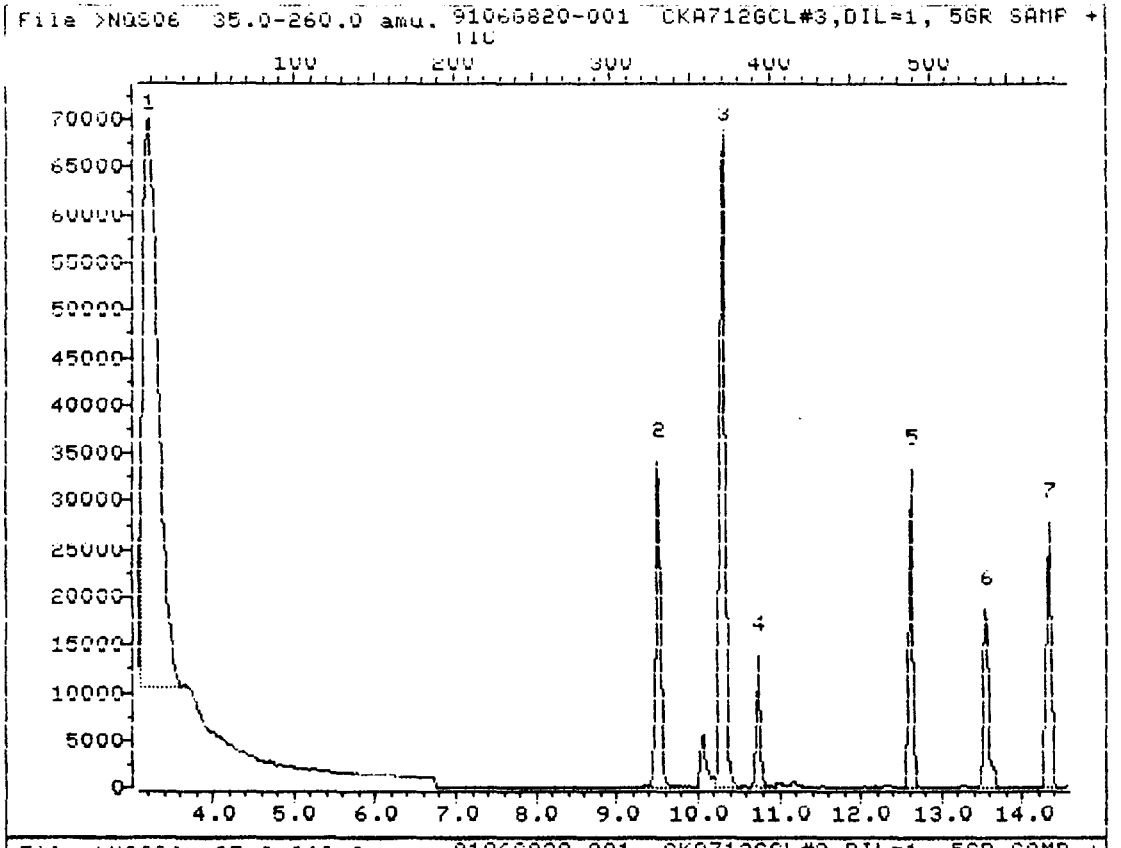
>NQ506 9106G820-001 CKA/12GCL#3,DIL=1, 5GR SAMP + 5ML DFW + 5UL IS

35.01 260.0 TIC
Upslope: .20 Area Reject: 4.00 % Max Peaks: 12 Bunching: 1
Dnslope: 0.00 Results File VD1R88 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area		corr. % max.	% of total
1	3.22	3	8	29	59417	1101853	778789	DMPT	100.00	40.291
2	9.51	321	330	343	34126	140306	•140306	ACE	18.02	7.259
3	10.31	366	371	381	68936	314639	•312906	DCM	40.18	16.188
4	10.74	390	393	400	13755	46642	•45118		5.79	2.334
5	12.62	484	489	495	33445	112084	112084	ISS	14.39	5.799
6	13.54	532	536	545	18967	83240	83240	04	10.69	4.306
7	14.32	570	576	582	27904	118762	118762	ISS	15.25	6.144
8	17.37	726	732	737	16582	81234	81234	TDS	10.43	4.203
9	18.85	803	808	814	9831	51756	51756	PCE	6.65	2.678
10	21.08	916	922	930	17715	92632	92632	ISS	11.89	4.792
11	24.64	1098	1104	1109	12981	66075	66075	BFB	8.48	3.418
12	25.18	1126	1132	1139	9326	49993	49993	PCE	6.42	2.586

Sum of corrected areas: 1932895.

11:39 AM THU., 25 JULY, 1991


File >NQS06 35.0-260.0 amu. 9106G820-001 CKA712GCL#3,DIL=1, 5GR SAMP +
TIC
100
200
300
400
500
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1
2
3
4
5
6
7
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5.0
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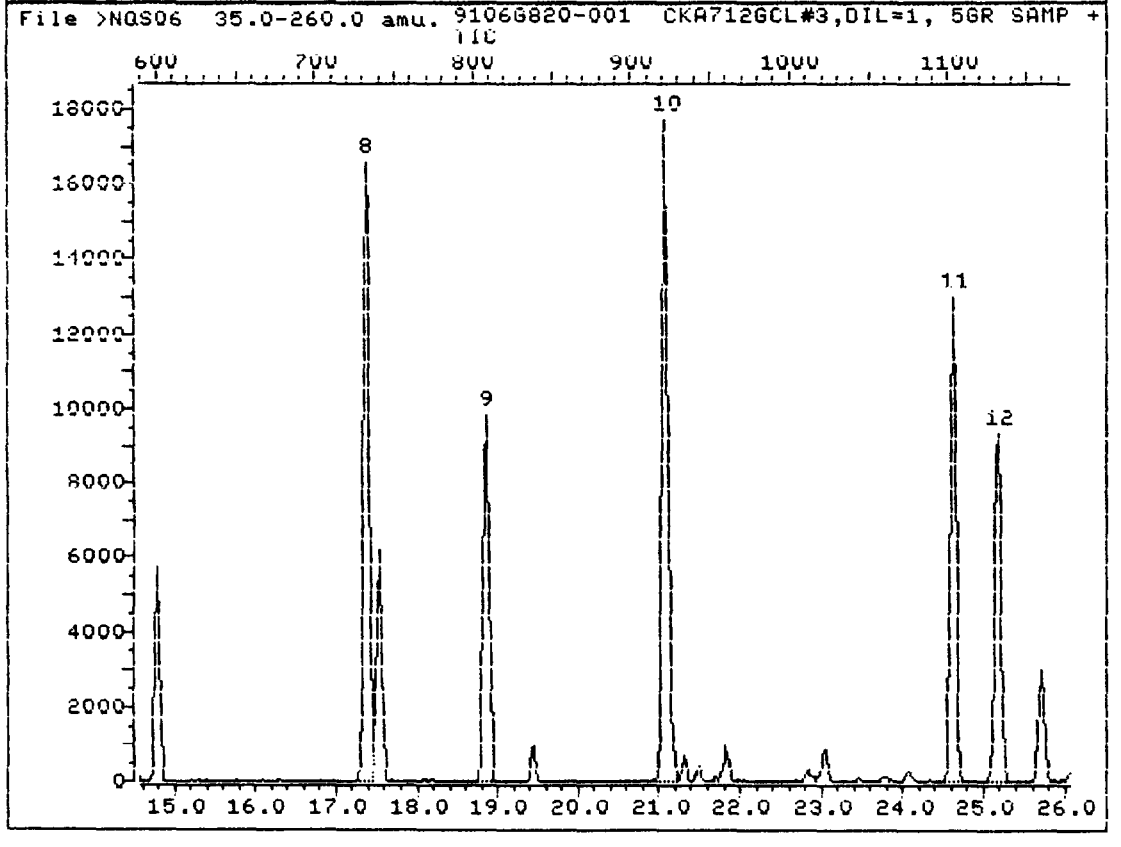
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0


File >NQS06 35.0-260.0 amu. 9106G820-001 CKA712GCL#3,DIL=1, 5GR SAMP +
TIC
600
700
800
900
1000
1100
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
8
9
10
11
12
15.0
16.0
17.0
18.0
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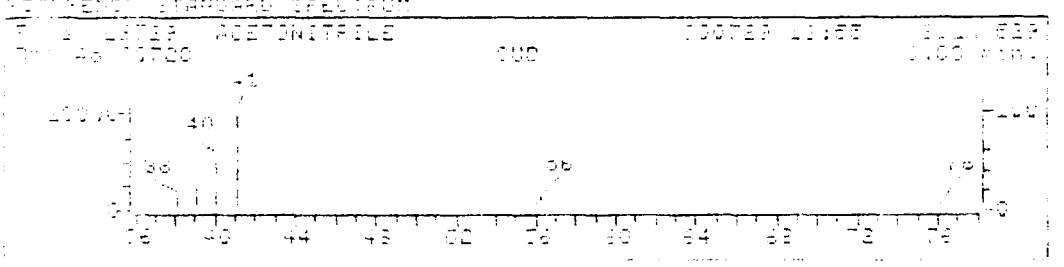
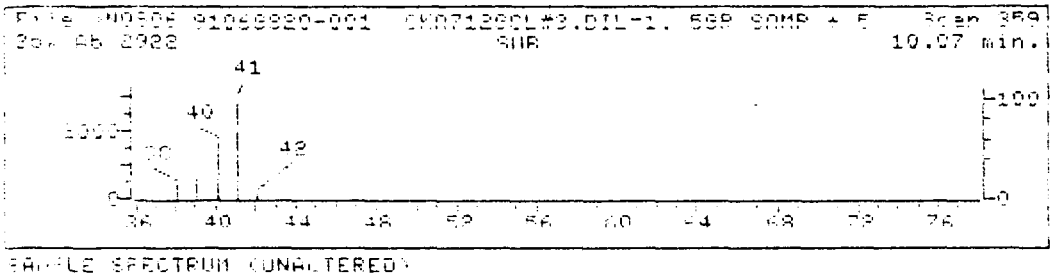
20.0
21.0
22.0
23.0
24.0
25.0
26.0

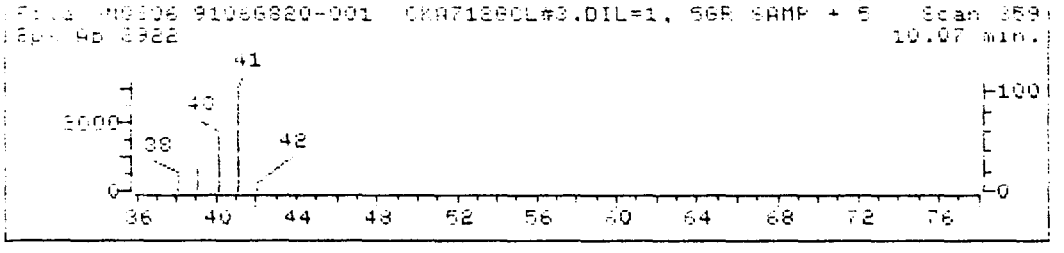
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

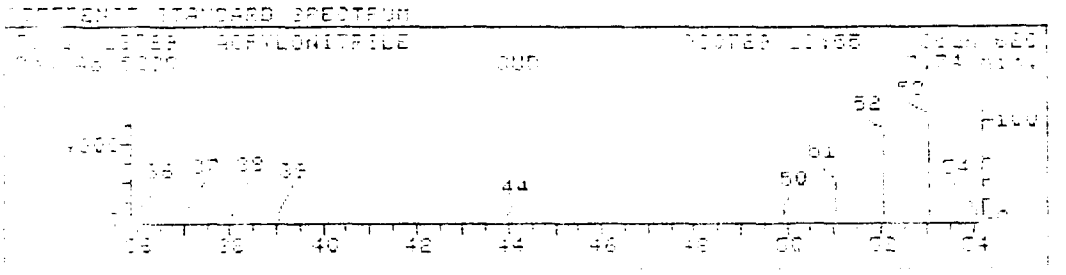


SAMPLE SPECTRUM (UNALTERED)

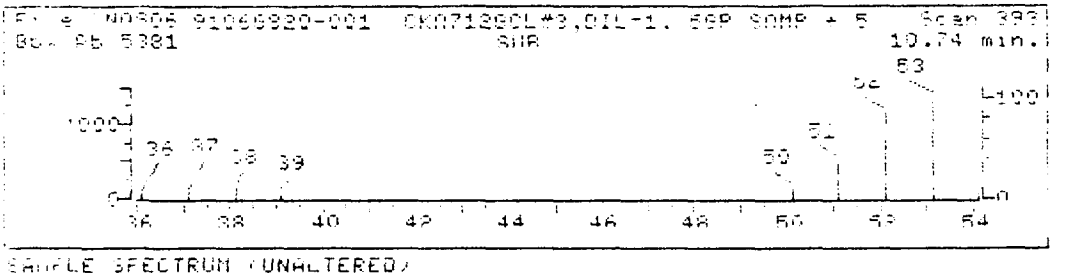


Data File: /NW506::L2 Quant Output File: /NW506::L2
Name: 910668200-001 CKA/12
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DHW + 5UL ISO DI/8
Quant Time: 910/14 16:26 Quant ID File: ID_LIM::01
Injected at: 910/13 08:34 Last Calibration: 910/12 19:20

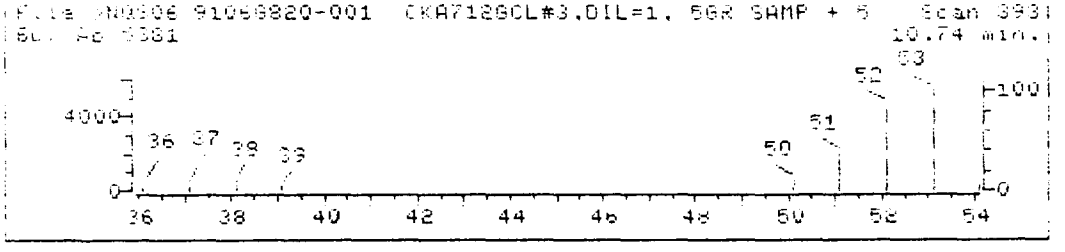
Compound No: 11
Compound Name: ACETONITRILE
Scan Number: 359
Retention Time: 10.07 min.
Quant Ion: 41.0
Area: 14226
Concentration: 276.06 ppb
q-value: 84



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >NW506::L2 Quant Output File: >NW506::E2
Name: 91060920-001 CKA712
Misc: GCL#3,DIL=1, 5GR SAMP + 5ML DHW + 5UL ISS 01/6
Quant Time: 910/14 16:26 Quant ID File: ID_LIM::001
Injected at: 910/13 00:54 Last Calibration: 910/12 19:20

Compound No: 10
Compound Name: ACRYLONITRILE
Scan Number: 393
Retention Time: 10.74 min.
Quant Ion: 53.0
Area: 18689
Concentration: 171.97 ppb
q-value: 94

Roy F. Weston, Inc. - Gulf Coast Laboratories
VOA ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot DiscolTCLV	003	W	91GVB229	06/13/91	N/A	07/02/91
Truck Lot DiscolTCLV	003 MS	W	91GVB229	06/13/91	N/A	07/02/91
LAB QC:						
VBLK	MB1	W	91GVB229	N/A	N/A	07/01/91
VBLK	MB1 BS	W	91GVB229	N/A	N/A	07/02/91

SIGNATURE Jeff A. Kazinski DATE 7-26-91

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Thursday July 25th, 1991

RE: **Truck Lot DiscolTCLV**
Project # 0000-00-00-0000
Lab ID: **9106G820-003**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/L

VOLATILES BY GC/MS, TCLP LEACHATE

Volatile Compound	Result	Reporting Limit	Flag
Vinyl Chloride	BDL	63	U
1,1-Dichloroethene	BDL	130	U
Chloroform	BDL	49	U
1,2-Dichloroethane	BDL	45	U
Carbon Tetrachloride	BDL	44	U
2-Butanone	BDL	200	U
Trichloroethene	BDL	50	U
Benzene	BDL	60	U
Tetrachloroethene	BDL	110	U
Chlorobenzene	BDL	48	U

Roy F. Weston, Inc. - Gulf Coast Laboratories
VOLATILES BY GC/MS, TCLP LEACHATE

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/26/91 10:24 Page: 1a

	Cust ID:	Truck Lot Di scolTCLV		Truck Lot Di scolTCLV		VBLK		VBLK BS		VBLK		VBLK	
Sample Information	RFW#:	003		003 MS		91GVB229-MB1		91GVB229-MB1		91GVB225-505		91GVB225-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	20.0		20.0		1.00		1.00		20.0		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	96	%	106	%	102	%	106	%	99	%	100	%
	Bromofluorobenzene	98	%	102	%	93	%	93	%	93	%	91	%
	1,2-Dichloroethane-d4	97	%	105	%	94	%	96	%	89	%	89	%
			fl		fl		fl		fl		fl		fl
Vinyl Chloride		40	U	64	* %	2	U	NA	%	40	U	2	U
1,1-Dichloroethene		100	U	79	%	5	U	74	%	100	U	5	U
Chloroform		40	U	82	%	2	U	NA	%	40	U	2	U
1,2-Dichloroethane		40	U	89	%	2	U	NA	%	40	U	2	U
Carbon Tetrachloride		40	U	91	%	2	U	NA	%	40	U	2	U
2-Butanone		200	U	110	%	10	U	NA	%	200	U	10	U
Trichloroethene		40	U	80	%	2	U	93	%	40	U	2	U
Benzene		60	U	87	%	3	U	100	%	60	U	3	U
Tetrachloroethene		100	U	91	%	5	U	NA	%	100	U	5	U
Chlorobenzene		40	U	84	%	2	U	99	%	40	U	2	U

*= Outside of EPA CLP QC limits.

Cust ID: **VBLK BS**

Sample Information

RFW#: **91GVB225-MB1**
Matrix: WATER
D.F.: 1.00
Units: ug/L

Surrogate Recovery	Toluene-d8	98	%
	Bromofluorobenzene	99	%
	1,2-Dichloroethane-d4	94	%

Vinyl Chloride	NA	%
1,1-Dichloroethene	76	%
Chloroform	NA	%
1,2-Dichloroethane	NA	%
Carbon Tetrachloride	NA	%
2-Butanone	NA	%
Trichloroethene	87	%
Benzene	97	%
Tetrachloroethene	NA	%
Chlorobenzene	94	%

*= Outside of EPA CLP QC limits.

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

RFW Lot No.: 9106G820

	CLIENT SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	Truck Lot DiscolTCLV	96	98	97		0
02	Truck Lot DiscolTCLVMS	106	102	105		0
03	VBLKGVB229-MB1	102	93	94		0
04	VBLKGVB229-MB1 BS	106	93	96		0
05	VBLK	99	93	89		0
06	VBLK	100	91	89		0
07	VBLKMS	98	99	94		0

	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

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

3A
WATER VOLATILE MATRIX SPIKE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products RFW Lot No.: 9106G820-003

MATRIX Spike - Sample No.: Truck Lot DiscolTCLV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
Vinyl Chloride	2000	0	1280	64 *	76-127
1,1-Dichloroethene	2000	0	1580	79	61-145
Chloroform	2000	0	1640	82	76-127
1,2-Dichloroethane	2000	0	1770	89	76-127
Carbon Tetrachloride	2000	0	1830	91	76-127
2-Butanone	2000	0	2200	110	76-127
Trichloroethene	2000	0	1600	80	71-120
Benzene	2000	0	1750	87	76-127
Tetrachloroethene	2000	0	1820	91	76-127
Chlorobenzene	2000	0	1680	84	75-130

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot DiscolTCLVMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 9106G820-003 MS

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BNQS05

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. _____

Date Analyzed: 07/02/91

Column: (pack/cap) PACK

Dilution Factor: 20.0

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

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride		S
75-35-4	1,1-Dichloroethene		S
67-66-3	Chloroform		S
107-06-2	1,2-Dichloroethane		S
56-23-5	Carbon Tetrachloride		S
78-93-3	2-Butanone		S
79-01-6	Trichloroethene		S
71-43-2	Benzene		S
127-18-4	Tetrachloroethene		S
108-90-7	Chlorobenzene		S

S: SPIKE COMPOUND

FORM 1 V-1

12/88 Rev.

D&K

QUANT REPORT

Operator ID: USER8 Quant Rev: 6 Quant Time: 910/02 02:22
Output File: ^NWS05::D3 Injected at: 910/02 01:48
Data File: >NWS05::L1 Dilution Factor: 1.00000
Name: 9106G820-0035 BXB/01
Misc: GCL#2,DIL=20,250UL SMP +5UL ISS#007B +4.75ML DFW+100L9

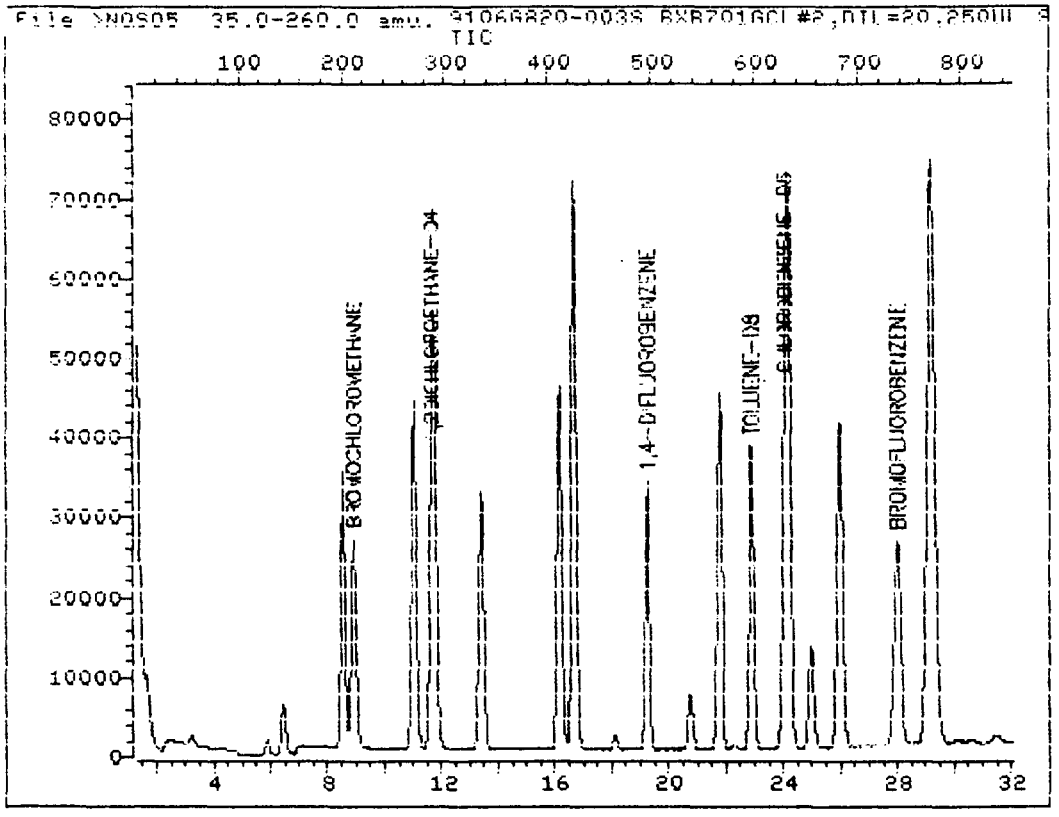
ID File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910/01 22:36

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.93	128.0	30610	50.00	UG/L	68
4)	VINYL CHLORIDE	3.21	62.0	10346	64.08	UG/L	91
6)	METHYLENE CHLORIDE	5.89	84.0	3767	15.33	UG/L	62
7)	ACETONE	6.47	43.0	51498	363.96	UG/L	70
9)	1,1-DICHLOROETHENE	8.57	96.0	67840	78.80	UG/L	88
11)	1,2-DICHLOROETHENE (TOTAL)	8.57	96.0	67840	66.81	UG/L	71
12)	CHLOROFORM	11.03	83.0	165455	82.19	UG/L	92
13)	1,2-DICHLOROETHANE-D4	11.65	65.0	83224	52.70	UG/L	97
14)	1,2-DICHLOROETHANE	11.76	62.0	153881	88.59	UG/L	95
15)	*1,4-DIFLUOROBENZENE	19.26	114.0	137815	50.00	UG/L	90
16)	2-BUTANONE	11.72	43.0	83440	110.08	UG/L	78
18)	CARBON TETRACHLORIDE	13.43	117.0	101876	91.35	UG/L	99
23)	TRICHLOROETHENE	16.18	130.0	82801	80.10	UG/L	88
26)	BENZENE	16.69	78.0	314311	87.38	UG/L	90
29)	*CHLOROBENZENE-D5	24.04	117.0	111034	50.00	UG/L	95
32)	TETRACHLOROETHENE	21.80	164.0	68540	90.89	UG/L	97
34)	TOLUENE	23.10	91.0	1853	.56	UG/L	89
35)	TOLUENE-D8	22.88	98.0	143533	53.04	UG/L	90
36)	CHLOROBENZENE	24.19	112.0	190951	84.23	UG/L	80
37)	ETHYLBENZENE	25.96	106.0	59236	59.26	UG/L	99
38)	STYRENE	29.19	104.0	360878	156.11	UG/L	98
40)	BROMOFLUOROBENZENE	27.99	95.0	79066	51.07	UG/L	95

* Compound is ISTD

DEK

TOTAL ION CHROMATOGRAM



Data File: >NQS05::L1 Quant Output File: ^NQS05::D3
Name: 9106G820-003S BXB701
Misc: GCL#2,DIL=20,250UL SMP +5UL ISS#007B +4.75ML DFW+10UL9

Id File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

Operator ID: USER8
Quant Time: 910702 02:22
Injected at: 910702 01:48

3A
WATER VOLATILE MATRIX SPIKE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: Cerro Copper Products RFW Lot No.: 9106G820

MATRIX Spike - Sample No.: VBLKGVB229-MB1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
Vinyl Chloride	50.0	0	0	NA	76-127
1,1-Dichloroethene	50.0	0	37.1	74	61-145
Chloroform	50.0	0	0	NA	76-127
1,2-Dichloroethane	50.0	0	0	NA	76-127
Carbon Tetrachloride	50.0	0	0	NA	76-127
2-Butanone	50.0	0	0	NA	76-127
Trichloroethene	50.0	0	46.4	93	71-120
Benzene	50.0	0	49.8	100	76-127
Tetrachloroethene	50.0	0	0	NA	76-127
Chlorobenzene	50.0	0	49.4	99	75-130

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLKMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 91GVB229-MB1 BS

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BZD701

Level: (low/med) LOW

Date Received: 07/01/91

% Moisture: not dec. _____

Date Analyzed: 07/02/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride		S
75-35-4	1,1-Dichloroethene		S
67-66-3	Chloroform		S
107-06-2	1,2-Dichloroethane		S
56-23-5	Carbon Tetrachloride		S
78-93-3	2-Butanone		S
79-01-6	Trichloroethene		S
71-43-2	Benzene		S
127-18-4	Tetrachloroethene		S
108-90-7	Chlorobenzene		S

S: SPIKE COMPOUND

FORM 1 V-1

12/88 Rev.

DEL

QUANT REPORT

Operator ID: USER8 Quant Rev: 6 Quant Time: 910702 06:25
Output File: ^ZD701::D3 Injected at: 910702 05:50
Data File: >ZD701::L1 Dilution Factor: 1.00000
Name: 91GVB229-MB1S BXB701
Misc: GCL#2,DIL=1,5ML DFW +5UL ISS#007B +10UL #987

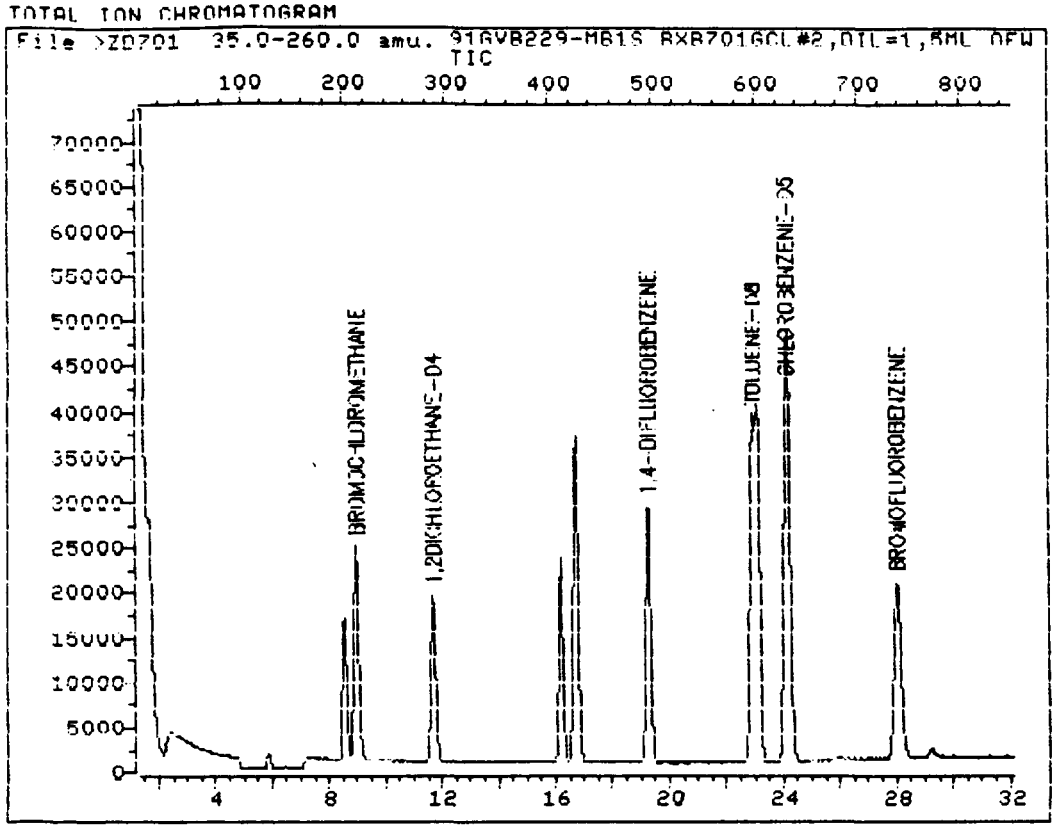
ID File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.98	128.0	27022	50.00	UG/L	63
6)	METHYLENE CHLORIDE	5.90	84.0	2756	12.70	UG/L	61
9)	1,1-DICHLOROETHENE	8.58	96.0	28171	37.07	UG/L	85
13)	1,2-DICHLOROETHANE-D4	11.69	65.0	67081	48.11	UG/L	98
15)	*1,4-DIFLUOROBENZENE	19.27	114.0	119842	50.00	UG/L	91
23)	TRICHLOROETHENE	16.19	130.0	41703	46.39	UG/L	92
26)	BENZENE	16.73	78.0	155725	49.78	UG/L	89
29)	*CHLOROBENZENE-D5	24.09	117.0	102998	50.00	UG/L	94
34)	TOLUENE	23.11	91.0	155108	50.68	UG/L	99
35)	TOLUENE-D8	22.93	98.0	133093	53.02	UG/L	91
36)	CHLOROBENZENE	24.20	112.0	103942	49.43	UG/L	79
~~38)~~	STYRENE	29.24	104.0	4568	2.13	UG/L	93
40)	BROMOFLUOROBENZENE	28.04	95.0	66444	46.27	UG/L	92

* Compound is ISTD

DEK

TOTAL ION CHROMATOGRAM



Data File: >ZD701::L1 Quant Output File: ^ZD701::D3
Name: 91GVB229-MB1S BXB701
Misc: GCL#2,DIL=1,5ML DFW +5UL ISS#007B +10UL #987

Id File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

Operator ID: USER8
Quant Time: 910702 06:25
Injected at: 910702 05:50

3A
WATER VOLATILE MATRIX SPIKE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: CERRO COPPER RFW Lot No.: 91GVB225-505

MATRIX Spike - Sample No.: VBLKGVB225-MB1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
Vinyl Chloride	50.0	0	0	NA	76-127
1,1-Dichloroethene	50.0	0	38.0	76	61-145
Chloroform	50.0	0	0	NA	76-127
1,2-Dichloroethane	50.0	0	0	NA	76-127
Carbon Tetrachloride	50.0	0	0	NA	76-127
2-Butanone	50.0	0	0	NA	76-127
Trichloroethene	50.0	0	43.6	87	71-120
Benzene	50.0	0	48.5	97	76-127
Tetrachloroethene	50.0	0	0	NA	76-127
Chlorobenzene	50.0	0	47.2	94	75-130

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLKMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 91GVB225-MB1 BS

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BZB627

Level: (low/med) LOW

Date Received: 06/27/91

% Moisture: not dec. _____

Date Analyzed: 06/27/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride		S
75-35-4	1,1-Dichloroethene		S
67-66-3	Chloroform		S
107-06-2	1,2-Dichloroethane		S
56-23-5	Carbon Tetrachloride		S
78-93-3	2-Butanone		S
79-01-6	Trichloroethene		S
71-43-2	Benzene		S
127-18-4	Tetrachloroethene		S
108-90-7	Chlorobenzene		S

S: SPIKE COMPOUND

FORM 1 V-1

12/88 Rev.

QUANT REPORT

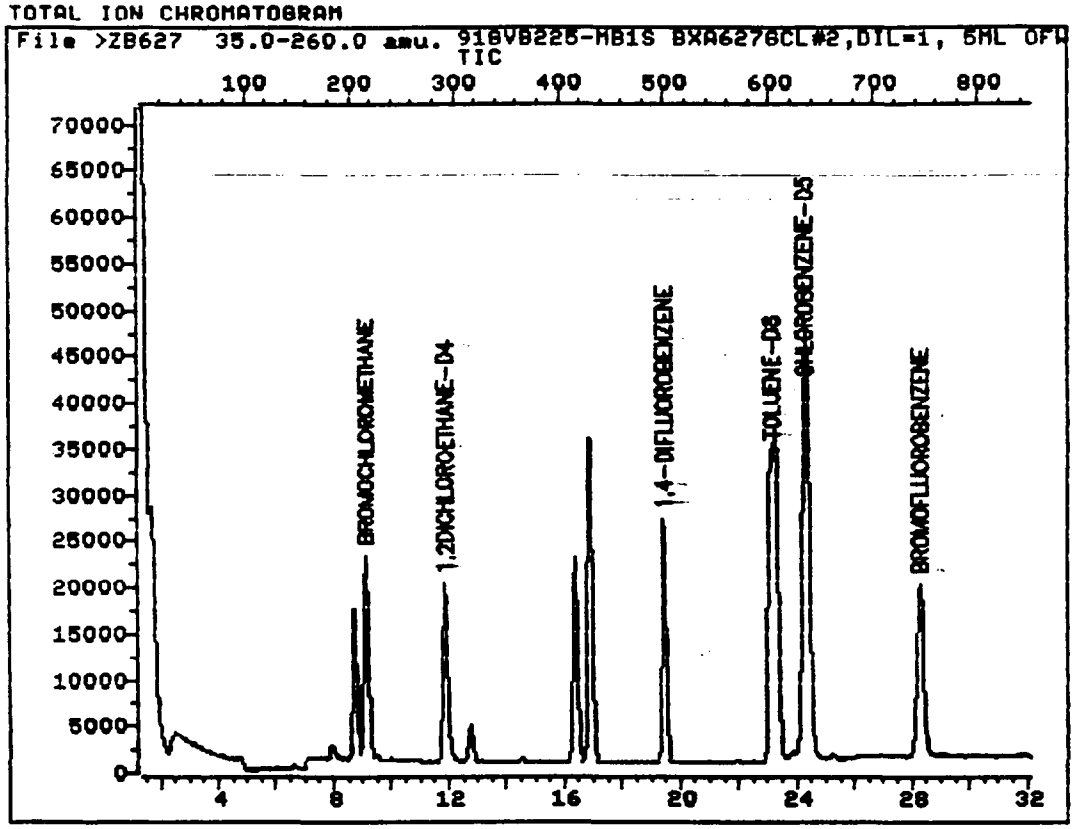
Operator ID: USER4 Quant Rev: 6 Quant Time: 910627 20:06
Output File: ^ZB627::D3 Injected at: 910627 19:31
Data File: >ZB627::L1 Dilution Factor: 1.00000
Name: 91GVB225-MB1S BXA627
Misc: GCL#2,DIL=1, 5ML OFW + 5UL ISS + 10UL 987

ID File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910627 10:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.12	128.0	24507	50.00	UG/L	86
9)	ACETONE	6.66	43.0	4008	19.89	UG/L	65
13)	1,1-DICHLOROETHENE	8.72	96.0	31224	38.05	UG/L	88
19)	1,2-DICHLOROETHANE-D4	11.87	65.0	64609	47.10	UG/L	99
22)	*1,4-DIFLUOROBENZENE	19.45	114.0	107149	50.00	UG/L	68
23)	2-BUTANONE	11.95	43.0	19732	28.22	UG/L	75
31)	TRICHLOROETHENE	16.37	130.0	38224	43.57	UG/L	89
34)	BENZENE	16.88	78.0	153473	48.51	UG/L	90
39)	*CHLOROBENZENE-D5	24.27	117.0	96449	50.00	UG/L	94
44)	TOLUENE	23.29	91.0	140447	46.22	UG/L	99
45)	TOLUENE-D8	23.11	98.0	114293	49.08	UG/L	90
46)	CHLOROBENZENE	24.38	112.0	96317	47.23	UG/L	80
50)	BROMOFLUOROBENZENE	28.29	95.0	65516	49.65	UG/L	68

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >ZB627::L1 Quant Output File: ^ZB627::D3
Name: 91GVB225-MB1S BXA627
Misc: GCL#2,DIL=1, 5ML OFW + 5UL ISS + 10UL 987

Id File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910627 10:51

Operator ID: USER4
Quant Time: 910627 20:06
Injected at: 910627 19:31

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: BZC701 Lab Sample ID: 91GVB229-MB1

Date Analyzed: 07/01/91 Time Analyzed: 2214

Matrix:(Soil/Water) WATER Level:(low/med) LOW

Instrument ID: GCL#2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	Truck Lot DiscolTCLV	9106G820-003	BNQS04	0107
02	Truck Lot DiscolTCLVMS	9106G820-003S	BNQS05	0148
03	VBLKGVB229-MB1 BS	91GVB229-MB1S	BZD701	0550

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 91GVB229-MB1

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BZC701

Level: (low/med) LOW

Date Received: 07/01/91

% Moisture: not dec. _____

Date Analyzed: 07/01/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	
75-01-4	Vinyl Chloride	2	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	2	U
107-06-2	1,2-Dichloroethane	2	U
56-23-5	Carbon Tetrachloride	2	U
78-93-3	2-Butanone	10	U
79-01-6	Trichloroethene	2	U
71-43-2	Benzene	3	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	2	U

QUANT REPORT

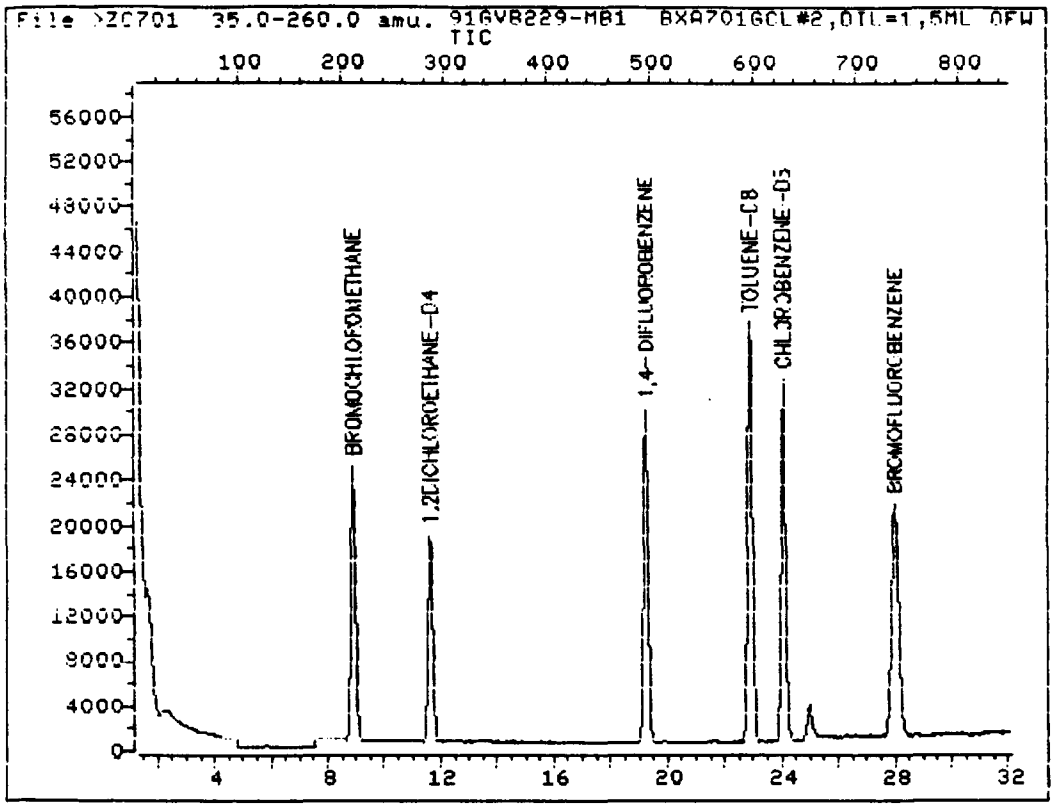
Operator ID: USER4 Quant Rev: 6 Quant Time: 910701 22:51
Output File: ^ZC701::E1 Injected at: 910701 22:14
Data File: >ZC701::L1 Dilution Factor: 1.00000
Name: 91GVB229-MB1 BXA701
Misc: GCL#2,DIL=1,5ML UPW + 5UL ISS007B

ID File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.92	128.0	27873	50.00	UG/L	64
13)	1,2-DICHLOROETHANE-D4	11.64	65.0	67754	47.11	UG/L	99
15)	*1,4-DIFLUOROBENZENE	19.25	114.0	121386	50.00	UG/L	90
29)	*CHLOROBENZENE-D5	24.07	117.0	109362	50.00	UG/L	95
35)	TOLUENE-D8	22.91	98.0	136174	51.09	UG/L	89
40)	BROMOFLUOROBENZENE	28.02	95.0	71159	46.67	UG/L	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >ZC701::L1 Quant Output File: ^ZC701::E1
Name: 91GVB229-MB1 BXA701
Misc: GCL#2,DIL=1,5ML DFW + 5UL IS5007B

Id File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

Operator ID: USER4
Quant Time: 910701 22:51
Injected at: 910701 22:14

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: LAB

Lab File ID: BZA627 Lab Sample ID: 91GVB225-MB1

Date Analyzed: 06/27/91 Time Analyzed: 1031

Matrix:(Soil/Water) WATER Level:(low/med) LOW

Instrument ID: GCL#2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLKGVB225-MB1 BS	91GVB225-MB1S	BZB627	1931
02	VBLK	91GVB225-505	BZD627	1201

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 91GVB225-MB1

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BZA627

Level: (low/med) LOW

Date Received: 06/27/91

% Moisture: not dec. _____

Date Analyzed: 06/27/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	
75-01-4	Vinyl Chloride	2	U
75-35-4	1,1-Dichloroethene	5	U
67-66-3	Chloroform	2	U
107-06-2	1,2-Dichloroethane	2	U
56-23-5	Carbon Tetrachloride	2	U
78-93-3	2-Butanone	10	U
79-01-6	Trichloroethene	2	U
71-43-2	Benzene	3	U
127-18-4	Tetrachloroethene	5	U
108-90-7	Chlorobenzene	2	U

nat

QUANT REPORT

Operator ID: USER8 Quant Rev: 6 Quant Time: 910627 11:08
Output File: ^ZA627::D3 Injected at: 910627 10:31
Data File: >ZA627::L1 Dilution Factor: 1.00000
Name: 91GVB225-MB1 BXA627
Misc: GCL#2,DIL=1, 5ML DFW + 5ULISS007A

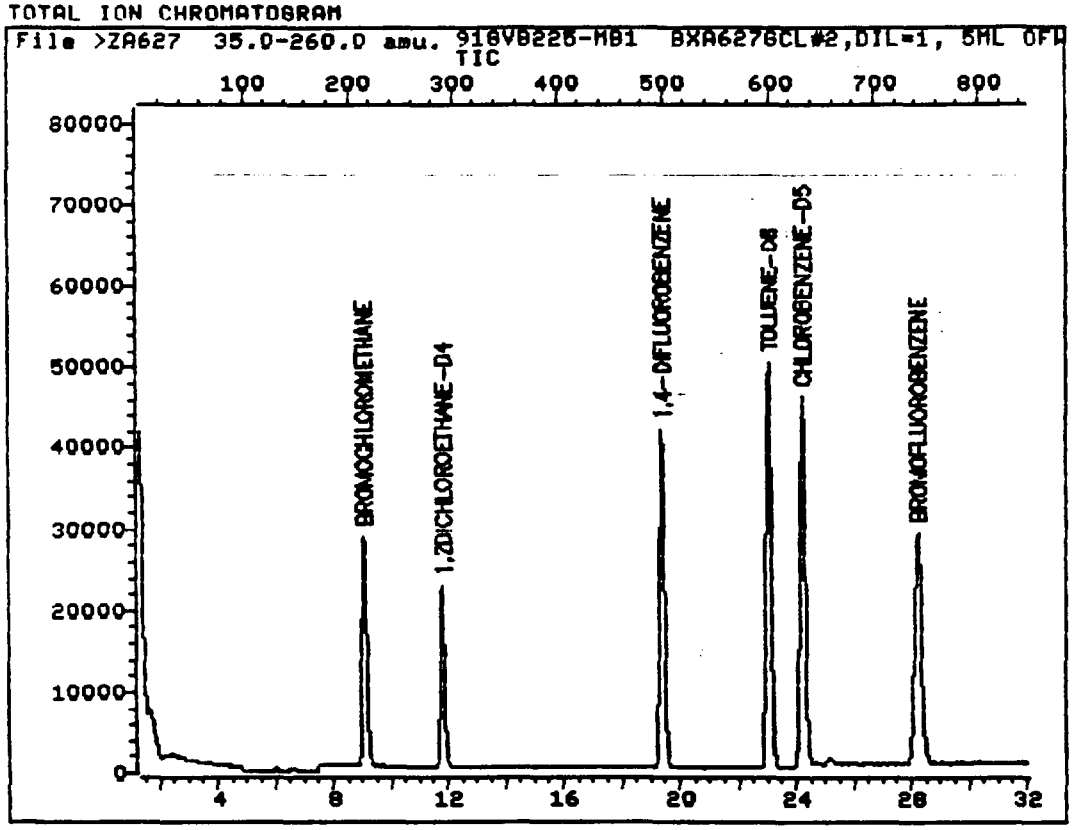
ID File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910627 10:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.08	128.0	32270	50.00	UG/L	88
19)	1,2-DICHLOROETHANE-D4	11.84	65.0	80772	44.72	UG/L	98
22)	*1,4-DIFLUOROBENZENE	19.41	114.0	169850	50.00	UG/L	68
39)	*CHLOROBENZENE-D5	24.24	117.0	154598	50.00	UG/L	95
45)	TOLUENE-D8	23.08	98.0	185804	49.77	UG/L	89
50)	BROMOFLUOROBENZENE	28.26	95.0	96728	45.73	UG/L	72

* Compound is ISTD

mGC

TOTAL ION CHROMATOGRAM



Data File: >ZA627::L1 Quant Output File: ^ZA627::D3
Name: 91GVB225-MB1 BXA627
Misc: GCL#2,DIL=1, 5ML OFW + 5ULISS007A

Id File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed_Col.)
Last Calibration: 910627 10:51

Operator ID: USER8
Quant Time: 910627 11:08
Injected at: 910627 10:31

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

VBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 91GVB225-505

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BZD627

Level: (low/med) LOW

Date Received: 06/27/91

% Moisture: not dec. _____

Date Analyzed: 06/27/91

Column: (pack/cap) PACK

Dilution Factor: 20.0

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

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	40	U
75-35-4	1,1-Dichloroethene	100	U
67-66-3	Chloroform	40	U
107-06-2	1,2-Dichloroethane	40	U
56-23-5	Carbon Tetrachloride	40	U
78-93-3	2-Butanone	200	U
79-01-6	Trichloroethene	40	U
71-43-2	Benzene	60	U
127-18-4	Tetrachloroethene	100	U
108-90-7	Chlorobenzene	40	U

mgx

QUANT REPORT

Operator ID: USER4 Quant Rev: 6 Quant Time: 910627 12:36
Output File: ^ZD627::D3 Injected at: 910627 12:01
Data File: >ZD627::L1 Dilution Factor: 1.00000
Name: 91GVB225-505 BXA627
Misc: GCL#2,DIL=20, 250UL SAMPLE + 4.75L DFW + 5UL ISS

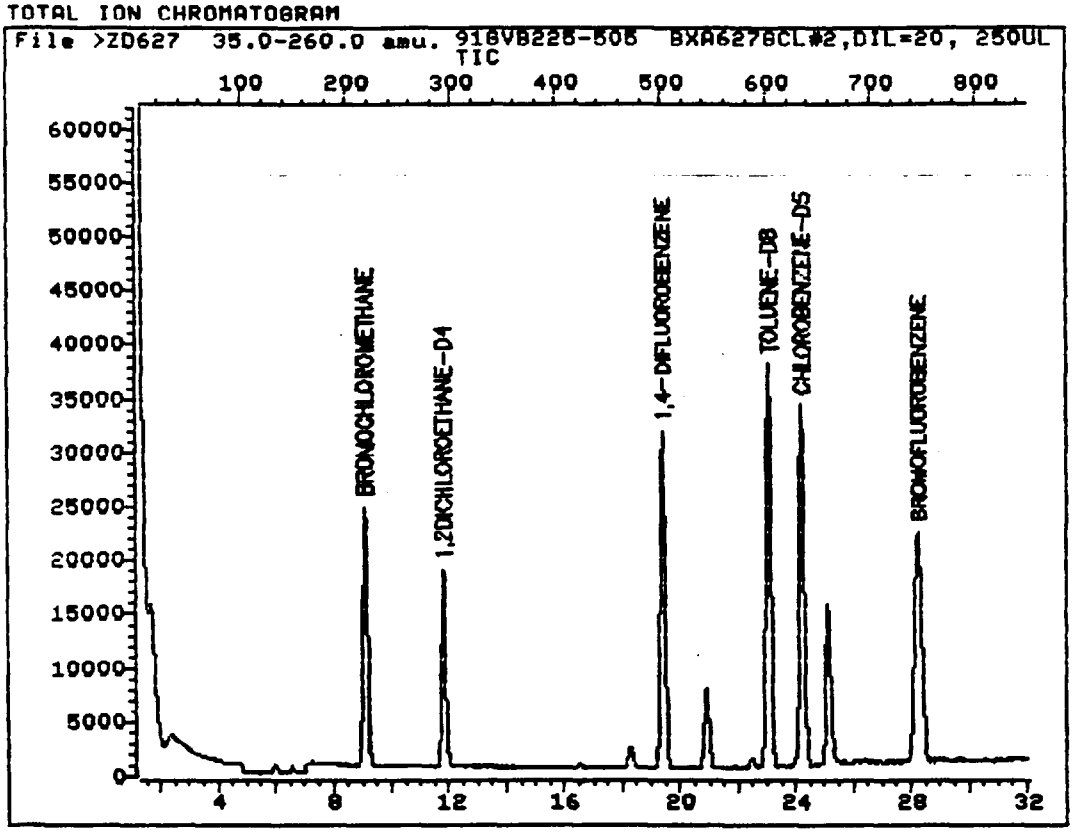
ID File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910627 10:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.10	128.0	27213	50.00	UG/L	88
9)	ACETONE	6.60	43.0	5250	23.47	UG/L	67
19)	1,2-DICHLOROETHANE-D4	11.82	65.0	67585	44.37	UG/L	98
22)	*1,4-DIFLUOROBENZENE	19.43	114.0	126853	50.00	UG/L	68
39)	*CHLOROBENZENE-D5	24.25	117.0	115559	50.00	UG/L	93
45)	TOLUENE-D8	23.09	98.0	138404	49.60	UG/L	91
50)	BROMOFLUOROBENZENE	28.27	95.0	73884	46.73	UG/L	70

* Compound is ISTD

MGIC

TOTAL ION CHROMATOGRAM



Data File: >ZD627::L1 Quant Output File: ^ZD627::D3
Name: 91GVB225-505 BXA627
Misc: GCL#2,DIL=20, 250UL SAMPLE + 4.75L OFW + 5UL ISS

Id File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910627 10:51

Operator ID: USER4
Quant Time: 910627 12:36
Injected at: 910627 12:01

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: BXB701 BFB Injection Date: 7/01/91

Instrument ID: GCL#2 BFB Injection Time: 2040

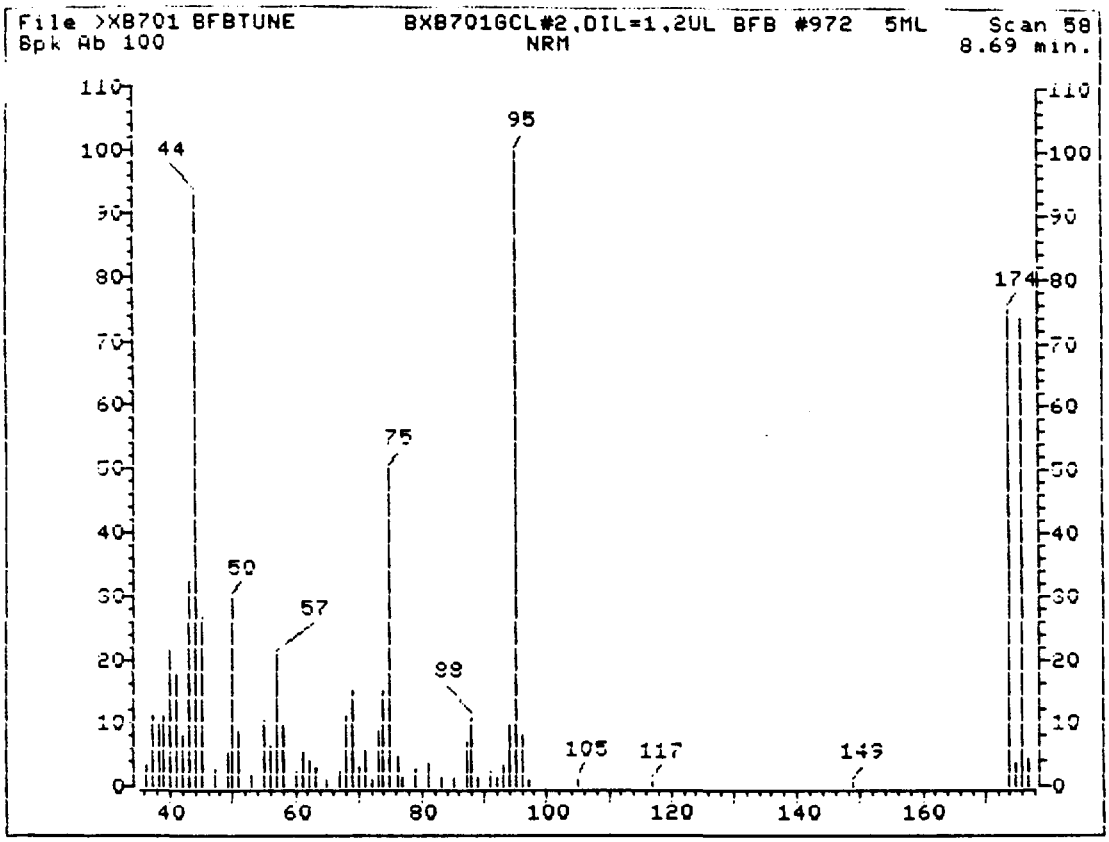
Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	29.6
75	30.0 - 60.0% of mass 95	50.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.0
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	75.4
175	5.0 - 9.0% of mass 174	3.8(5.0)1
176	Greater than 95.0% but less than 101.0% of mass 174	73.8(98.0)1
177	5.0 - 9.0% of mass 176	4.3(5.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	50STD	50STD	BYB701	07/01/91	2124
02	VBLKGVB229-MB1	91GVB229-MB1	BZC701.	07/01/91	2214
03	Truck Lot DiscolTCLV	9106G820-003	BNQS04.	07/02/91	0107
04	Truck Lot DiscolTCLVMS	9106G820-003S	BNQS05.	07/02/91	0148
05	VBLKGVB229-MB1 BS	91GVB229-MB1S	BZD701.	07/02/91	0550
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



MS data file header from : >XB701

Sample: BFBTUNE BXB701 Operator: USER4 MS 7/01/91 20:40
Misc : GCL#2,DIL=1,2UL BFB #972 5ML DFW
Sys. #: 2 MS model: 96 SW/HW rev.: 1A ALS # : 0
Method file: BFBMET Tuning file: TUNE2 No. of extra records: 2
Source temp.: 150 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	200.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	9.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>XB/01 BFBTUNE BXB/01GCL#2,DIL=1,2UL BFB #972 5ML DFW
58 NRM

File: >XB/01 Scan #: 58 Retn. time: 8.69

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.10	3.507	50.05	29.603	67.10	2.269	79.05	2.682	95.05	100.000
37.10	11.037	51.05	8.716	68.00	11.243	81.05	3.610	96.10	7.994
38.10	10.263	53.05	1.908	69.10	15.162	83.15	1.392	97.10	1.031
39.10	11.191	55.05	10.572	70.10	3.146	85.05	1.444	105.00	1.135
40.00	21.558	56.05	6.395	71.10	5.621	87.05	7.117	117.05	.722
41.10	17.999	57.05	20.732	72.10	1.031	88.05	10.830	148.95	.619
42.10	7.942	58.05	10.263	73.10	8.819	89.05	1.289	173.90	75.248
43.10	32.285	60.05	2.527	74.00	15.059	91.05	2.321	174.90	3.765
44.05	93.038	61.05	5.467	75.00	49.974	91.95	1.289	175.90	73.801
45.05	26.405	62.10	4.177	76.10	4.245	93.05	3.559	176.90	4.281
47.05	2.682	63.10	3.094	77.00	1.444	94.05	9.799	207.10	1.289
49.05	5.415	65.10	.928						

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	29.60	29.60	Ok
75	30-60% of mass 95	49.97	49.97	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.99	7.99	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	75.35	75.35	Ok
175	5-9% of mass 174	3.76	5.00	Ok
176	95-101% of mass 174	73.80	97.95	Ok
177	5-9% of mass 176	4.28	5.80	Ok

Injection Date: 07/01/91
Injection Time: 20:40
Data File: >XB701
Scan: 58

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: [illegible] LABORATORIES Contract: [illegible]

Lab File ID: [illegible] Lab No.: ---- SAS No.: ---- SDG No.: ----

Date: [illegible] Calibration date(s): [illegible]

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min RF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

Compound	RRF20 = [illegible]	RRF50 = [illegible]	RRF100 = [illegible]	RRF150 = [illegible]	RRF200 = [illegible]	RRF	% RSD
Chloromethane #	.4871	.5951	.5531	.5411	.5111	.5751	18.9#
Bromomethane	.3121	.2691	.2741	.2441	.2191	.2621	15.61
Vinyl Chloride *	.4181	.3551	.3641	.3651	.3511	.3661	8.8*
Chloroethane	.2271	.2111	.2171	.2141	.2111	.2111	4.01
Methylene Chloride	.6791	.5971	.5611	.5271	.5521	.4331	32.01
Acetone	.3811	.2481	.2111	.2511	.2551	.2671	25.21
Carbon Disulfide	5.4141	6.0841	6.0311	5.8671	5.5981	5.7991	4.91
1,1-Dichloroethene *	1.6781	1.5161	1.4881	1.4351	1.2581	1.4591	10.6*
1,1-Dichloroethane #	4.8381	4.1691	3.9161	4.0901	3.4901	4.1011	11.9#
1,2-Dichloroethene (total)	1.8941	1.2271	1.6511	1.7421	1.4971	1.7121	8.71
Chloroform *	3.9661	3.4651	3.2091	3.3261	2.9061	3.3741	11.5*
1,2-Dichloroethane	3.5061	2.9391	2.7871	3.0601	2.6271	2.9841	11.21
2-Butanone	.3581	.3141	.2651	.3591	.3551	.3301	12.61
1,1,1-Trichloroethane	.6411	.5761	.5761	.5751	.4871	.5911	10.71
Carbon Tetrachloride	.5021	.4521	.4521	.4711	.3911	.4461	9.51
Vinyl Acetate	1.6751	1.6141	1.4611	1.7801	1.7651	1.6461	7.91
Bromodichloromethane	.7701	.6461	.6561	.6971	.6011	.6701	9.81
1,2-Dichloropropane *	.6141	.5271	.5161	.5791	.5001	.5471	8.7*
cis-1,3-Dichloropropene	1.2511	1.1011	1.0711	1.1911	.9991	1.1231	8.91
Trichloroethene	.4591	.3941	.3651	.4041	.3581	.3921	11.61
Dibromochloromethane	.5281	.4441	.3951	.4481	.3701	.4371	13.91
1,1,2-Trichloroethane	.4361	.3501	.3111	.3651	.2901	.3501	16.21
Benzene	1.6371	1.3321	1.2321	1.3201	1.0631	1.3171	15.81
trans-1,3-Dichloropropene	.3861	.3471	.3161	.3581	.2911	.3401	10.91
Bromoform #	.3501	.3121	.2791	.3421	.2901	.3151	9.9#
4-Methyl-2-pentanone	.8961	.8521	.7491	.9641	1.0001	.8931	11.31
2-Hexanone	.6231	.5751	.5101	.6851	.6961	.6181	12.61
Tetrachloroethene	.4031	.3461	.3091	.3391	.2741	.3341	14.31
1,1,2,2-Tetrachloroethane #	.7531	.6031	.5431	.6961	.5891	.6371	13.4#
Toluene *	1.9271	1.5751	1.5271	1.5571	1.2621	1.5151	16.4*
Chlorobenzene #	1.2401	1.0201	.9621	1.0121	.8761	1.0221	13.2#
Ethylbenzene *	.5841	.4981	.4061	.5141	.4141	.4931	12.6*
Styrene	1.1361	1.0621	1.0331	1.0271	1.0101	1.0531	4.71
Xylene (total)	1.5831	1.4161	1.3381	1.3231	1.3581	1.4041	7.61
Internal Std							
1,4-Dichlorobenzene-d4	5.0951	1.2761	.5981	.4131	.3161	1.1211	101.41
Chlorobenzene-d5	1.6831	.6931	.3521	.2361	.1811	.6291	98.81
Dichloromethane-d2	6.3851	2.6151	1.3491	.9641	.7741	2.4071	97.21

[illegible] FILE CONTAINING CALIBRATION CHECK

[illegible] Contract:[illegible]

[illegible] Case No.: ---- SAS No.: ---- SDG No.: ----

[illegible] Calibration Date: [illegible] Time: 21:[illegible]

[illegible] Init. Calib. Date(s):06/28/91 --/--/--

[illegible] Level:(low/med) low Column:(pack/cap) pack

[illegible] for SMC(\$) = 0.5000 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

[illegible]	RRF	[illegible]	%D
Chloromethane	.5751	.2034	23.5 #
Bromomethane	.2621	.2151	17.7
Vinyl Chloride	.5661	.3741	28.0 *
Chloroethane	.2111	.1541	26.9
Methylene Chloride	.4551	.4001	7.4
Acetone	.2671	.2311	13.4
Carbon Disulfide	5.7991	5.4671	5.7
1,1-Dichloroethene	1.4591	1.4061	3.6 *
1,1-Dichloroethane	4.1011	3.9751	3.1 #
1,2-Dichloroethene (total)	1.7121	1.6591	3.1
Chloroform	3.5741	3.2881	2.5 *
1,2-Dichloroethane	2.9841	2.8371	4.9
2-Butanone	.3501	.2751	16.5
1,1,1-Trichloroethane	.5511	.5061	8.0
Carbon Tetrachloride	.4461	.4051	9.2
Vinyl Acetate	1.6461	1.3461	18.3
Bromodichloromethane	.6701	.6111	8.8
1,2-Dichloropropane	.5471	.5101	6.8 *
cis-1,3-Dichloropropene	1.1251	1.0741	4.5
Trichloroethene	.3921	.3751	4.3
Dibromochloromethane	.4371	.4131	5.4
1,1,2-Trichloroethane	.3501	.3341	4.7
Benzene	1.5171	1.5051	.9
trans-1,3-Dichloropropene	.5401	.5241	4.5
Bromoform	.3151	.2801	11.1 #
4-Methyl-2-pentanone	.8951	.8171	8.5
2-Hexanone	.6181	.5631	8.9
Tetrachloroethene	.3541	.3401	1.7
1,1,2,2-Tetrachloroethane	.6371	.6041	5.2 #
Toluene	1.5351	1.4861	3.2 *
Chlorobenzene	1.0221	1.0211	.1 #
Ethylbenzene	.4931	.4501	8.7 *
Styrene	1.0551	1.0411	1.2
Xylene (total)	1.4041	1.3901	1.0
Toluene-d8	1.1211	1.2191	8.7
Bromofluorobenzene	.6291	.6971	10.8
1,2-Dichloroethane-d4	2.4171	2.5801	7.2

QUANT REPORT

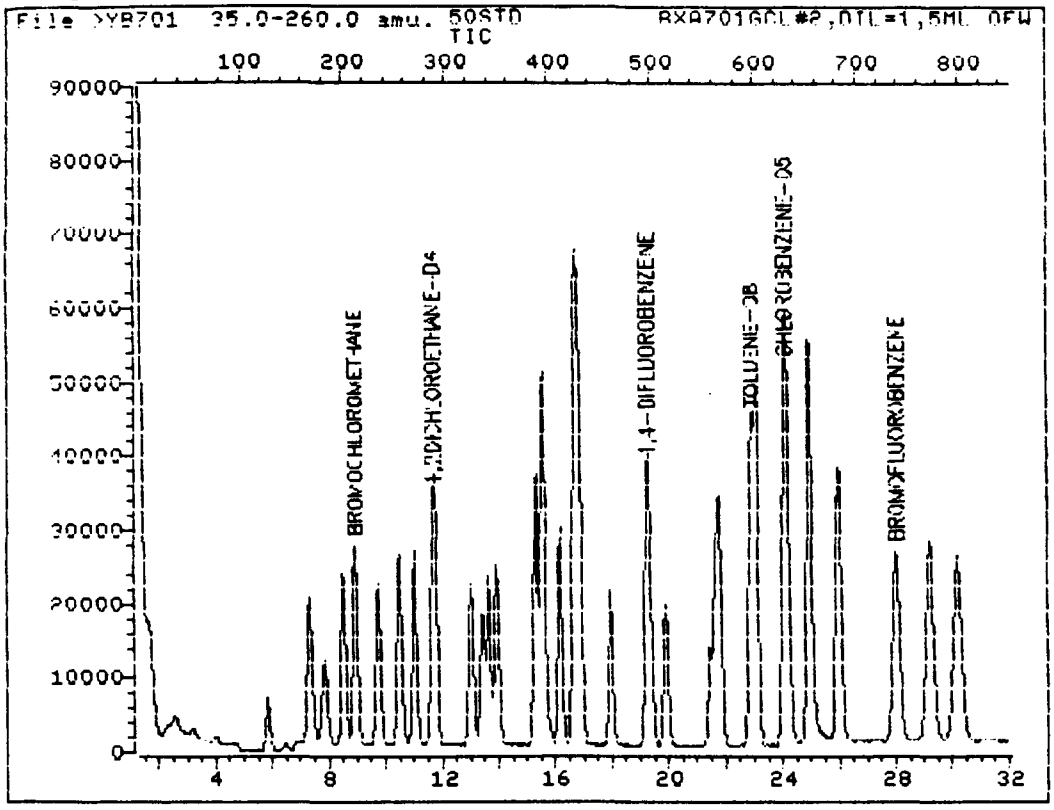
Operator ID: USER4 Quant Rev: 6 Quant Time: 910/01 22:01
Output File: ^YB701::E1 Injected at: 910/01 21:24
Data File: >YB701::L1 Dilution Factor: 1.00000
Name: 50STD BXA701
Misc: GCL#2,DIL=1,5ML DFW +5UL ISSOO/B+2.5UL#008,#009

ID File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910/01 10:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.91	128.0	31118	50.00	UG/L	66
2)	CHLOROMETHANE	1.81	50.0	8957	46.10	UG/L	98
3)	BROMOMETHANE	2.57	94.0	6697	43.14	UG/L	93
4)	VINYL CHLORIDE	3.19	62.0	8207	41.21	UG/L	92
5)	CHLOROETHANE	4.02	64.0	4794	41.01	UG/L	88
6)	METHYLENE CHLORIDE	5.83	84.0	12492	52.77	UG/L	63
7)	ACETONE	6.45	43.0	7192	48.11	UG/L	64
8)	CARBON DISULFIDE	7.32	76.0	170130	49.11	UG/L	100
9)	1,1-DICHLOROETHENE	8.52	96.0	43761	54.94	UG/L	88
10)	1,1-DICHLOROETHANE	9.75	63.0	123622	51.72	UG/L	93
11)	1,2-DICHLOROETHENE (TOTAL)	10.51	96.0	51617	51.61	UG/L	79
12)	CHLOROFORM	11.02	83.0	102328	49.45	UG/L	95
13)	1,2-DICHLOROETHANE-D4	11.67	65.0	80277	48.79	UG/L	99
14)	1,2-DICHLOROETHANE	11.78	62.0	88289	50.11	UG/L	95
15)	*1,4-DIFLUOROBENZENE	19.24	114.0	143158	50.00	UG/L	90
16)	2-BUTANONE	11.71	43.0	39369	56.16	UG/L	78
17)	1,1,1-TRICHLOROETHANE	13.05	97.0	72473	51.66	UG/L	78
18)	CARBON TETRACHLORIDE	13.41	117.0	57924	51.88	UG/L	98
19)	VINYL ACETATE	13.66	43.0	192643	46.96	UG/L	66
20)	BROMODICHLOROMETHANE	13.95	83.0	87518	50.95	UG/L	92
21)	1,2-DICHLOROPROPANE	15.33	63.0	73027	50.93	UG/L	90
22)	CIS-1,3-DICHLOROPROPENE	15.58	75.0	153780	51.24	UG/L	94
23)	TRICHLOROETHENE	16.16	130.0	53689	53.60	UG/L	90
24)	DIBROMOCHLOROMETHANE	16.71	129.0	59185	51.92	UG/L	99
25)	1,1,2-TRICHLOROETHANE	16.85	97.0	47775	53.67	UG/L	96
26)	BENZENE	16.67	78.0	186833	50.51	UG/L	89
27)	TRANS-1,3-DICHLOROPROPENE	16.85	75.0	46444M	52.19	UG/L	
28)	BROMOFORM	19.35	173.0	40064	51.80	UG/L	97
29)	*CHLOROBENZENE-D5	24.07	117.0	126694	50.00	UG/L	96
30)	4-METHYL-2-PENTANONE	19.90	43.0	103545	52.46	UG/L	82
31)	2-HEXANONE	21.46	43.0	71343	56.66	UG/L	81
32)	TETRACHLOROETHENE	21.78	164.0	43021	53.05	UG/L	95
33)	1,1,2,2-TETRACHLOROETHANE	21.67	83.0	76488M	54.70	UG/L	
34)	TOLUENE	23.09	91.0	188248	51.45	UG/L	98
35)	TOLUENE-D8	22.91	98.0	154396	47.78	UG/L	89
36)	CHLOROBENZENE	24.17	112.0	129342	53.70	UG/L	80
37)	ETHYLBENZENE	25.95	106.0	57024	49.25	UG/L	98
38)	STYRENE	29.21	104.0	131888	50.53	UG/L	98
39)	XYLENE (TOTAL)	30.19	91.0	176093	48.35	UG/L	96
40)	BROMOFLUOROBENZENE	28.02	95.0	88325	51.32	UG/L	91

* Compound is ISTD

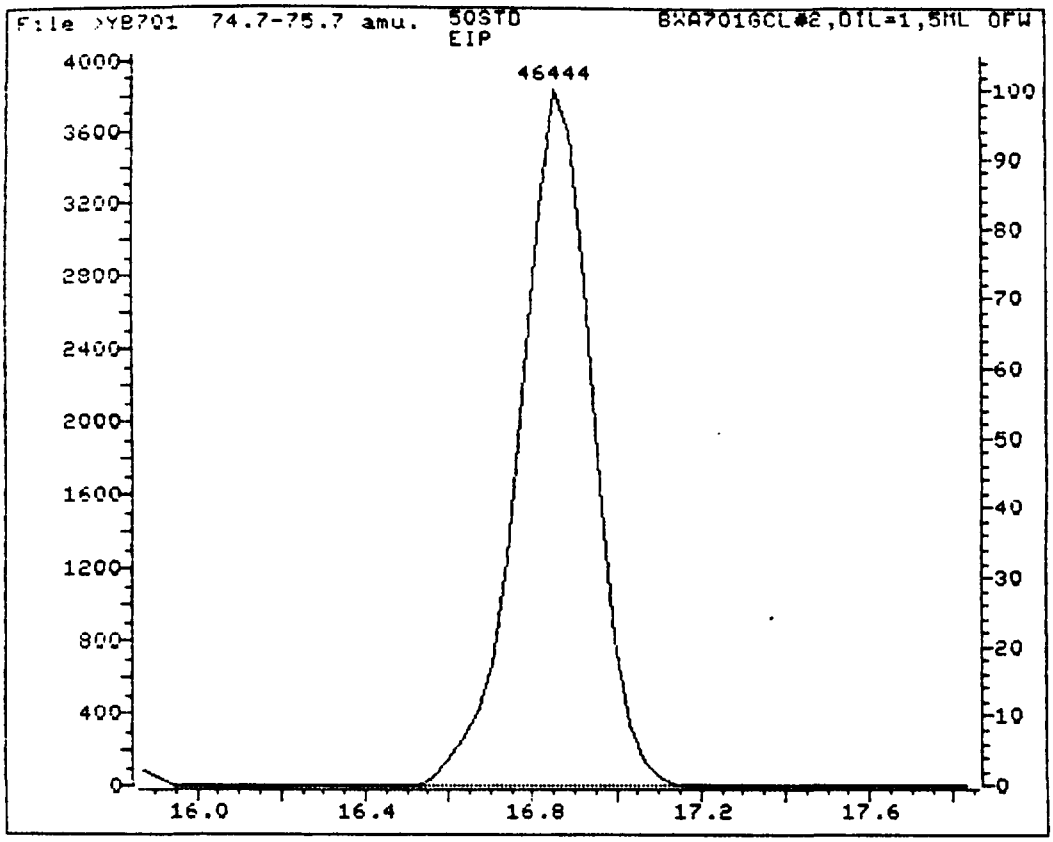
TOTAL ION CHROMATOGRAM



Data File: >YB701::L1 Quant Output File: ^YB701::E1
Name: 50STD BXA701
Misc: GCL#2,DIL=1,5ML OFW +5UL ISS007B+2.5UL#008,#009

Id File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 10:27

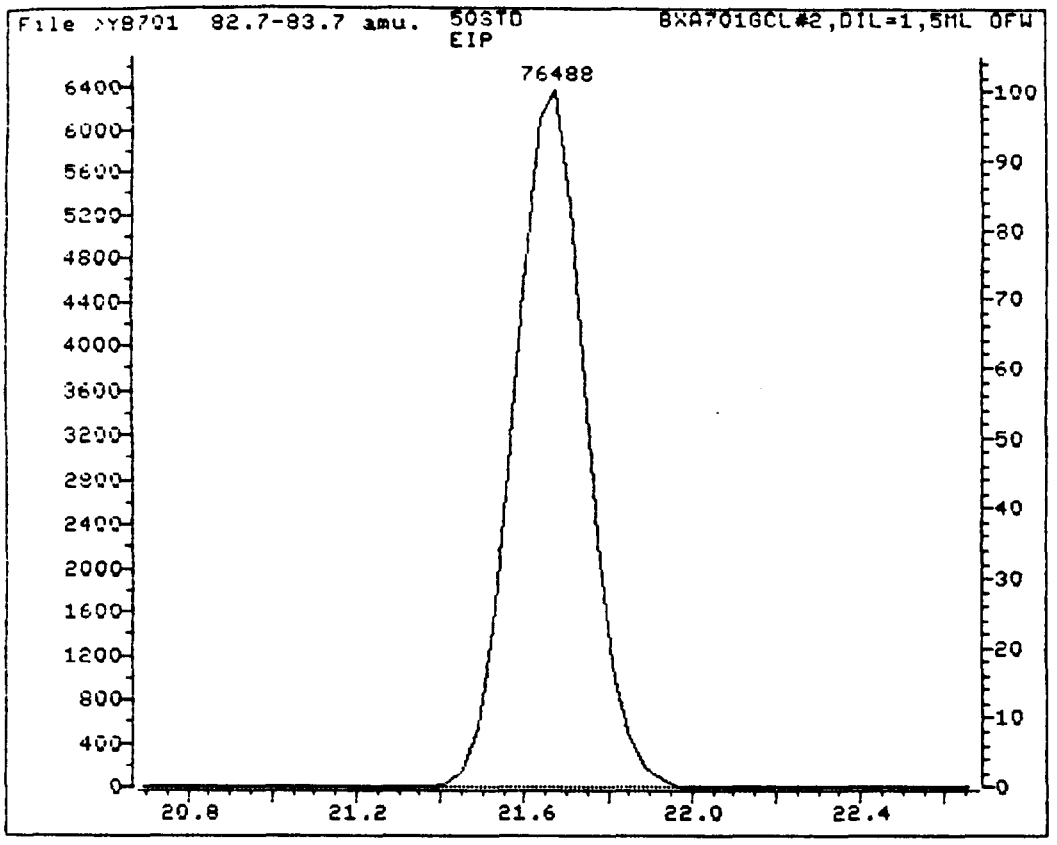
Operator ID: USER4
Quant Time: 910701 22:01
Injected at: 910701 21:24



Data File: >YB701::L1 Quant Output File: ^YB701::E1
Name: 50STD BXA701
Misc: GCL#2,DIL=1,5ML OFW +5UL ISS007B+2.5UL#008,#009
Quant Time: 910701 22:01 Quant ID File: ID_MS2::U1
Injected at: 910701 21:24 Last Calibration: 910701 10:27

Compound No: 27
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 430
Retention Time: 16.85 min.
Quant Ion: 75.0
Area: 46444M
Concentration: 52.19 UG/L

This report was produced by QAREA on: 910701 22:05



Data File: >YB701::L1 Quant Output File: ^YB701::E1
Name: 50STD BXA701
Misc: GCL#2,DIL=1,5ML OFW +5UL ISS007B+2.5UL#008,#009
Quant Time: 910701 22:01 Quant ID File: ID_MS2::U1
Injected at: 910701 21:24 Last Calibration: 910701 10:27

Compound No: 33
Compound Name: 1,1,2,2-TETRACHLOROETHANE
Scan Number: 563
Retention Time: 21.67 min.
Quant Ion: 83.0
Area: 76488M
Concentration: 54.70 UG/L

This report was produced by QAREA on: 910701 22:06

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: GCL-Bottle Project

Lab File ID: BXA627 BFB Injection Date: 6/27/91

Instrument ID: GCL#2 BFB Injection Time: 904

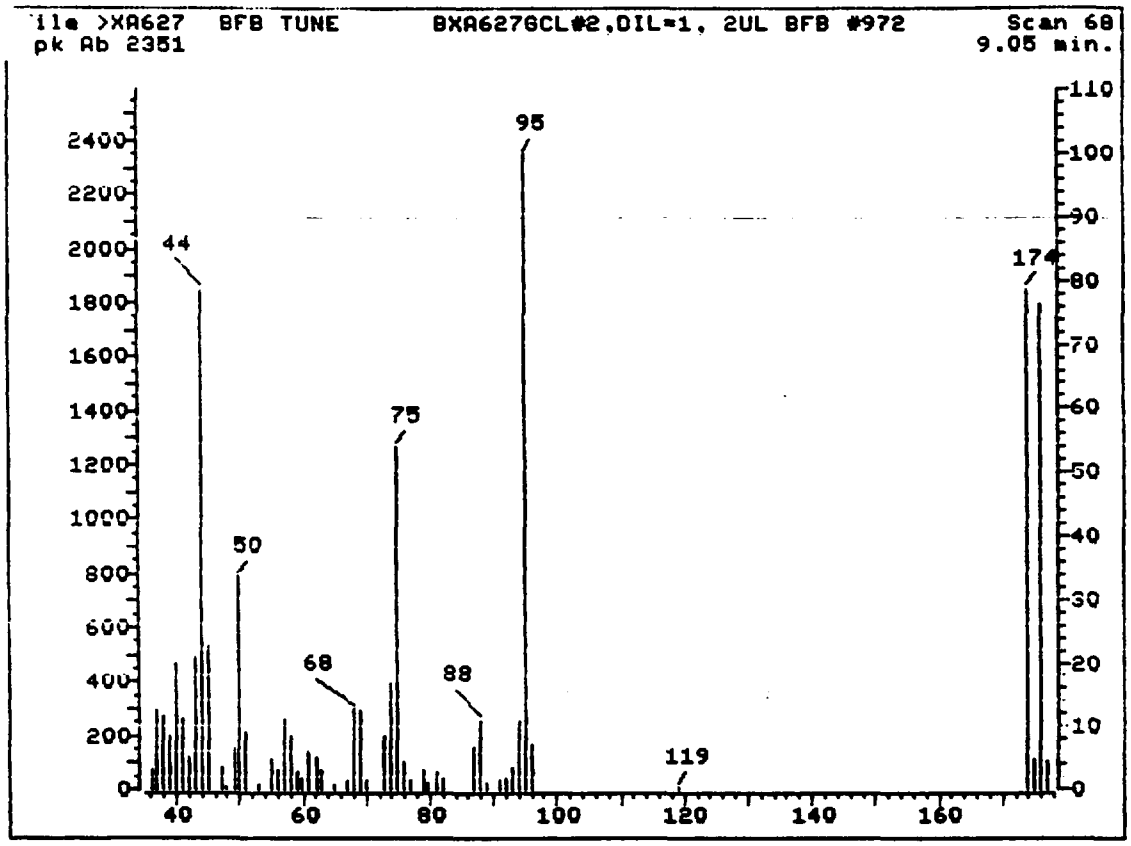
Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	33.5
75	30.0 - 60.0% of mass 95	54.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	78.6
175	5.0 - 9.0% of mass 174	4.7(6.0)1
176	Greater than 95.0% but less than 101.0% of mass 174	76.4(97.1)1
177	5.0 - 9.0% of mass 176	4.5(5.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	BYA627	06/27/91	0940
02	VBLKGVB225-MB1	91GVB225-MB1	BZA627.	06/27/91	1031
03	VBLK	91GVB225-505	BZD627.	06/27/91	1201
04	VBLKGVB225-MB1 BS	91GVB225-MB1S	BZB627.	06/27/91	1931
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



MS data file header from : >XA627

Sample: BFB TUNE BXA627 Operator: USER4 MS 6/27/91 9:04
Misc : GCL#2,DIL=1, 2UL BFB #972
Sys. #: 2 MS model: 96 SW/HW rev.: IA ALS # : 0
Method file: BFBMET Tuning file: TUNE2 No. of extra records: 2
Source temp.: 150 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	200.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	9.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

/XA627 BFB TUNE BXA627GCL#2,DIL=1, 2UL BFB #972
68 NRM

File: >XA627 Scan #: 68 Retn. time: 9.05

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.10	3.020	47.95	.255	60.95	5.997	76.00	4.254	93.05	3.275
37.00	12.548	49.05	6.465	62.10	5.104	77.00	1.446	94.05	10.804
38.00	11.357	50.05	33.475	63.00	3.190	78.95	3.020	95.05	100.000
39.00	8.507	51.05	9.017	65.10	.723	79.85	.936	96.10	7.188
40.00	19.864	53.05	.681	67.10	1.276	80.95	2.765	119.05	.298
41.00	10.974	55.05	4.806	68.00	12.633	81.95	1.616	173.90	78.605
42.00	4.977	56.05	3.020	69.00	12.590	86.95	6.593	174.90	4.679
43.00	20.970	57.05	11.017	70.10	1.276	88.05	10.804	175.90	76.350
44.05	78.605	58.05	8.337	73.00	8.592	89.05	1.063	176.90	4.466
45.05	22.629	59.05	2.765	74.00	16.844	91.05	1.319	207.00	1.914
47.05	3.403	59.95	1.744	75.00	54.020	91.95	1.659	219.15	1.361

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	33.48	33.48	Ok
75	30-60% of mass 95	54.02	54.02	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.19	7.19	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	78.60	78.60	Ok
175	5-9% of mass 174	4.68	5.95	Ok
176	95-101% of mass 174	76.35	97.13	Ok
177	5-9% of mass 176	4.47	5.85	Ok

Injection Date: 06/27/91
Injection Time: 09:04
Data File: >XA627
Scan: 68

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WFSOL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 2 Calibration Date(s): 06/20/91 --/--/--

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>YC620 RRF50 =>YB620
RRF100=>YD620 RRF150=>YE620 RRF200=>YF620

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.487	.395	.353	.341	.301	.375	18.9#
Bromomethane	.312	.263	.274	.244	.215	.262	13.6
Vinyl Chloride *	.418	.353	.364	.365	.331	.366	8.8*
Chloroethane	.221	.201	.217	.204	.211	.211	4.0
Methylene Chloride	.679	.397	.361	.377	.352	.433	32.0
Acetone	.381	.248	.200	.251	.255	.267	25.2
Carbon Disulfide	5.414	6.084	6.031	5.867	5.598	5.799	4.9
1,1-Dichloroethene *	1.678	1.516	1.408	1.433	1.258	1.459	10.6*
1,1-Dichloroethane #	4.838	4.169	3.916	4.090	3.490	4.101	11.9#
1,2-Dichloroethene (total)	1.894	1.777	1.651	1.742	1.497	1.712	8.7
Chloroform *	3.966	3.463	3.209	3.326	2.906	3.374	11.5*
1,2-Dichloroethane	3.506	2.939	2.787	3.060	2.627	2.984	11.2
2-Butanone	.358	.314	.263	.359	.353	.330	12.6
1,1,1-Trichloroethane	.641	.526	.526	.573	.487	.551	10.7
Carbon Tetrachloride	.502	.432	.432	.471	.391	.446	9.5
Vinyl Acetate	1.625	1.604	1.461	1.780	1.763	1.646	7.9
Bromodichloromethane	.770	.646	.636	.697	.601	.670	9.8
1,2-Dichloropropane *	.614	.527	.516	.579	.500	.547	8.7*
cis-1,3-Dichloropropene	1.251	1.101	1.071	1.191	.999	1.123	8.9
Trichloroethene	.459	.394	.363	.404	.338	.392	11.6
Dibromochloromethane	.528	.444	.395	.448	.370	.437	13.9
1,1,2-Trichloroethane	.436	.350	.311	.363	.290	.350	16.2
Benzene	1.637	1.332	1.232	1.320	1.063	1.317	15.8
trans-1,3-Dichloropropene	.386	.347	.316	.358	.291	.340	10.9
Bromoform #	.350	.312	.279	.342	.290	.315	9.9#
4-Methyl-2-pentanone	.896	.852	.749	.964	1.006	.893	11.3
2-Hexanone	.623	.575	.510	.685	.696	.618	12.6
Tetrachloroethene	.403	.346	.309	.339	.274	.334	14.3
1,1,2,2-Tetrachloroethane #	.753	.603	.543	.696	.589	.637	13.4#
Toluene *	1.927	1.573	1.377	1.537	1.262	1.535	16.4*
Chlorobenzene #	1.240	1.020	.962	1.012	.876	1.022	13.2#
Ethylbenzene *	.584	.498	.466	.504	.414	.493	12.6*
Styrene	1.136	1.062	1.033	1.027	1.010	1.053	4.7
Xylene (total)	1.583	1.416	1.338	1.323	1.358	1.404	7.6
Toluene-d8	3.053	1.226	.598	.413	.316	1.121	101.4
Bromofluorobenzene	1.683	.693	.352	.236	.181	.629	98.8
1,2-Dichloroethane-d4	6.385	2.615	1.349	.964	.724	2.407	97.2

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: 000

Lab Code: WESTL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 96 2 Calibration Date: 6/27/91 Time: 9:40

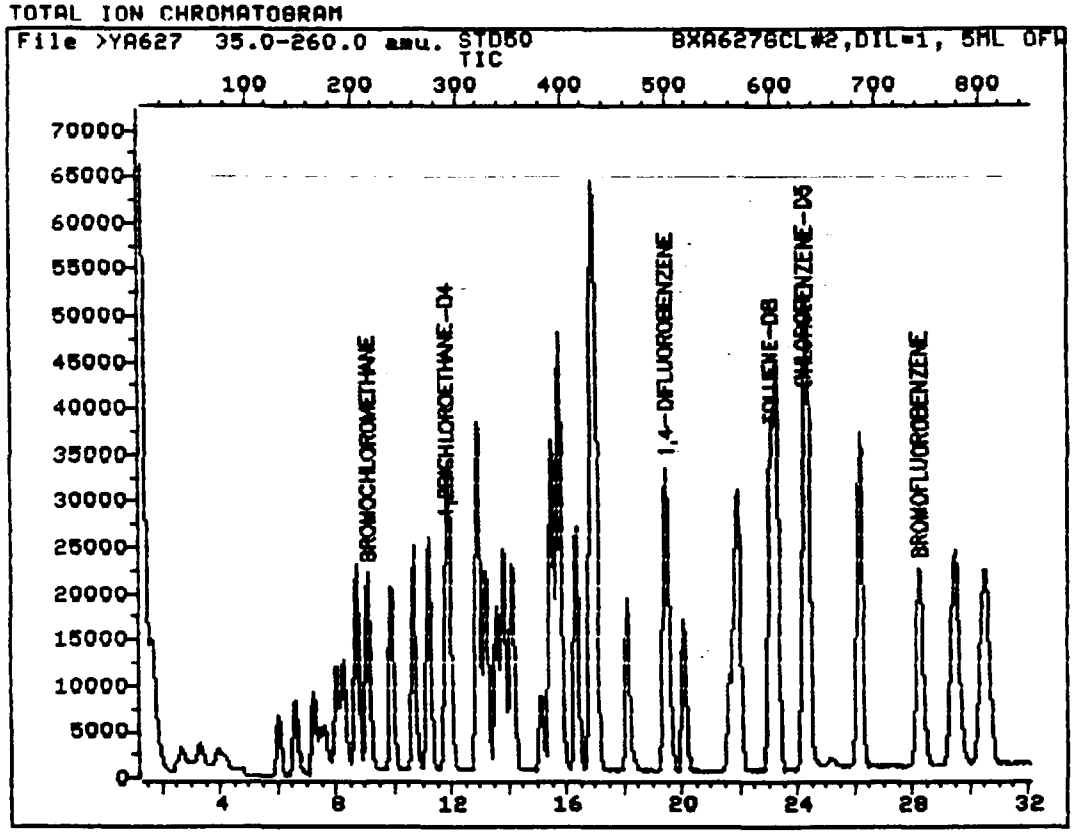
Lab File ID: >YA627 Init. Calib. Date(s): 06/20/91 --/--/--

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane #	.375	.375	.0 #
Bromomethane	.262	.242	7.5
Vinyl Chloride *	.366	.437	19.2 *
Chloroethane	.211	.262	24.5
Methylene_Chloride	.433	.521	20.3
Acetone	.267	.411	54.0
Carbon_Disulfide	5.799	1.545	73.3
1,1-Dichloroethene *	1.459	1.674	14.8 *
1,1-Dichloroethane #	4.101	4.690	14.4 #
1,2-Dichloroethene_(total)	1.712	1.971	15.1
Chloroform *	3.374	3.931	16.5 *
1,2-Dichloroethane	2.984	3.462	16.0
2-Butanone	.330	.326	1.0
1,1,1-Trichloroethane	.551	.589	7.0
Carbon_Tetrachloride	.446	.470	5.4
Vinyl Acetate	1.646	1.779	8.1
Bromodichloromethane	.670	.696	3.8
1,2-Dichloropropane *	.547	.585	7.0 *
cis-1,3-Dichloropropene	1.123	1.191	6.0
Trichloroethene	.392	.409	4.5
Dibromochloromethane	.437	.470	7.5
1,1,2-Trichloroethane	.350	.370	5.8
Benzene	1.317	1.476	12.1
trans-1,3-Dichloropropene	.340	.365	7.5
Bromoform #	.315	.317	.8 #
4-Methyl-2-pentanone	.893	.797	10.8
2-Hexanone	.618	.537	13.1
Tetrachloroethene	.334	.349	4.4
1,1,2,2-Tetrachloroethane #	.637	.613	3.8 #
Toluene *	1.535	1.575	2.6 *
Chlorobenzene #	1.022	1.057	3.4 #
Ethylbenzene *	.493	.485	1.7 *
Styrene	1.053	1.061	.7
Xylene_(total)	1.404	1.454	3.6
Toluene-d8	1.121	1.207	7.7
Bromofluorobenzene	.629	.684	8.7
1,2-Dichloroethane-d4	2.407	2.799	16.2

TOTAL ION CHROMATOGRAM



Data File: >YA627::L1 Quant Output File: ^YA627::D3
Name: STD50 BXA627
Misc: GCL#2,DIL=1, 5ML OFW + 5ULISS007A+2.5UL008,008,003+10U

Id File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910620 10:37

Operator ID: USER4
Quant Time: 910627 10:29
Injected at: 910627 09:40

QUANT REPORT

Operator ID: USER4 Quant Rev: 6 Quant Time: 910627 10:29
Output File: ^YA627::D3 Injected at: 910627 09:40
Data File: >YA627::L1 Dilution Factor: 1.00000
Name: STD50 BXA627
Misc: GCL#2,DIL=1, 5ML DFW + 5ULISS007A+2.5UL008,008,003+10U

ID File: ID_PPL::U1
Title: Daily Calibration via Single Point at 50 ug/L (Packed Col.)
Last Calibration: 910620 10:37

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.11	128.0	24269	50.00	UG/L	88
2)	CHLOROMETHANE	1.86	50.0	9111	34.66	UG/L	98
3)	BRUMOMETHANE	2.66	94.0	5871	42.97	UG/L	89
4)	VINYL CHLORIDE	3.31	62.0	10596	40.95	UG/L	90
5)	DICHLORODIFLUOROMETHANE	3.24	85.0	8423	61.21	UG/L	96
6)	CHLOROETHANE	4.14	64.0	6365	37.96	UG/L	92
7)	METHYLENE CHLORIDE	6.03	84.0	12647	40.98	UG/L	65
8)	ACROLEIN	6.61	56.0	33859	1530.95	UG/L	98
9)	ACETONE	6.61	43.0	9976	43.34	UG/L	66
10)	CARBON DISULFIDE	7.51	76.0	37505	39.57	UG/L	100
11)	TRICHLOROFLUOROMETHANE	8.02	101.0	59615	72.11	UG/L	94
12)	ACRYLONITRILE	7.26	53.0	37786	325.45	UG/L	100
13)	1,1-DICHLOROETHENE	8.71	96.0	40633	57.31	UG/L	86
14)	1,1-DICHLOROETHANE	9.91	63.0	113832	52.10	UG/L	94
15)	1,2-DICHLOROETHENE (TOTAL)	10.67	96.0	47837	55.79	UG/L	78
17)	CHLOROFORM	11.21	83.0	95410	53.83	UG/L	93
19)	1,2-DICHLOROETHANE-D4	11.83	65.0	67918	48.88	UG/L	98
20)	1,2-DICHLOROETHANE	11.94	62.0	84013	53.33	UG/L	95
22)	*1,4-DIFLUOROBENZENE	19.44	114.0	116214	50.00	UG/L	68
23)	2-BUTANONE	11.90	43.0	37924	51.54	UG/L	76
24)	1,1,1-TRICHLOROETHANE	13.21	97.0	68434	53.25	UG/L	79
26)	CARBON TETRACHLORIDE	13.60	117.0	54582	55.14	UG/L	98
27)	VINYL ACETATE	13.82	43.0	206768	50.87	UG/L	66
28)	BROMODICHLOROMETHANE	14.11	83.0	80839	51.65	UG/L	92
29)	1,2-DICHLOROPROPANE	15.49	63.0	68028	48.23	UG/L	90
30)	CIS-1,3-DICHLOROPROPENE	15.74	75.0	138347	49.35	UG/L	93
31)	TRICHLOROETHENE	16.36	130.0	47574	53.34	UG/L	89
32)	DIBROMOCHLOROMETHANE	16.90	129.0	54609	55.26	UG/L	97
33)	1,1,2-TRICHLOROETHANE	17.01	97.0	43043	50.36	UG/L	97
34)	BENZENE	16.87	78.0	171565	49.90	UG/L	87
35)	TRANS-1,3-DICHLOROPROPENE	17.05	75.0	42466M	50.30	UG/L	
36)	HEXANE	18.14	57.0	8972	50.14	UG/L	100
37)	2-CHLOROETHYLVINYLETHER	18.14	63.0	41447M	50.22	UG/L	
38)	BROMOFORM	19.55	173.0	36895	58.91	UG/L	97
39)	*CHLOROBENZENE-D5	24.23	117.0	107466	50.00	UG/L	96
40)	4-METHYL-2-PENTANONE	20.09	43.0	85623	48.64	UG/L	82
41)	2-HEXANONE	21.62	43.0	57734	46.87	UG/L	79
42)	TETRACHLOROETHENE	21.98	164.0	37490	55.94	UG/L	97
43)	1,1,2,2-TETRACHLOROETHANE	21.83	83.0	65865M	48.05	UG/L	
44)	TOLUENE	23.25	91.0	169291	49.82	UG/L	98
45)	TOLUENE-D8	23.07	98.0	129743	47.59	UG/L	89
46)	CHLOROBENZENE	24.37	112.0	113611	51.95	UG/L	79
47)	ETHYLBENZENE	26.18	106.0	52075	49.48	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
48)	STYRENE	29.48	104.0	113997	51.70	UG/L	98
49)	XYLENE (TOTAL)	30.50	91.0	156246	50.48	UG/L	95
50)	BROMOFLUOROBENZENE	28.25	95.0	73515	51.51	UG/L	74

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot DiscolTCLV

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER

Lab Sample ID: 9106G820-003

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: BNQS04

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. _____

Date Analyzed: 07/02/91

Column: (pack/cap) PACK

Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	
75-01-4	Vinyl Chloride	40	U
75-35-4	1,1-Dichloroethene	100	U
67-66-3	Chloroform	40	U
107-06-2	1,2-Dichloroethane	40	U
56-23-5	Carbon Tetrachloride	40	U
78-93-3	2-Butanone	200	U
79-01-6	Trichloroethene	40	U
71-43-2	Benzene	60	U
127-18-4	Tetrachloroethene	100	U
108-90-7	Chlorobenzene	40	U

DGL

QUANT REPORT

Operator ID: USER8 Quant Rev: 6 Quant Time: 910/02 01:42
Output File: ^NQS04::D3 Injected at: 910/02 01:07
Data File: >NQS04::L1 Dilution Factor: 1.00000
Name: 9106G820-003 BXB/01
Misc: GCL#2,DIL=20,250UL SMP +5UL ISS#00/8 +4.75ML DFW

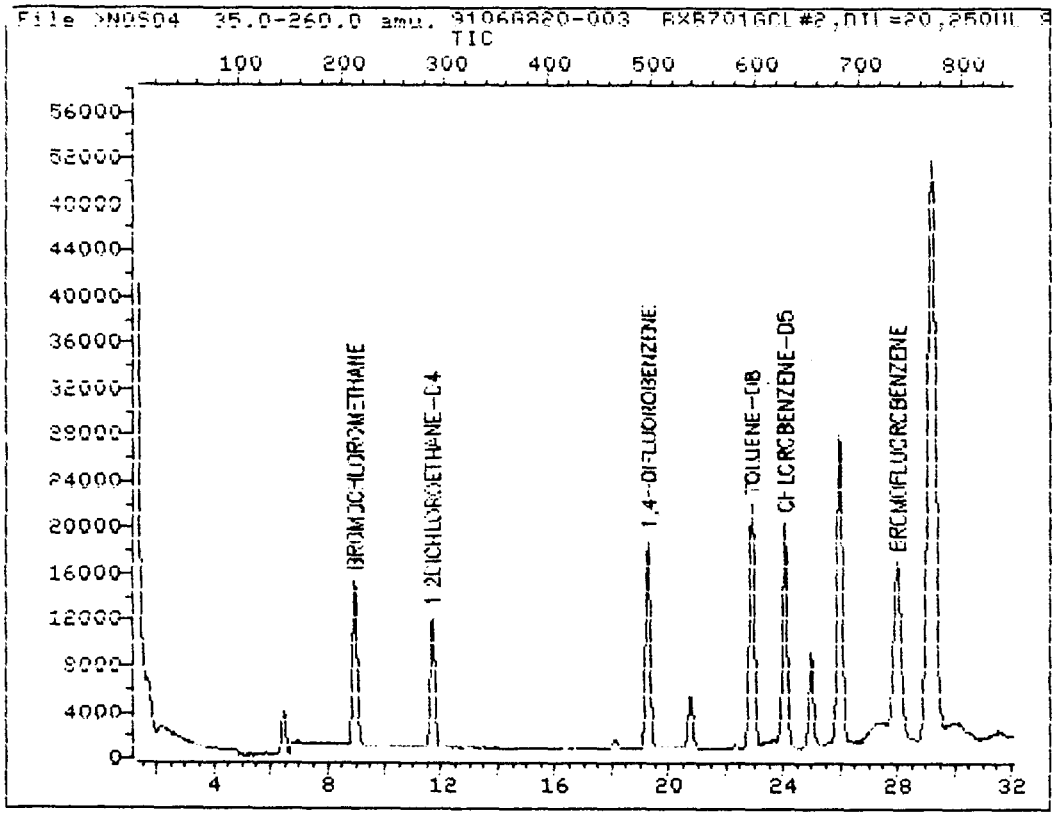
ID File: ID_MS2::U1
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910/01 22:36

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.95	128.0	16751	50.00	UG/L	66
7)	ACETONE	6.45	43.0	30151	389.40	UG/L	69
13)	1,2-DICHLOROETHANE-D4	11.71	65.0	42016	48.61	UG/L	98
15)	*1,4-DIFLUOROBENZENE	19.28	114.0	77034	50.00	UG/L	91
29)	*CHLOROBENZENE-D5	24.06	117.0	69523	50.00	UG/L	95
34)	TOLUENE	23.12	91.0	5326	2.58	UG/L	91
35)	TOLUENE-D8	22.90	98.0	81358	48.01	UG/L	88
37)	ETHYLBENZENE	25.98	106.0	38712	61.86	UG/L	99
38)	STYRENE	29.21	104.0	243318	168.10	UG/L	99
40)	BROMOFLUOROBENZENE	28.01	95.0	47465	48.97	UG/L	94

* Compound is ISTD

D&L

TOTAL ION CHROMATOGRAM



Data File: >NQS04::L1 Quant Output File: ^NQS04::D3
Name: 9106G820-003 BXB701
Misc: GCL#2,DIL=20,250UL SMP +5UL ISS#0078 +4.75ML DFW

Id File: ID_MS2::01
Title: Daily Calibration via Single Point at 50 ug/L
Last Calibration: 910701 22:36

Operator ID: USER8
Quant Time: 910702 01:42
Injected at: 910702 01:07

Roy F. Weston, Inc. - Gulf Coast Laboratories
BNA ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #		MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot Discolor.	001		SO	91GB0294	06/13/91	06/26/91	07/15/91
Truck Lot Discolor.	001	01	SO	91GB0294	06/13/91	06/26/91	07/23/91
LAB QC:							
SBLK	MB1		S	91GB0294	N/A	06/26/91	07/11/91
SBLK	MB1 BS		S	91GB0294	N/A	06/26/91	07/12/91
SBLK	MB1 BSD		S	91GB0294	N/A	06/26/91	07/12/91

SIGNATURE Jeff A. Kaczinski DATE 7-24-91

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Wednesday July 24th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

SEMIVOLATILES BY GC/MS, HSL LIST

Semivolatile Compound	Result	Reporting Limit	Flag
Phenol	BDL	560000	U
bis(2-Chloroethyl)ether	BDL	560000	U
2-Chlorophenol	BDL	560000	U
1,3-Dichlorobenzene	BDL	560000	U
1,4-Dichlorobenzene	BDL	560000	U
Benzyl alcohol	BDL	560000	U
1,2-Dichlorobenzene	BDL	560000	U
2-Methylphenol	BDL	560000	U
bis(2-Chloroisopropyl)ether	BDL	560000	U
4-Methylphenol	BDL	560000	U
N-Nitroso-Di-n-propylamine	BDL	560000	U
Hexachloroethane	BDL	560000	U
Nitrobenzene	BDL	560000	U
Isophorone	BDL	560000	U
2-Nitrophenol	BDL	560000	U
2,4-Dimethylphenol	BDL	560000	U
Benzoic acid	BDL	2800000	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 24th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

SEMIVOLATILES BY GC/MS, HSL LIST

Semivolatile Compound	Result	Reporting Limit	Flag
bis(2-Chloroethoxy)methane	BDL	560000	U
2,4-Dichlorophenol	BDL	560000	U
1,2,4-Trichlorobenzene	BDL	560000	U
Naphthalene	BDL	560000	U
4-Chloroaniline	BDL	560000	U
Hexachlorobutadiene	BDL	560000	U
4-Chloro-3-methylphenol	BDL	560000	U
2-Methylnaphthalene	BDL	560000	U
Hexachlorocyclopentadiene	BDL	560000	U
2,4,6-Trichlorophenol	BDL	560000	U
2,4,5-Trichlorophenol	BDL	2800000	U
2-Chloronaphthalene	BDL	560000	U
2-Nitroaniline	E	2800000	
Dimethylphthalate	BDL	560000	U
Acenaphthylene	BDL	560000	U
2,6-Dinitrotoluene	BDL	560000	U
3-Nitroaniline	BDL	2800000	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 24th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

SEMIVOLATILES BY GC/MS, HSL LIST

Semivolatile Compound	Result	Reporting Limit	Flag
Acenaphthene	BDL	560000	U
2,4-Dinitrophenol	BDL	2800000	U
4-Nitrophenol	BDL	2800000	U
Dibenzofuran	BDL	560000	U
2,4-Dinitrotoluene	BDL	560000	U
Diethylphthalate	BDL	560000	U
4-Chlorophenyl-phenylether	BDL	560000	U
Fluorene	BDL	560000	U
4-Nitroaniline	BDL	2800000	U
4,6-Dinitro-2-methylphenol	BDL	2800000	U
N-Nitrosodiphenylamine (1)	BDL	560000	U
4-Bromophenyl-phenylether	BDL	560000	U
Hexachlorobenzene	BDL	560000	U
Pentachlorophenol	BDL	2800000	U
Phenanthrene	BDL	560000	U
Anthracene	BDL	560000	U
Di-n-Butylphthalate	BDL	560000	U

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ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Wednesday July 24th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

SEMIVOLATILES BY GC/MS, HSL LIST

Semivolatile Compound	Result	Reporting Limit	Flag
Fluoranthene	BDL	560000	U
Pyrene	BDL	560000	U
Butylbenzylphthalate	BDL	560000	U
3,3'-Dichlorobenzidine	BDL	1100000	U
Benzo(a)anthracene	BDL	560000	U
Chrysene	BDL	560000	U
bis(2-Ethylhexyl)phthalate	BDL	560000	U
Di-n-Octyl phthalate	BDL	560000	U
Benzo(b)fluoranthene	BDL	560000	U
Benzo(k)fluoranthene	BDL	560000	U
Benzo(a)pyrene	BDL	560000	U
Indeno(1,2,3-cd)pyrene	BDL	560000	U
Dibenzo(a,h)anthracene	BDL	560000	U
Benzo(g,h,i)perylene	BDL	560000	U

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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 24th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

Tentatively Identified Compounds

2 Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

Semivolatile Compound	Retention Time	Estimated Concentration	
UNKNOWN(C6H8N2)	14.80	600000	J
SUB.CHLORO-NITRO-BENZENE	15.30	3000000	J

WESTON-GULF COAST LABORATORIES, INC.
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ANALYTICAL REPORT

To: Cerro Copper Products

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: Mr. Joe Grana

Date: Wednesday July 24th, 1991

RE: Truck Lot Discolor.
Project # 0000-00-00-0000
Lab ID: 9106G820-001 DL
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

SEMIVOLATILES BY GC/MS, HSL LIST

Semivolatile Compound	Result	Reporting Limit	Flag
2-Nitroaniline	0.19E+09	80000000	J

Roy F. Weston, Inc. - Gulf Coast Laboratories
SEMIVOLATILES BY GC/MS, HSL LIST

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/23/91 20:18 Page: 1a

	Cust ID:	Truck Lot Discolor		Truck Lot Discolor		SBLK		SBLK BS		SBLK BSD	
Sample Information	RFW#:	001		001 DL		91GB0294-MB1		91GB0294-MB1		91GB0294-MB1	
	Matrix:	SOLID		SOLID		SOIL		SOIL		SOIL	
	D.F.:	500		50000		1.00		1.00		1.00	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Surrogate Recovery	Nitrobenzene-d5	D	%	D	%	121 *	%	100	%	109	%
	2-Fluorobiphenyl	D	%	D	%	106	%	92	%	95	%
	Terphenyl-d14	D	%	D	%	135	%	172 *	%	169 *	%
	Phenol-d5	D	%	D	%	103	%	100	%	104	%
	2-Fluorophenol	D	%	D	%	90	%	99	%	103	%
	2,4,6-Br3-phenol	D	%	D	%	74	%	105	%	109	%
Phenol		560000	U	NA		330	U	80	%	81	%
bis(2-Chloroethyl)ether		560000	U	NA		330	U	330	U	330	U
2-Chlorophenol		560000	U	NA		330	U	80	%	83	%
1,3-Dichlorobenzene		560000	U	NA		330	U	330	U	330	U
1,4-Dichlorobenzene		560000	U	NA		330	U	76	%	82	%
Benzyl alcohol		560000	U	NA		330	U	330	U	330	U
1,2-Dichlorobenzene		560000	U	NA		330	U	330	U	330	U
2-Methylphenol		560000	U	NA		330	U	330	U	330	U
bis(2-Chloroisopropyl)ether		560000	U	NA		330	U	330	U	330	U
4-Methylphenol		560000	U	NA		330	U	330	U	330	U
N-Nitroso-Di-n-propylamine		560000	U	NA		330	U	106	%	108	%
Hexachloroethane		560000	U	NA		330	U	330	U	330	U
Nitrobenzene		560000	U	NA		330	U	330	U	330	U
Isophorone		560000	U	NA		330	U	330	U	330	U
2-Nitrophenol		560000	U	NA		330	U	330	U	330	U
2,4-Dimethylphenol		560000	U	NA		330	U	330	U	330	U
Benzoic acid		2800000	U	NA		1700	U	1700	U	1700	U
bis(2-Chloroethoxy)methane		560000	U	NA		330	U	330	U	330	U
2,4-Dichlorophenol		560000	U	NA		330	U	330	U	330	U
1,2,4-Trichlorobenzene		560000	U	NA		330	U	86	%	92	%
Naphthalene		560000	U	NA		330	U	330	U	330	U
4-Chloroaniline		560000	U	NA		330	U	330	U	330	U
Hexachlorobutadiene		560000	U	NA		330	U	330	U	330	U
4-Chloro-3-methylphenol		560000	U	NA		330	U	84	%	86	%
2-Methylnaphthalene		560000	U	NA		330	U	330	U	330	U
Hexachlorocyclopentadiene		560000	U	NA		330	U	330	U	330	U

*= Outside of EPA CLP QC limits.

Cust ID:	Truck Lot Discolor		Truck Lot Discolor	SBLK		SBLK BS		SBLK BSD	
RFW#:	001		001 DL	91GB0294-MB1		91GB0294-MB1		91GB0294-MB1	
2,4,6-Trichlorophenol	560000	U	NA	330	U	330	U	330	U
2,4,5-Trichlorophenol	2800000	U	NA	1700	U	1700	U	1700	U
2-Chloronaphthalene	560000	U	NA	330	U	330	U	330	U
2-Nitroaniline		E	0.19E+09	J 1700	U	1700	U	1700	U
Dimethylphthalate	560000	U	NA	330	U	330	U	330	U
Acenaphthylene	560000	U	NA	330	U	330	U	330	U
2,6-Dinitrotoluene	560000	U	NA	330	U	330	U	330	U
3-Nitroaniline	2800000	U	NA	1700	U	1700	U	1700	U
Acenaphthene	560000	U	NA	330	U	83	%	84	%
2,4-Dinitrophenol	2800000	U	NA	1700	U	1700	U	1700	U
4-Nitrophenol	2800000	U	NA	1700	U	65	%	70	%
Dibenzofuran	560000	U	NA	330	U	330	U	330	U
2,4-Dinitrotoluene	560000	U	NA	330	U	68	%	72	%
Diethylphthalate	560000	U	NA	330	U	330	U	330	U
4-Chlorophenyl-phenylether	560000	U	NA	330	U	330	U	330	U
Fluorene	560000	U	NA	330	U	330	U	330	U
4-Nitroaniline	2800000	U	NA	1700	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol	2800000	U	NA	1700	U	1700	U	1700	U
N-Nitrosodiphenylamine (1)	560000	U	NA	330	U	330	U	330	U
4-Bromophenyl-phenylether	560000	U	NA	330	U	330	U	330	U
Hexachlorobenzene	560000	U	NA	330	U	330	U	330	U
Pentachlorophenol	2800000	U	NA	1700	U	68	%	70	%
Phenanthrene	560000	U	NA	330	U	330	U	330	U
Anthracene	560000	U	NA	330	U	330	U	330	U
Di-n-Butylphthalate	560000	U	NA	330	U	330	U	330	U
Fluoranthene	560000	U	NA	330	U	330	U	330	U
Pyrene	560000	U	NA	330	U	134	%	136	%
Butylbenzylphthalate	560000	U	NA	330	U	330	U	330	U
3,3'-Dichlorobenzidine	1100000	U	NA	670	U	670	U	670	U
Benzo(a)anthracene	560000	U	NA	330	U	330	U	330	U
Chrysene	560000	U	NA	330	U	330	U	330	U
bis(2-Ethylhexyl)phthalate	560000	U	NA	330	U	330	U	330	U
Di-n-Octyl phthalate	560000	U	NA	330	U	330	U	330	U
Benzo(b)fluoranthene	560000	U	NA	330	U	330	U	330	U
Benzo(k)fluoranthene	560000	U	NA	330	U	330	U	330	U
Benzo(a)pyrene	560000	U	NA	330	U	330	U	330	U
Indeno(1,2,3-cd)pyrene	560000	U	NA	330	U	330	U	330	U
Dibenzo(a,h)anthracene	560000	U	NA	330	U	330	U	330	U
Benzo(g,h,i)perylene	560000	U	NA	330	U	330	U	330	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products Level:(low/med)LOW

RFW Lot No.: 9106G820

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	Truck Lot Discolor.	D	D	D	D	D	D		0
02	Truck Lot Discolor.DL	D	D	D	D	D	D		0
03	SBLKGB0294-MB1	121 *	106	135	103	90	74		1
04	SBLKGB0294-MB1 BS	100	92	172 *	100	99	105		1
05	SBLKGB0294-MB1 BSD	109	95	169 *	104	103	109		1

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Br3-phenol	(19-122)

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

3D

SOIL SEMIVOLATILE BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: LAB RFW Lot No.: 9106G820

BLANK Spike - Sample No.: SBLKGB0294-MB1 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	BS CONCENTRATION (ug/Kg)	BS % REC #	QC LIMITS REC
Phenol	3330	0	2680	80	26- 90
2-Chlorophenol	3330	0	2680	80	25-102
1,4-Dichlorobenzene	1670	0	1270	76	28-104
N-Nitroso-Di-n-propylamine	1670	0	1760	106	41-126
1,2,4-Trichlorobenzene	1670	0	1430	86	38-107
4-Chloro-3-methylphenol	3330	0	2790	84	26-103
Acenaphthene	1670	0	1380	83	31-137
4-Nitrophenol	3330	0	2160	65	11-114
2,4-Dinitrotoluene	1670	0	1130	68	28- 89
Pentachlorophenol	3330	0	2260	68	17-109
Pyrene	1670	0	2240	134	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	BSD CONCENTRATION (ug/Kg)	BSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
Phenol	3330	2700	81	1	35	26- 90
2-Chlorophenol	3330	2760	83	3	50	25-102
1,4-Dichlorobenzene	1670	1370	82	7	27	28-104
N-Nitroso-Di-n-propylamine	1670	1800	108	1	38	41-126
1,2,4-Trichlorobenzene	1670	1530	92	6	23	38-107
4-Chloro-3-methylphenol	3330	2860	86	2	33	26-103
Acenaphthene	1670	1400	84	1	19	31-137
4-Nitrophenol	3330	2320	70	7	50	11-114
2,4-Dinitrotoluene	1670	1210	72	5	47	28- 89
Pentachlorophenol	3330	2320	70	2	47	17-109
Pyrene	1670	2260	136	1	36	35-142

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

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLKMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1 BS

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ87

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol		S
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol		S
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene		S
100-51-6	Benzyl alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-propylamine		S
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene		S
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol		S
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U

S: SPIKE COMPOUND

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLKMS

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1 BS

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ87

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

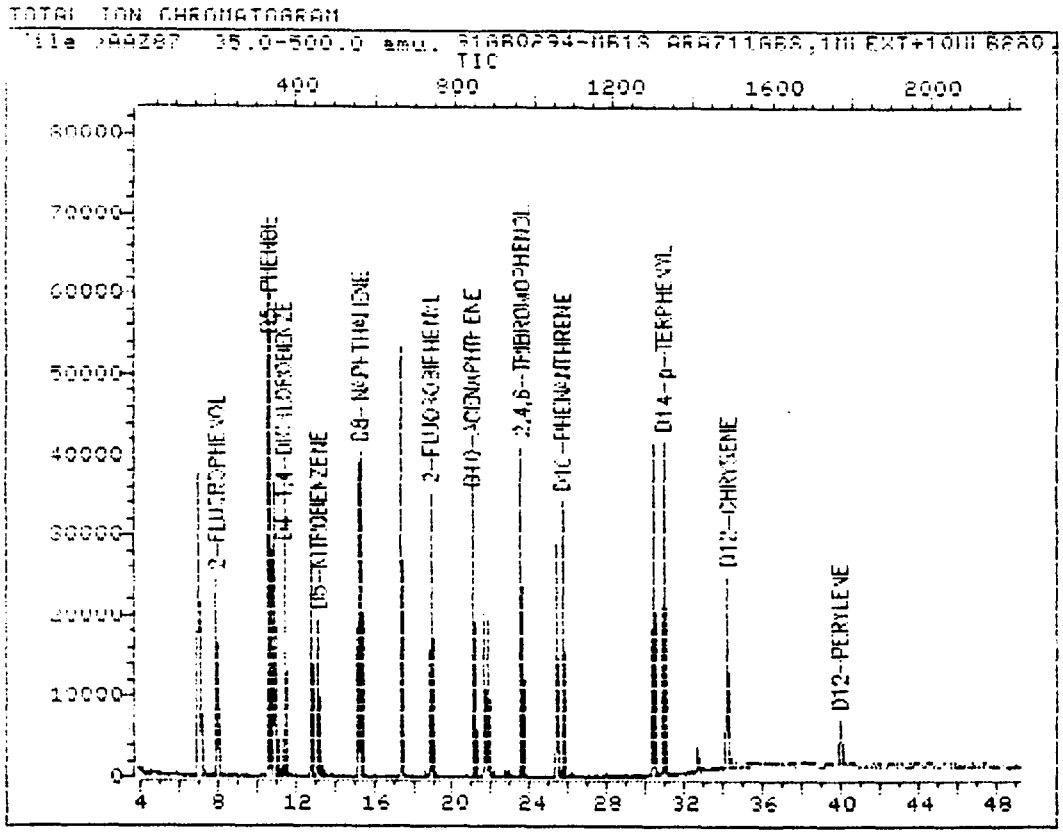
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene		S
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol		S
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene		S
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol		S
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene		S
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	670	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-Octyl phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine
S: SPIKE COMPOUND



Data File: >AAZ87::DU Quant Output File: ^AAZ87::DD
Name: 91GB0294-MB1S AAA711
Misc: GBS,1ML EXT+10UL B280,F=1000,E=30.0,DIL=1,GCL#1 BTL#64

Id File: ID_MS1::D6
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910/11 11:59

Operator ID: MANAGER
Quant Time: 910/12 00:55
Injected at: 910/12 00:01

QUANT REPORT

Operator ID: MANAGER Quant Rev: 0 Quant Time: 910/12 00:53
Output File: ^AA/R/::DD Injected at: 910/12 00:01
Data File: >AA/R/::DD Dilution Factor: 1.000000
Name: 910B0094-MB15 ARA/11
Misc: GRS,IMLEXI+0010L8/80,F=1000,E=50.0,DIL=1,GCL#1 RTI #64

ID File: ID_MST::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910/11 11:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	11.39	152.1	18060	40.00	ng	98
2)	PHENOL	10.64	94.1	50298	80.58	ng	82
4)	2-CHLOROPHENOL	10.88	128.0	41513	80.28	ng	97
6)	1,4-DICHLOROBENZENE	11.43	146.0	24522	38.11	ng	95
10)	N-NITROSO-DI-N-PROPYLAMINE	12.82	70.1	16995	52.88	ng	89
12)	2-FLUOROPHENOL	7.93	112.1	39882	98.52	ng	99
13)	PHENOL-D5	10.60	99.1	41824	100.52	ng	97
16)	*D8-NAPHTHALENE	15.52	136.2	56353	40.00	ng	95
24)	1,2,4-TRICHLOROBENZENE	15.22	180.0	23578	42.86	ng	98
28)	4-CHLORO-3-METHYLPHENOL	17.52	107.1	35652	83.68	ng	99
30)	NITROBENZENE-D5	13.14	82.1	19659	49.79	ng	96
33)	*D10-ACENAPHTHENE	20.98	164.2	26728	40.00	ng	92
41)	ACENAPHTHENE	21.09	153.2	32791	41.46	ng	98
44)	4-NITROPHENOL	21.59	109.1	9312	64.80	ng	86
45)	2,4-DINITROTOLUENE	21.76	89.1	6968	34.01	ng	89
50)	2-FLUOROBIPHENYL	18.89	172.1	32698	46.17	ng	99
51)	2,4,6-TRIBROMOPHENOL	23.55	330.0	18836	104.68	ng	96
52)	*D10-PHENANTHRENE	25.69	188.2	45892	40.00	ng	91
57)	PENTACHLOROPHENOL	25.34	266.0	14428	67.70	ng	95
59)	*D12-CHRYSENE	34.70	240.2	34277	40.00	ng	99
63)	PYRENE	30.31	202.2	68965	67.23	ng	94
69)	TERPHENYL-D14	30.90	244.3	56491	85.69	ng	97
70)	*D12-PERYLENE	39.90	264.2	16085	40.00	ng	96

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLKMSD

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1 BSD

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ88

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol		S
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol		S
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene		S
100-51-6	Benzyl alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-propylamine		S
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene		S
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol		S
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U

S: SPIKE COMPOUND

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLKMSD

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1 BSD

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ88

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/91

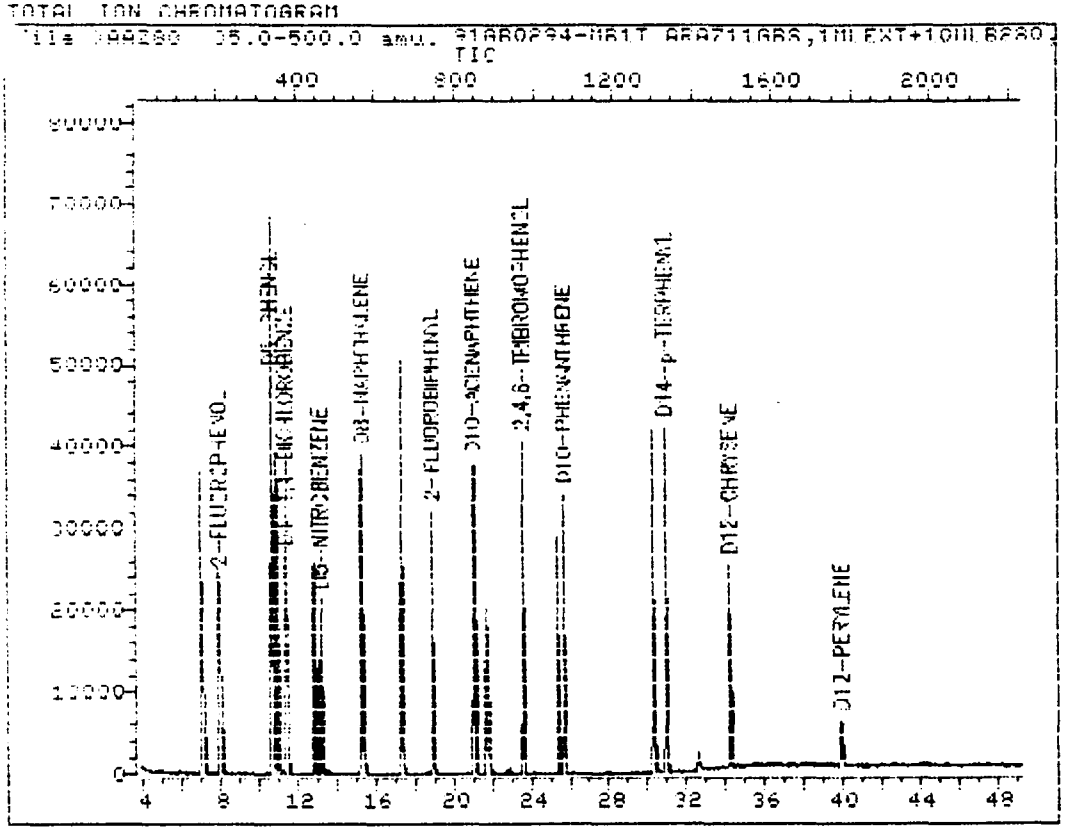
GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene		S
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol		S
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene		S
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol		S
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene		S
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	670	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-Octyl phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine
S: SPIKE COMPOUND

TOTAL ION CHROMATOGRAM



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Name: 91GR0294-MB1T ARA711
Misc: GBS,1ML EXT+10ULB280,F=1000,E=30.0,DIL=1,GCL#1 BTL#65

ID File: ID_MS1::D9
Title: ID FILE FOR HAZARDOUS SUBSTANCES,TEPA,MSD#1
Last Calibration: 910/11 11:59

Operator ID: MANAGER
Quant Time: 910/12 03:49
Injected at: 910/12 00:52

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 910/12 01:49
Output File: >AA/88::DD Injected at: 910/12 00:57
Data File: >AA288::DD Dilution Factor: 1.00000
Name: 91GR0294-MRIT ARA/11
Misc: GRS,1MLEXT+10ULB28D,F=1000,E=30.0,DIL=1,GCL#1 BTL#65

ID File: ID_MS1::D5
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910/11 11:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	11.39	152.1	17806	40.00	ng	97
2)	PHENOL	10.64	94.1	49974	80.92	ng	83
4)	2-CHLOROPHENOL	10.88	128.0	42159	82.69	ng	96
6)	1,4-DICHLOROBENZENE	11.43	146.0	26022	41.01	ng	95
12)	N-NITROSO-DI-N-PROPYLAMINE	12.84	70.1	17136	54.08	ng	91
14)	2-FLUOROPHENOL	7.95	112.1	41293	103.46	ng	94
15)	PHENOL-D5	10.60	99.1	42813	104.16	ng	99
16)	*D8-NAPHTHALENE	15.34	136.2	55227	40.00	ng	96
24)	1,2,4-TRICHLOROBENZENE	15.22	180.0	24779	45.97	ng	99
28)	4-CHLORO-3-METHYLPHENOL	17.51	107.1	35839	85.83	ng	97
30)	NITROBENZENE-D5	13.14	82.1	21012	54.30	ng	95
31)	*D10-ACENAPHTHENE	21.00	164.2	25848	40.00	ng	91
41)	ACENAPHTHENE	21.10	153.2	32102	41.97	ng	96
44)	4-NITROPHENOL	21.59	109.1	9664	69.54	ng	84
45)	2,4-DINITROTOLUENE	21.75	89.1	7165	36.16	ng	86
50)	2-FLUOROBIPHENYL	18.88	172.1	52474	47.42	ng	98
51)	2,4,6-TRIBROMOPHENOL	23.54	330.0	19049	109.47	ng	94
53)	*D10-PHENANTHRENE	25.69	188.2	45965	40.00	ng	92
57)	PENTACHLOROPHENOL	25.34	266.0	14841	69.53	ng	98
62)	*D12-CHRYSENE	34.70	240.2	35670	40.00	ng	99
63)	PYRENE	30.31	202.2	72336	67.76	ng	95
69)	TERPHENYL-D14	30.90	244.3	57834	84.48	ng	97
70)	*D12-PERYLENE	39.90	264.2	16099	40.00	ng	97

* Compound is ISTD

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: AAAZ74 Lab Sample ID: 91GB0294-MB1

Date Extracted: 06/26/91 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 07/11/91 Time Analyzed: 1148

Matrix:(Soil/Water) SOIL Level:(low/med) LOW

Instrument ID: GCL#1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SBLKGB0294-MB1 BS	91GB0294-MB1S	AAAZ87	07/12/91
02	SBLKGB0294-MB1 BSD	91GB0294-MB1T	AAAZ88	07/12/91
03	Truck Lot Discolor.	9106G820-001	DBBF28	07/15/91
04	Truck Lot Discolor.DL	9106G820-001	DBBG36	07/23/91

COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ74

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOIL Lab Sample ID: 91GB0294-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ74

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	670	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-Octyl phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLK

Lab Name: Roy F. Weston, Inc. Work Order: NONE

Client: LAB

Matrix: SOIL Lab Sample ID: 91GB0294-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AAAZ74

Level: (low/med) LOW Date Received: 06/26/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/91

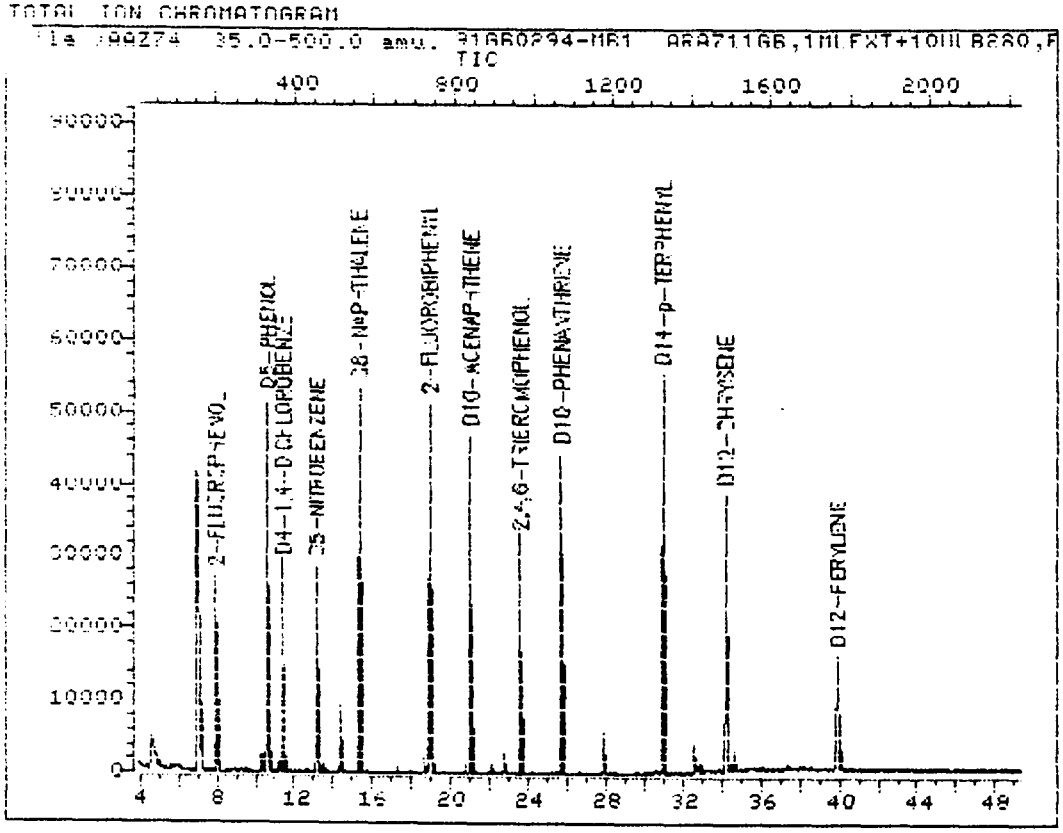
GPC Cleanup: (Y/N) Y pH: ____ Dilution Factor: 1.00

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.56	600	J
2.	UNKNOWN	6.97	3000	J
3.	UNKNOWN	14.34	200	J
4.	SUB.BENZENEDICARBOXYLIC ACID	27.87	100	J
5.	UNKNOWN	32.59	200	J

TOTAL ION CHROMATOGRAM



Data File: >AAZ74::DD Quant Output File: ^AAZ74::DD
Name: 91GB0294-MB1 ARA711
Misc: GB,1ML EXT+10UL B280,F=1000,E=30.0,DIL=1,GCL#1 BIL#51

Id File: ID_MS1::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910/11 11:59

Operator ID: MANAGER
Quant Time: 910/11 12:40
Injected at: 910/11 11:48

:QREP,^AAZ74

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 910711 12:40
Output File: ^AAZ74::DD Injected at: 910711 11:48
Data File: >AAZ74::D0 Dilution Factor: 1.00000
Name: 91GB0294-MB1 ARA711
Misc: GB,1MLEXT+10ULB280,F=1000,E=30.0,DIL=1,GCL#1 BTL#51

ID File: ID_MS1::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910711 11:59

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	11.38	367	23175	40.00	ng	98
14)	2-FLUOROPHENOL	7.94	198	46669	89.84	ng	97
15)	PHENOL-D5	10.59	328	55111	103.01	ng	99
16)	*D8-NAPHTHALENE	15.33	561	69035	40.00	ng	95
30)	NITROBENZENE-D5	13.13	453	29236	60.44	ng	92
31)	*D10-ACENAPHTHENE	20.99	839	32741	40.00	ng	93
50)	2-FLUOROBIPHENYL	18.90	736	46043	53.07	ng	98
51)	2,4,6-TRIBROMOPHENOL	23.54	964	16257	73.76	ng	89
52)	*D10-PHENANTHRENE	25.69	1070	57390	40.00	ng	92
62)	*D12-CHRYSENE	34.20	1488	55074	40.00	ng	99
69)	TERPHENYL-D14	30.91	1326	71438	67.58	ng	97
70)	*D12-PERYLENE	39.90	1768	43046	40.00	ng	95

* Compound is ISTD

To this file header from : >AA274

Sample: 91GB0294-MB1 ARA/11 Operator: MANAGER M5 7/11/91 11:48
File : B,IMLEXT+10ULB280,F=1000,E=30.0,DIL=1,GLL=1 BIL=1
Inj. #: 1 M5 model: 70 SW/HW rev.: 1A ALS # : 0
Method file: [illegible] Tuning file: [illegible] No. of extra scans: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures : 30. 290. 0. 0. 0.
Chromatographic times, min. : 4.0 15.2 0.0 0.0 0.0
Chromatographic rate, deg/min: 8.0 0.0 0.0 .2 0.0

A-274 91GB0294-MB1 ARA/11GB,IMLEXT+10ULB280,F=1000,E=30.0,DIL=1,G

[illegible] 10.0 [illegible] 1L
Threshold: .20 Area Reject: .52 % Max Peaks: 38 Smoothing: 1
[illegible] Results File [illegible] Sorted by time/Area [illegible]

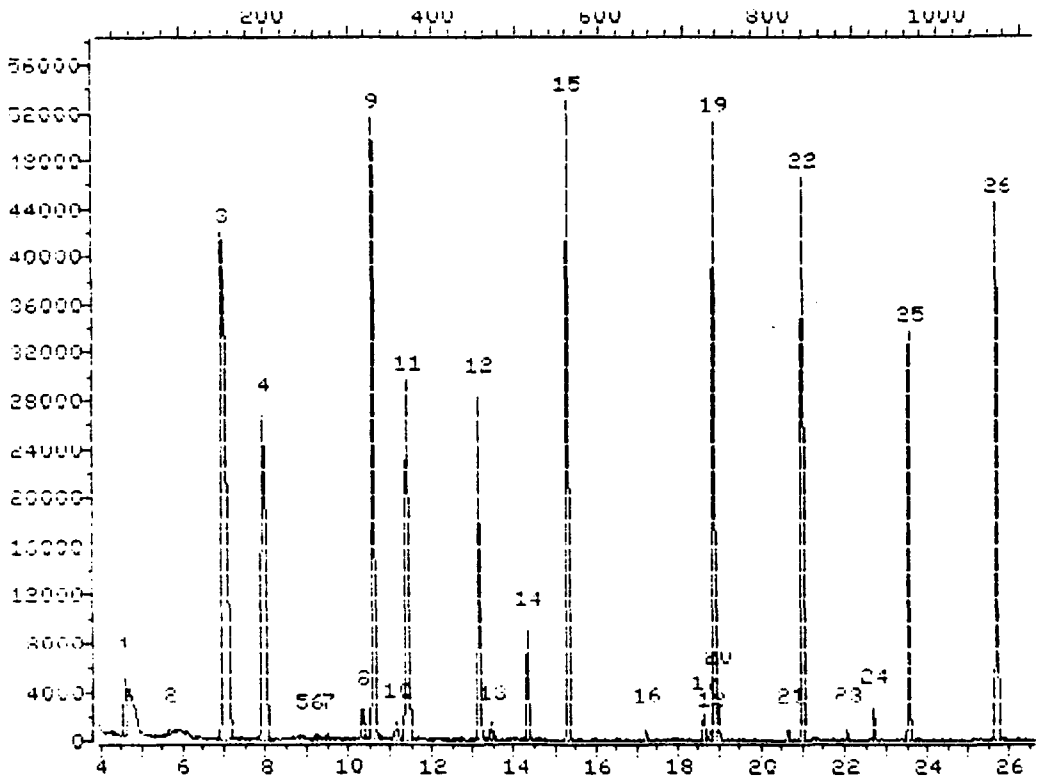
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	4.56	79	82	86	4750	30182 C8215	~~[illegible]~~ M.I.	[illegible]	1.123
2	5.66	83	86	90	547	7018	~~2684~~	.78	.114
3	6.77	147	150	162	41159	545387	543[illegible]	100.00	14.541
4	7.94	194	198	211	26786	201019	199627 SS	58.11 SS	8.451
5	8.14	235	242	246	340	4579	~~[illegible]~~	.81	.118
6	9.23	258	261	268	545	4050	~~3476~~	1.01	.147
7	[illegible]	270	274	281	436	3478	~~[illegible]~~	.65	.095
8	11.33	312	315	321	2278	12004	~~10268~~	2.99	.435
9	[illegible]	[illegible]	348	355	[illegible]	[illegible]	[illegible] SS	[illegible]	8.359
10	12.15	351	356	360	1329	7858	~~[illegible]~~	2.08	.303
11	[illegible]	365	368	373	[illegible]	[illegible]	[illegible]	44.30	6.470
12	13.13	449	453	458	28248	100097	98690 SS	28.73	4.178
13	[illegible]	464	468	470	1272	4015	~~[illegible]~~	1.00	.146
14	14.34	508	512	519	9004	27085	26575	7.74	1.125
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	46.[illegible]2	6.736
16	[illegible]	652	654	660	1017	3697	~~[illegible]~~	.96	.139
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.338
18	16.81	724	732	735	722	2689	~~[illegible]~~	.67	.098
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] SS	[illegible]	6.143
20	[illegible]	[illegible]	740	745	4152	9575	~~[illegible]~~	2.60	.378
21	[illegible]	[illegible]	823	825	[illegible]	[illegible]	~~[illegible]~~	[illegible]	.143
22	[illegible]	835	839	844	46617	157240	[illegible]	45.58	6.628
23	[illegible]	[illegible]	891	895	[illegible]	[illegible]	[illegible]	[illegible]	.128
24	[illegible]	923	925	926	2601	6968	~~6667~~	1.95	.283
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] SS	[illegible]	5.086
26	[illegible]	1069	1070	1074	44352	156726	[illegible]	45.39	6.600
27	[illegible]	[illegible]	1174	1177	[illegible]	[illegible]	[illegible]	[illegible]	.720
28	[illegible]	1303	1307	1309	458	2731	~~1092~~	.54	.079
29	[illegible]	[illegible]	[illegible]	1313	[illegible]	[illegible]	~~[illegible]~~	.53	.077
30	[illegible]	1322	1326	1331	55140	193168	191642 SS	55.79	8.113

51	32.79	1404	1409	1416	4023	20714	18457	5.37	.781
52	32.92	1422	1425	1428	1169	6992	~~3097~~	1.13	.165
53	34.20	1483	1488	1493	38154	159779	154156	44.74	6.535
54	34.57	1503	1506	1509	2627	12984	~~8592~~	2.43	.354
55	37.74	1539	1542	1545	480	8963	~~751~~	.89	.130
56	38.01	1673	1675	1679	453	8001	~~2034~~	.59	.086
	39.40	1739	1738	1743	15743	126462	108[illegible]	31.31	4.581
58	40.64	1801	1804	1806	403	5096	~~1799~~	.52	.076

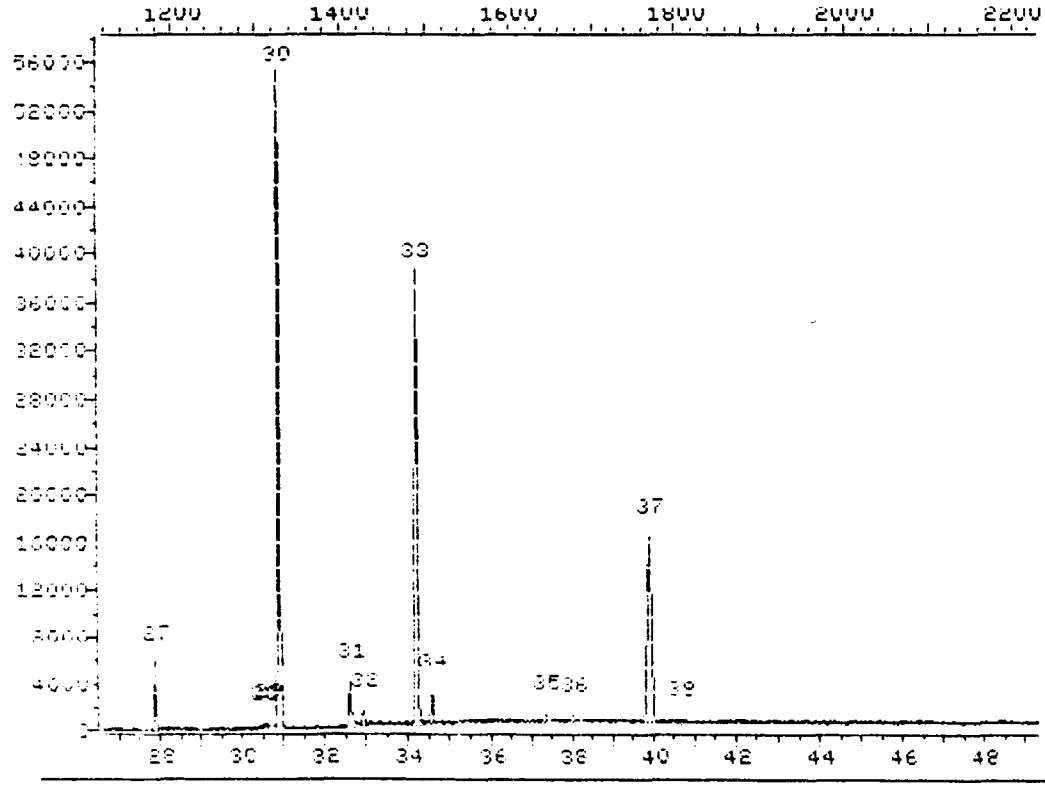
sum of corrected areas: 2362297.

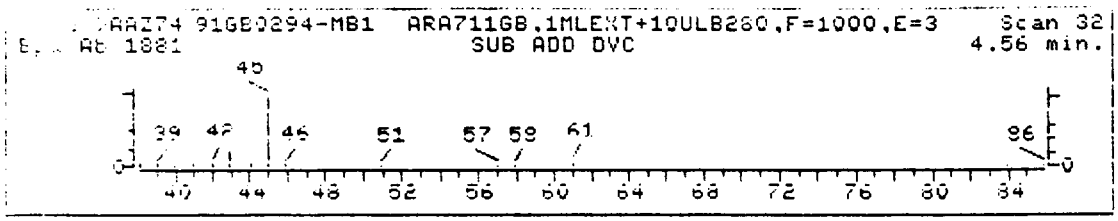
7:40 PM MON., 22 JULY, 1991

File >AAZ74 35.0-500.0 amu. 91GB0294-MB1 ARA711GB,1MLEXT+10ULB280,F=10
HDC TIC



File >AAZ74 35.0-500.0 amu. 91GB0294-MB1 ARA711GB,1MLEXT+10ULB280,F=10
HDC TIC





6.9 ppm 18

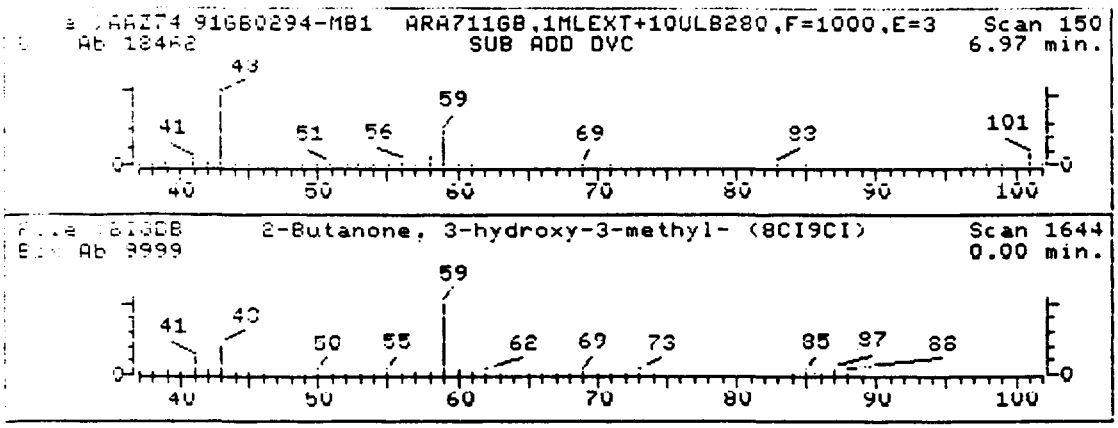
90

:-U,PEM,,,,,,5

Sample file: AA274 Spectrum #: 32

No data base entries were retrieved.

:QU,

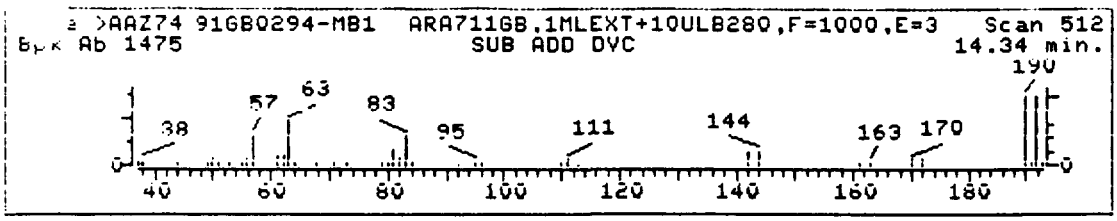


90

1. 2-Butanone, 3-hydroxy-3-methyl- (8CI9CI) 102 C5H10O2

Sample file: ARA274 Spectrum #: 150
Search speed: 1 Tilting option: N No. of ion ranges searched: 41

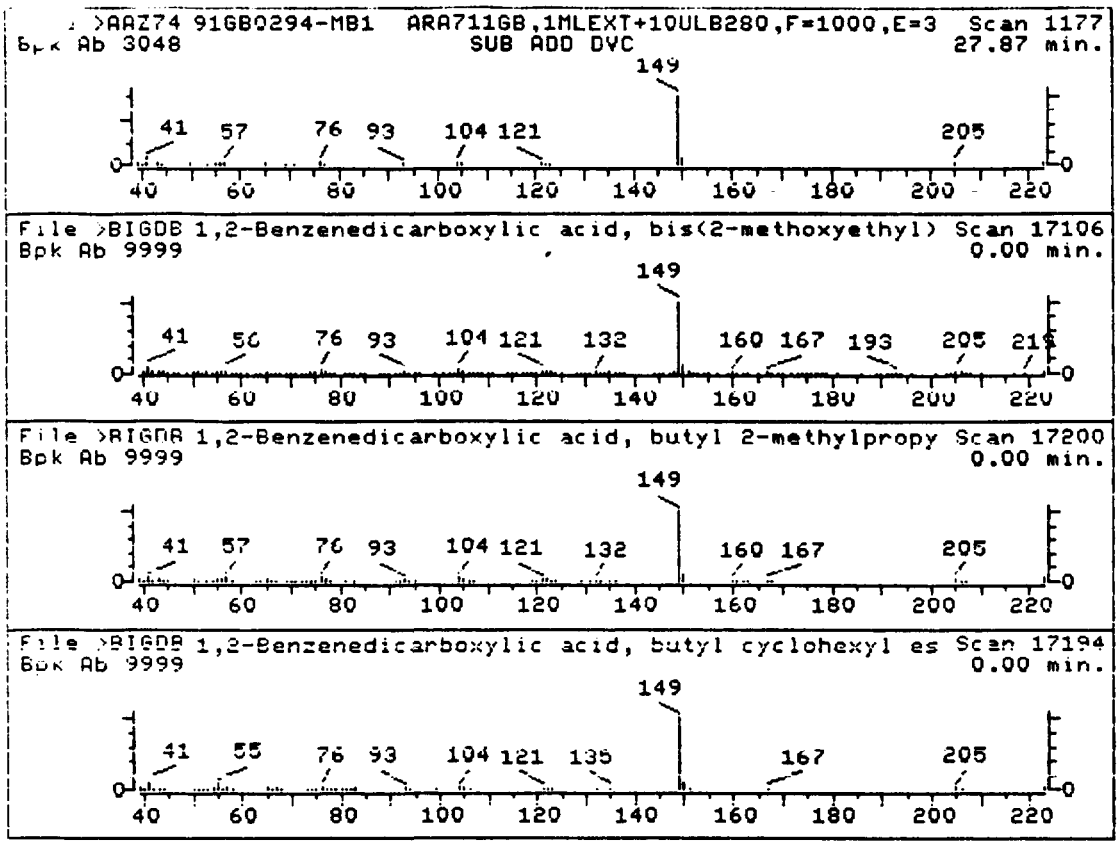
	Prob.	Lib #	Con #	Model	K	DK	Flg	Cli	%	Con	C_I	R_I
1.	11*	115220	1644	"B1GDB	21	45	1	0	39	62	2	14



6.7

Sample file: >AAZ74 Spectrum #: 512

No data base entries were retrieved.

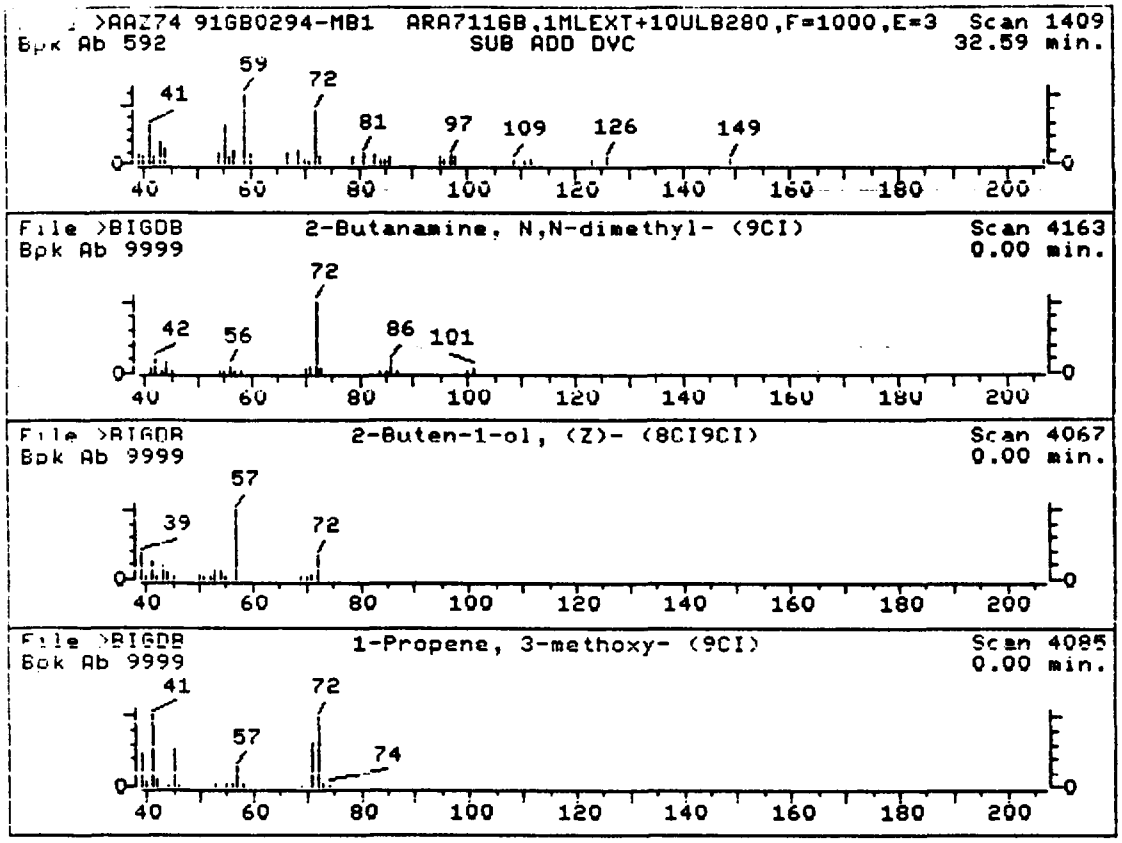


4.4

2. 1,2-Benzenedicarboxylic acid, butyl 2-methylpropyl e 278 C16H22O4
   ster (9CI)
3. 1,2-Benzenedicarboxylic acid, butyl cyclohexyl ester 304 C18H24O4
   (9CI)
4. 1,2-Benzenedicarboxylic acid, dibutyl ester 278 C16H22O4
5. 1,2-Benzenedicarboxylic acid, butyl 2-ethylhexyl est 334 C20H30O4
   er (9CI)

Sample File: >AAZ74 Spectrum #: 11.7
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	FILE	K	OK	#FLG	ILT	%	ON	C_I	R_IV
1.	83	117828	17106	"BIGDB	76	26	2	0	90	2	57	27
2.	83	17851[illegible]5	17200	"BIGDB	70	56	2	0	30	4	57	23
3.	78	84640	17194	"BIGDB	64	44	2	0	100	0	55	14
	78	595	233	PRIMUL	58	46	2	0	30	2	55	13
4.	78	85698	17197	"BIGDB	60	53	2	0	100	4	55	12



4,8

1.	2-Butanamine, N,N-dimethyl- (9CI)	101 C6H15N
2.	2-Buten-1-ol, (Z)- (8CI9CI)	72 C4H8O
3.	1-Propene, 3-methoxy- (9CI)	72 C4H8O
4.	1-Propene, 1-methoxy- (9CI)	72 C4H8O

Sample File: >AAZ74 Spectrum #: 1409
Search speed: 1 Filtering option: N No. of ion ranges searched: 45

	Prob.	CAS #	CON #	RUOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	15	921240	4163	"BIGDB	39	47	2	0	25	50	3	15
2.	15*	4088602	4067	"BIGDB	22	60	3	0	235	60	3	12
3.	11*	62,407	4085	"BIGDB	27	75	3	0	25	65	2	13
	11*	7319166	4091	"BIGDB	22	75	3	0	73	65	2	12

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: DFA714 DFTPP Injection Date: 7/14/91

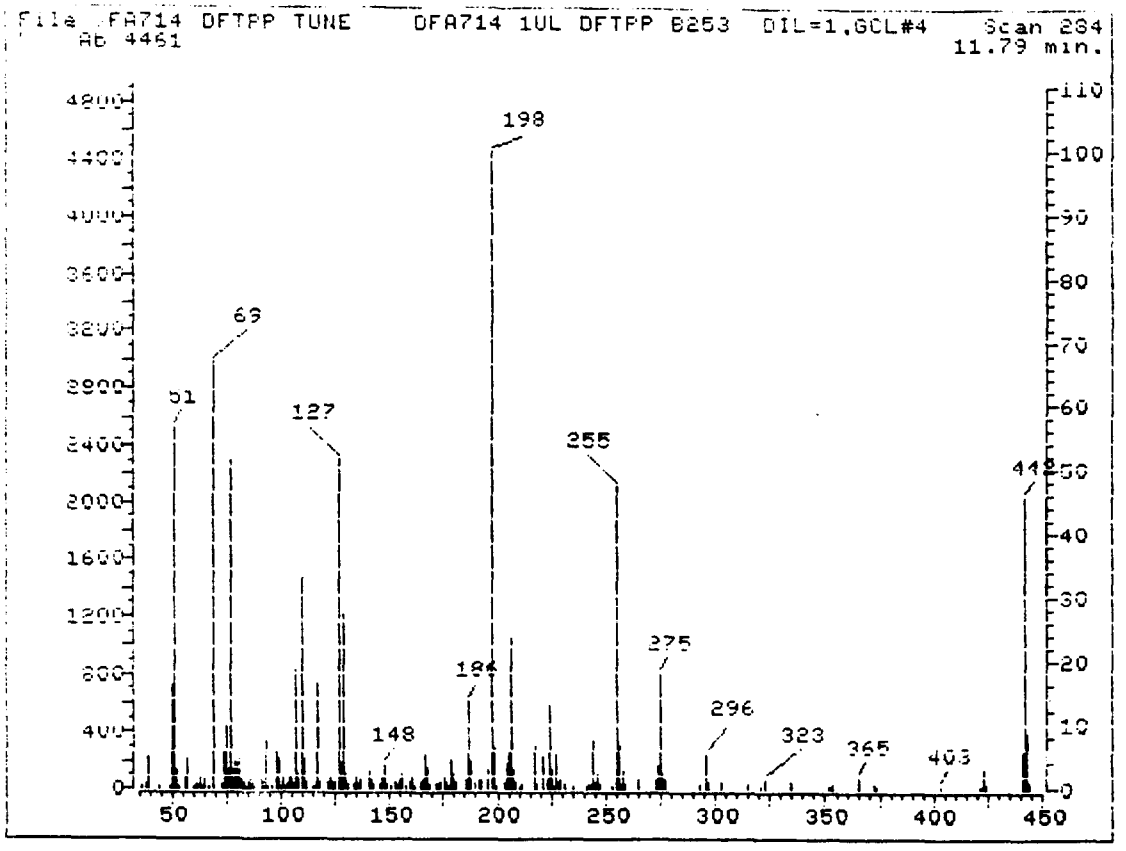
Instrument ID: GCL#4 DFTPP Injection Time: 1707

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.5
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	66.8
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	51.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	18.0
365	Greater than 1.00% of mass 198	1.84
441	Present, but less than mass 443	6.2
442	Greater than 40.0% of mass 198	45.8
443	17.0 - 23.0% of mass 442	8.6(18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	DGA714	07/14/91	1727
02	Truck Lot Discolor.	9106G820-001	DBBF28.	07/15/91	0256
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



MS data file header from : >FA714

Sample: DFTPP TUNE DFA714 Operator: MANAGER MS 7/14/91 17:07
Misc : 1UL DFTPP B253 DIL=1,GCL#4 DIL# 1
Sys. #: 4 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: DEL-FL Tuning file: TUN14 No. of extra scans: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	150.	220.	0.	0.	0.
Chromatographic times, min. :	4.0	3.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	.2	0.0

FA/14 DFTPP TUNE DFA/14 IUL DFTPP 8253 DIL=1,GCL#4
.34 AM

File: FA/14 Scan #: 284 Retn. time: 11.29

m/z	int.	m/z	int.	m/z	int.	m/z	int.	m/z	int.
56.05	.443	92.05	.941	141.95	1.233	191.05	.807	255.00	47.272
58.05	.785	92.95	2.756	143.05	.762	191.95	1.457	256.00	6.613
59.05	5.389	94.10	.426	146.05	.583	192.95	1.457	257.00	.583
44.10	.448	96.00	.493	147.10	1.614	195.95	2.937	258.00	2.757
44.90	.403	98.00	5.671	148.00	3.766	197.95	100.000	258.90	.695
49.00	.538	99.00	4.730	148.90	.650	198.95	6.478	265.00	1.300
50.00	16.140	99.90	.559	150.50	.269	199.90	.403	273.00	1.412
51.10	56.534	100.00	.403	152.90	.964	203.00	.919	273.90	3.788
52.10	3.183	101.00	2.174	153.90	.538	204.00	3.900	275.00	17.956
53.00	.538	102.10	.314	154.90	1.547	205.00	5.963	276.00	2.219
55.10	1.338	103.00	.505	156.00	2.488	206.00	23.425	276.90	1.345
57.00	4.685	104.00	1.793	157.60	.314	207.00	2.892	293.05	.583
58.50	.448	105.00	1.559	158.00	.314	208.10	1.031	295.95	5.360
60.90	.672	106.10	.762	160.00	.964	209.90	.314	296.95	.897
62.10	.695	107.00	18.538	161.00	1.369	210.00	.403	303.05	.897
63.00	1.950	108.00	2.399	162.10	.471	210.90	.807	314.90	.717
64.10	.336	110.00	32.795	164.20	.291	216.90	6.837	320.50	.247
65.00	1.390	111.00	4.887	165.00	.986	218.00	.717	323.10	1.323
66.90	.291	112.00	1.143	166.00	1.345	221.00	4.976	334.15	1.076
69.05	66.801	115.10	.269	167.00	5.470	221.80	1.278	334.95	.314
73.15	.560	116.00	.874	167.90	3.228	223.00	1.390	351.95	.471
74.05	5.873	117.00	16.342	169.00	.560	224.00	13.203	352.85	.381
75.05	10.177	118.00	1.166	172.00	.605	225.00	3.161	353.05	.381
76.05	3.228	122.05	1.031	173.05	.740	226.05	.247	353.95	.650
77.05	51.423	123.05	1.973	174.05	1.076	226.95	9.447	365.00	1.838
78.05	3.519	123.95	.941	175.15	2.130	228.15	.986	365.80	.291
79.05	4.706	125.05	1.031	176.05	.941	229.05	1.278	371.90	.628
80.05	4.852	127.05	51.580	176.85	.964	231.15	.762	373.00	.381
80.95	5.178	128.05	4.052	177.95	.336	235.05	.471	402.85	.426
81.95	1.412	129.05	27.236	178.05	.291	241.05	.314	421.00	.359
82.95	1.009	129.95	2.533	178.95	4.842	242.05	.672	422.00	.448
84.25	.247	131.05	.695	180.05	2.511	243.05	.695	423.00	2.892
85.15	1.031	133.95	.695	180.95	1.166	244.05	7.666	424.10	.650
86.05	1.367	135.05	1.883	185.05	1.345	245.15	1.098	441.05	6.187
86.95	.352	136.05	.829	186.05	13.786	245.95	2.331	442.05	45.717
87.95	.493	137.05	1.300	187.05	4.438	247.05	.605	443.05	8.608
91.05	1.457	141.05	2.824	187.95	1.121	253.00	.314	444.05	1.077

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	56.53	56.53	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	66.80	66.80	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	51.58	51.58	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.48	6.48	Ok
275	10-30% of mass 198	17.96	17.96	Ok
365	Greater than 1% of mass 198	1.84	1.84	Ok
441	0-100% of mass 443	6.19	71.88	Ok
442	Greater than 40% of mass 198	45.80	45.80	Ok
443	17-23% of mass 442	8.61	18.80	Ok

Injection Date: 07/14/91
Injection Time: 17:07
Data File: >FA7 4
Scan: 284

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.702	1.768	1.707	1.763	1.732	1.734	1.8*
bis(2-Chloroethyl)ether	1.452	1.530	1.511	1.511	1.482	1.497	2.0
2-Chlorophenol	1.385	1.392	1.397	1.415	1.363	1.391	1.4
1,3-Dichlorobenzene	1.561	1.513	1.524	1.505	1.480	1.517	1.9
1,4-Dichlorobenzene *	1.585	1.555	1.554	1.552	1.502	1.550	1.9*
Benzyl alcohol	.861	.871	.856	.887	.832	.861	2.4
1,2-Dichlorobenzene	1.470	1.465	1.464	1.457	1.379	1.447	2.7
2-Methylphenol	1.182	1.186	1.158	1.195	1.141	1.172	1.9
bis(2-chloroisopropyl)ether	1.495	1.498	1.499	1.483	1.587	1.513	2.8
4-Methylphenol	1.189	1.274	1.210	1.207	1.142	1.204	4.0
N-Nitroso-di-n-propylamine #	.972	.993	.830	.869	.883	.909	7.7#
Hexachloroethane	.736	.726	.778	.746	.672	.732	5.3
Nitrobenzene	.421	.437	.422	.418	.431	.426	1.8
Isophorone	.898	.826	.823	.790	.792	.826	5.3
2-Nitrophenol *	.206	.215	.205	.208	.220	.211	3.0*
2,4-Dimethylphenol	.247	.300	.277	.289	.296	.282	7.6
Benzoic acid	.178	.206	.188	.195	.234	.200	10.7
bis(2-Chloroethoxy)methane	.518	.526	.515	.527	.509	.519	1.4
2,4-Dichlorophenol *	.319	.322	.316	.318	.321	.319	.7*
1,2,4-Trichlorobenzene	.364	.354	.345	.343	.343	.350	2.6
Naphthalene	1.081	1.096	1.068	1.091	.954	1.058	5.6
4-Chloroaniline	.440	.422	.402	.411	.418	.419	3.4
Hexachlorobutadiene *	.250	.236	.247	.229	.220	.237	5.3*
4-Chloro-3-methylphenol *	.368	.375	.361	.356	.359	.364	2.0*
2-Methylnaphthalene	.653	.664	.649	.647	.650	.653	1.0
Hexachlorocyclopentadiene #	.402	.447	.488	.471	.422	.446	7.8#
2,4,6-Trichlorophenol *	.432	.443	.429	.429	.452	.437	2.3*
2,4,5-Trichlorophenol	.462	.470	.451	.457	.452	.459	1.7
2-Chloronaphthalene	1.287	1.313	1.282	1.283	1.270	1.287	1.2
2-Nitroaniline	.441	.470	.444	.464	.486	.461	4.1
Dimethylphthalate	1.656	1.652	1.637	1.612	1.531	1.618	3.2
Acenaphthylene	2.029	2.042	2.003	2.084	1.822	1.996	5.1
2,6-Dinitrotoluene	.354	.377	.364	.377	.401	.375	4.7
3-Nitroaniline	.323	.352	.309	.345	.362	.338	6.4
Acenaphthene *	1.232	1.236	1.208	1.215	1.209	1.220	1.1*
[illegible]-Dinitrophenol #	.141	.191	.165	.196	.230	.185	18.2#
4-Nitrophenol #	.244	.265	.236	.265	.264	.255	5.4#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.755	1.783	1.721	1.761	1.818	1.768	2.0
2,4-Dinitrotoluene	.322	.356	.335	.371	.355	.348	5.5
Diethylphthalate	1.884	1.858	1.909	1.910	1.672	1.847	5.4
4-Chlorophenyl-phenylether	.709	.712	.689	.714	.680	.701	2.2
Fluorene	1.384	1.412	1.361	1.416	1.375	1.389	1.7
4-Nitroaniline	.305	.338	.275	.309	.332	.312	8.1
4,6-Dinitro-2-methylphenol	.139	.168	.154	.165	.167	.158	7.6
N-Nitrosodiphenylamine (1) *	.565	.595	.583	.591	.546	.576	3.5*
4-Bromophenyl-phenylether	.260	.261	.256	.245	.241	.253	3.5
Hexachlorobenzene	.342	.330	.333	.317	.304	.325	4.6
Pentachlorophenol *	.189	.201	.196	.192	.203	.196	3.0*
Phenanthrene	1.157	1.181	1.162	1.157	1.117	1.155	2.0
Anthracene	1.147	1.160	1.136	1.125	1.070	1.128	3.1
Di-n-butylphthalate	2.009	1.997	2.064	1.909	1.284	1.853	17.4
Fluoranthene *	1.335	1.298	1.260	1.213	1.143	1.250	6.0*
Pyrene	1.377	1.609	1.396	1.492	1.774	1.530	10.8
Butylbenzylphthalate	.862	.954	.934	1.011	1.010	.954	6.5
3,3'-Dichlorobenzidine	.370	.361	.368	.374	.350	.365	2.7
Benzo(a)anthracene	1.179	1.184	1.178	1.196	1.156	1.179	1.2
Chrysene	1.134	1.123	1.128	1.109	1.063	1.111	2.6
bis(2-Ethylhexyl)phthalate	1.159	1.216	1.362	1.428	1.330	1.299	8.5
Di-n-octylphthalate *	2.461	3.887	3.662	4.980	5.545	4.107	29.3*
Benzo(b)fluoranthene	1.431	1.672	1.435	1.657	1.710	1.581	8.6
Benzo(k)fluoranthene	1.296	1.523	1.497	1.508	1.685	1.502	9.2
Benzo(a)pyrene *	1.122	1.171	1.127	1.136	1.150	1.141	1.7*
Indeno(1,2,3-cd)pyrene	.567	.420	.463	.377	.365	.438	18.6
Dibenzo(a,h)anthracene	.649	.496	.526	.439	.424	.507	17.7
Benzo(g,h,i)perylene	.576	.407	.432	.348	.327	.418	23.4
Nitrobenzene-d5	.394	.400	.400	.400	.390	.397	1.1
2-Fluorobiphenyl	1.319	1.339	1.337	1.319	1.310	1.325	1.0
Terphenyl-d14	1.043	1.214	1.105	1.148	1.337	1.170	9.6
Phenol-d5	1.440	1.430	1.399	1.432	1.411	1.423	1.2
2-Fluorophenol	1.232	1.237	1.260	1.227	1.218	1.235	1.3
2,4,6-Tribromophenol	.271	.285	.276	.279	.293	.281	3.0

(1) Cannot be separated from Diphenylamine

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date: 7/14/91 Time: 17:27

Lab File ID: >GA714 Init. Calib. Date(s): 06/17/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND		RRF	RRF50	%D	
Phenol	*	1.734	1.173	32.4	*
bis(2-Chloroethyl)ether		1.497	1.158	22.7	
2-Chlorophenol		1.391	1.223	12.0	
1,3-Dichlorobenzene		1.517	1.572	3.6	
1,4-Dichlorobenzene	*	1.550	1.526	1.5	*
Benzyl alcohol		.861	.625	27.4	
1,2-Dichlorobenzene		1.447	1.378	4.8	
2-Methylphenol		1.172	.887	24.3	
bis(2-chloroisopropyl)ether		1.513	1.423	5.9	
4-Methylphenol		1.204	.856	28.9	
N-Nitroso-di-n-propylamine	#	.909	.866	4.7	#
Hexachloroethane		.732	.743	1.5	
Nitrobenzene		.426	.482	13.2	
Isophorone		.826	.805	2.5	
2-Nitrophenol	*	.211	.227	7.7	*
2,4-Dimethylphenol		.282	.274	2.6	
Benzoic acid		.200	.192	3.9	
bis(2-Chloroethoxy)methane		.519	.442	15.0	
2,4-Dichlorophenol	*	.319	.354	11.1	*
1,2,4-Trichlorobenzene		.350	.458	31.0	
Naphthalene		1.058	.919	13.1	
4-Chloroaniline		.419	.387	7.6	
Hexachlorobutadiene	*	.237	.353	49.2	*
4-Chloro-3-methylphenol	*	.364	.415	14.1	*
2-Methylnaphthalene		.653	.671	2.8	
Hexachlorocyclopentadiene	#	.446	.457	2.4	#
2,4,6-Trichlorophenol	*	.437	.500	14.5	*
2,4,5-Trichlorophenol		.459	.552	20.4	
2-Chloronaphthalene		1.287	1.246	3.2	
2-Nitroaniline		.461	.467	1.4	
Dimethylphthalate		1.618	1.696	4.8	
Acenaphthylene		1.996	1.774	11.1	
2,6-Dinitrotoluene		.375	.412	9.9	
3-Nitroaniline		.338	.295	12.8	
Acenaphthene	*	1.220	1.092	10.4	*
2,4-Dinitrophenol	#	.185	.235	27.5	#
4-Nitrophenol	#	.255	.359	40.7	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

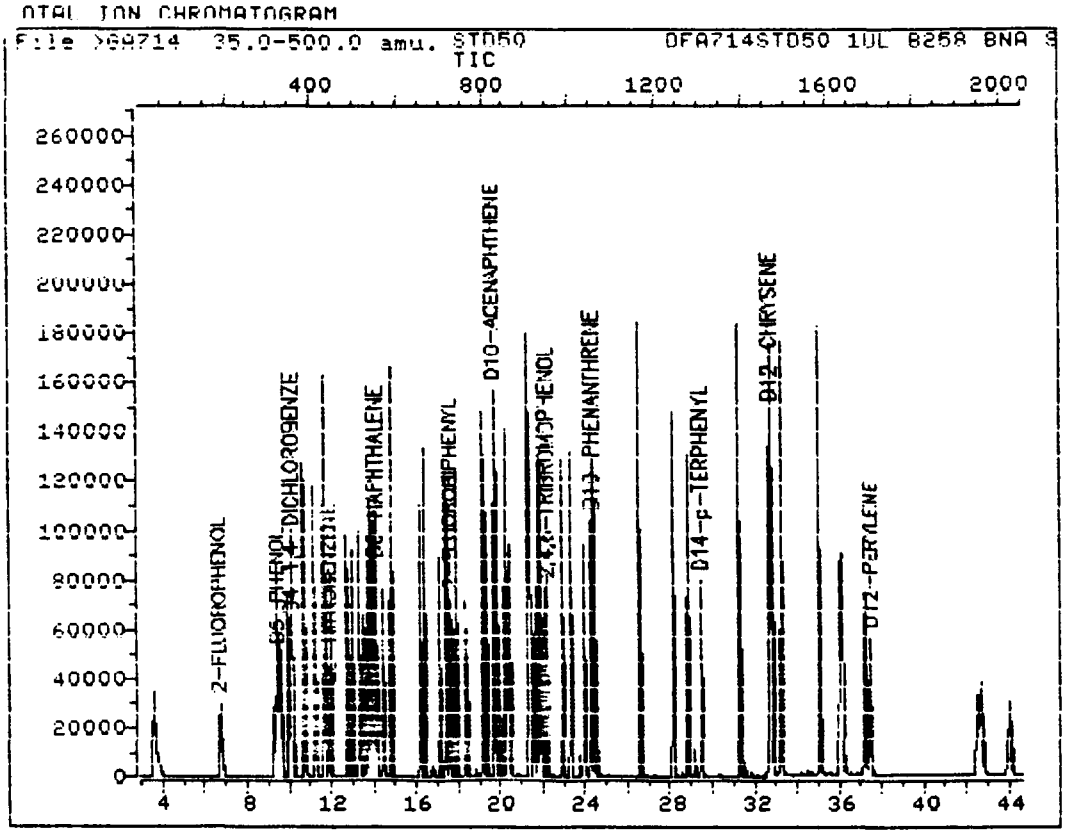
Instrument ID: 70 4 Calibration Date: 7/14/91 Time: 17:27

Lab File ID: >GA714 Init. Calib. Date(s): 06/17/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.768	1.957	10.7
2,4-Dinitrotoluene	.348	.434	24.8
Diethylphthalate	1.847	1.791	3.0
4-Chlorophenyl-phenylether	.701	.716	2.1
Fluorene	1.389	1.318	5.1
4-Nitroaniline	.312	.368	18.1
4,6-Dinitro-2-methylphenol	.158	.181	14.1
N-Nitrosodiphenylamine (1) *	.576	.508	11.8 *
4-Bromophenyl-phenylether	.253	.256	1.3
Hexachlorobenzene	.325	.350	7.5
Pentachlorophenol *	.196	.205	4.7 *
Phenanthrene	1.155	1.006	12.9
Anthracene	1.128	.929	17.6
Di-n-butylphthalate	1.853	1.645	11.2
Fluoranthene *	1.250	1.378	10.2 *
Pyrene	1.530	1.498	2.1
Butylbenzylphthalate	.954	.920	3.5
3,3'-Dichlorobenzidine	.365	.386	5.9
Benzo(a)anthracene	1.179	1.358	15.2
Chrysene	1.111	1.160	4.4
bis(2-Ethylhexyl)phthalate	1.299	1.144	12.0
Di-n-octylphthalate *	4.107	2.422	41.0 *
Benzo(b)fluoranthene	1,581	1.542	2.5
Benzo(k)fluoranthene	1.502	1.150	23.4
Benzo(a)pyrene *	1.141	1.240	8.7 *
Indeno(1,2,3-cd)pyrene	.438	.900	105.2
Dibenzo(a,h)anthracene	.507	.826	63.1
Benzo(g,h,i)perylene	.418	.840	100.9
Nitrobenzene-d5	.397	.442	11.4
2-Fluorobiphenyl	1.325	1.547	16.8
Terphenyl-d14	1.170	1.182	1.1
Phenol-d5	1.423	1.014	28.7
2-Fluorophenol	1.235	.959	22.4
2,4,6-Tribromophenol	.281	.320	14.0

(1) Cannot be separated from Diphenylamine



Data File: >GA714::D7 Quant Output File: ^GA714::DD
Name: STD50 DFA714
Misc: STD50 1UL B258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BIL# 1

Id File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#4
Last Calibration: 910712 10:53

Operator ID: MANAGER
Quant Time: 910714 18: 3
Injected at: 910714 17:27

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 910/14 18:13
Output File: ^GA/14::DD Injected at: 910/14 17:27
Data File: ^GA/14::D/ Dilution Factor: 1.00000
Name: STD50 DFA/14
Misc: S 050 1UL 8258 8NA STD 50LN 50NG/UL DIL=1,GCC#4 BIL# 1

ID File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSL 4
Last Calibration: 910/12 10:53

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	10.09	152.1	31358	40.00	ng	97
2)	PHENOL	9.44	94.1	459/2M	36.85	ng	
3)	BIS(2-CHLOROETHYL)ETHER	9.52	93.1	45376	41.59	ng	87
4)	2-CHLOROPHENOL	9.60	128.0	47943	45.97	ng	93
5)	1,3-DICHLOROBENZENE	9.97	146.0	61612	51.15	ng	93
6)	1,4-DICHLOROBENZENE	10.15	146.0	59823	48.28	ng	92
7)	1,2-DICHLOROBENZENE	10.68	146.0	54006	46.46	ng	86
8)	BENZYL ALCOHOL	10.68	108.1	24512	40.08	ng	92
9)	2-METHYLPHENOL	11.19	108.1	34780	39.79	ng	91
10)	BIS(2-CHLOROISOPROPYL)ETHER	11.19	45.1	55/65M	52.83	ng	
11)	HEXACHLOROETHANE	11.63	117.0	29123	47.16	ng	96
12)	N-NITROSO-DI-N-PROPYLAMINE	11.63	70.1	33950	46.64	ng	97
13)	4-METHYLPHENOL	11.65	108.1	33559	36.55	ng	97
14)	2-FLUOROPHENOL	6.64	112.1	37586	41.64	ng	98
15)	PHENOL-D5	9.40	99.1	39755	39.13	ng	55
16)	*D8-NAPHTHALENE	14.03	136.2	106147	40.00	ng	92
17)	NITROBENZENE	11.94	77.1	63952	54.01	ng	98
18)	ISOPHORONE	12.71	82.1	106810	47.66	ng	87
19)	2-NITROPHENOL	12.93	139.1	30078	53.62	ng	78
20)	2,4-DIMETHYLPHENOL	13.28	122.1	36589	46.04	ng	82
21)	BIS(2-CHLOROETHOXY)METHANE	13.52	93.1	58580	44.57	ng	96
22)	2,4-DICHLOROPHENOL	13.74	162.0	47029	54.17	ng	95
23)	BENZOIC ACID	13.89	122.1	25510	53.80	ng	95
24)	1,2,4-TRICHLOROBENZENE	13.95	180.0	60761	60.56	ng	96
25)	NAPHTHALENE	14.09	128.1	122003	44.09	ng	95
26)	4-CHLOROANILINE	14.39	127.1	51313	47.01	ng	98
27)	HEXACHLOROBUTADIENE	14.76	225.0	46826	64.86	ng	99
28)	4-CHLORO-3-METHYLPHENOL	16.10	107.1	55080	55.43	ng	98
29)	2-METHYLNAPHTHALENE	16.30	142.2	89015	50.36	ng	99
30)	NITROBENZENE-D5	11.38	82.1	29523	27.32	ng	94
31)	*D10-ACENAPHTHENE	19.64	164.2	63093	40.00	ng	92
32)	HEXACHLOROCYCLOPENTADIENE	17.05	237.0	36005	58.30	ng	92
33)	2,4,6-TRICHLOROPHENOL	17.34	196.1	39468	55.38	ng	96
34)	2,4,5-TRICHLOROPHENOL	17.46	196.1	43559	55.16	ng	96
35)	2-CHLORONAPHTHALENE	17.81	162.1	98230	46.83	ng	95
36)	2-NITROANILINE	18.30	65.1	36849	49.41	ng	94
37)	ACENAPHTHYLENE	19.13	152.1	139898	42.88	ng	98
38)	DIMETHYLPHTHALATE	19.09	163.1	133755	50.82	ng	96
39)	2,6-DINITROTOLUENE	19.25	165.1	32473	53.58	ng	94
40)	3-NITROANILINE	19.64	138.1	23278	45.60	ng	89
41)	ACENAPHTHENE	19.74	153.2	86150	43.01	ng	99
42)	2,4-DINITROPHENOL	19.94	184.2	18555	88.14	ng	85
43)	DIBENZOFURAN	20.25	168.1	154340	52.98	ng	93

	Compound	R.I.	Q ion	Area	Conc	Units	q
44)	4-NITROPHENOL	20.37	109.1	28277	67.20	ng	91
45)	2,4-DINITROTOLUENE	20.45	89.1	34235	53.41	ng	88
46)	FLUORENE	21.33	166.1	103951	45.58	ng	95
47)	DIETHYLPHTHALATE	21.37	149.1	141259	45.68	ng	99
48)	4-CHLOROPHENYL-PHENYLETHER	21.43	204.2	56453	47.57	ng	97
49)	4-NITROANILINE	21.61	138.1	29041M	66.22	ng	
50)	2-FLUOROBIPHENYL	17.58	172.1	61012	28.11	ng	97
51)	2,4,6-TRIBROMOPHENOL	22.16	330.0	25253	49.18	ng	95
52)	*D10-PHENANTHRENE	24.27	188.2	130586	40.00	ng	91
53)	4,6-DINITRO-2-METHYLPHENOL	21.75	198.2	29525	67.94	ng	88
54)	N-NITROSODIPHENYLAMINE	21.85	169.1	83002	45.39	ng	98
55)	4-BROMOPHENYL-PHENYLETHER	22.93	248.0	41798M	48.15	ng	
56)	HEXACHLOROBENZENE	23.34	284.0	57082	47.28	ng	98
57)	PENTACHLOROPHENOL	23.95	266.0	33499	49.99	ng	98
58)	PHENANTHRENE	24.34	178.1	164275	43.82	ng	98
59)	ANTHRACENE	24.48	178.1	151716	41.36	ng	99
60)	DI-N-BUTYLPHTHALATE	26.53	149.1	268473	43.59	ng	97
61)	FLUORANTHENE	28.12	202.2	224847	52.17	ng	84
62)	*D12-CHRYSENE	32.39	240.2	116609	40.00	ng	99
63)	PYRENE	28.79	202.2	218314	58.13	ng	77
64)	BUTYLBENZYLPHTHALATE	31.21	149.1	134164	58.21	ng	92
65)	BENZO(A)ANTHRACENE	32.63	228.2	197886	57.76	ng	98
66)	CHRYSENE	32.77	228.2	169073	49.57	ng	98
67)	3,3'-DICHLOROBENZIDINE	32.67	252.1	56263	61.09	ng	97
68)	BIS(2-ETHYLHEXYL)PHTHALATE	33.16	149.1	166696	46.82	ng	98
69)	TERPHENYL-D14	29.44	244.3	86136	30.40	ng	95
70)	*D12-PERYLENE	37.44	264.2	107014	40.00	ng	95
71)	BENZO(B)FLUORANTHENE	36.04	252.2	206198	59.47	ng	95
72)	BENZO(K)FLUORANTHENE	36.14	252.2	153810	49.55	ng	96
73)	DI-N-OCTYLPHTHALATE	35.04	149.1	323953	55.49	ng	99
74)	BENZO(A)PYRENE	37.22	252.2	165928	58.39	ng	94
75)	INDENO(1,2,3-CD)PYRENE	42.47	276.2	120347	61.73	ng	97
76)	DIBENZO(A,H)ANTHRACENE	42.66	278.2	110545	50.21	ng	96
77)	BENZO(G,H,I)PERYLENE	43.98	276.2	112410	58.22	ng	94

* Compound is 13CD

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: DFA723 DFTPP Injection Date: 7/23/91

Instrument ID: GCL#4 DFTPP Injection Time: 1029

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.7
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	63.0
70	Less than 2.0% of mass 69	0.4(0.61)1
127	40.0 - 60.0% of mass 198	47.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	20.1
365	Greater than 1.00% of mass 198	2.10
441	Present, but less than mass 443	7.6
442	Greater than 40.0% of mass 198	53.3
443	17.0 - 23.0% of mass 442	10.6(19.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	DGA723	07/23/91	1049
02	Truck Lot Discolor.DL	9106G820-001	DBBG36.	07/23/91	1505
03					
04					
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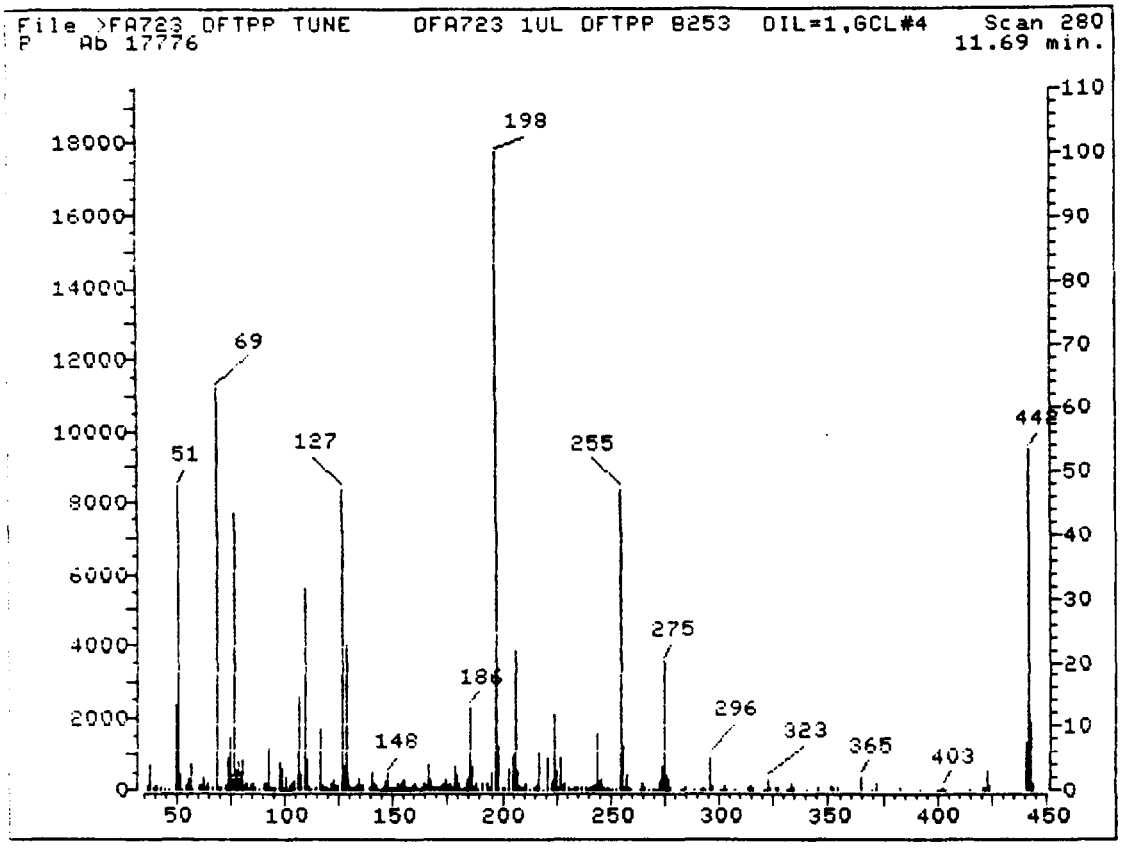
G820



MS data file header from : >FA723

Sample: DFTPP TUNE DFA723 Operator: MANAGER MS 7/23/91 10:29
Misc : 1UL DFTPP B253 DIL=1,GCL#4 BTL# 1
Sys. #: 4 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DECAFL Tuning file: TUNE4 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	160.	220.	0.	0.	0.
Chromatographic times, min. :	4.0	3.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	.2	0.0

45.10	.113	112.00	.495	167.00	3.989	226.00	.298	300.95	.084
7.00	.056	112.90	.186	167.90	1.840	226.90	5.209	301.95	.141
0.00	13.018	113.10	.180	169.00	.495	227.95	.698	302.95	.641
51.00	47.688	115.00	.214	170.00	.231	229.05	.984	303.75	.118
52.00	2.290	116.90	9.569	171.00	.236	229.75	.158	304.05	.124
52.90	.191	117.90	.804	172.00	.388	230.85	.383	308.00	.084
55.00	.709	119.00	.309	172.90	.624	231.95	.090	314.00	.298
55.90	1.660	120.00	.236	174.00	.990	232.95	.113	314.90	.563
57.00	3.927	120.90	.101	174.95	1.592	233.85	.298	315.90	.304
58.00	.197	121.85	.962	175.95	.540	234.95	.270	321.00	.203
61.00	.675	122.95	1.592	176.95	.878	236.95	.354	321.90	.084
62.00	.563	124.05	.765	177.95	.332	239.05	.208	322.90	1.800
63.00	2.014	125.05	.596	178.95	3.702	240.05	.146	324.00	.360
63.90	.360	126.95	47.181	179.95	2.335	240.95	.253	326.90	.298
64.90	1.159	127.95	3.600	180.95	1.170	242.05	.591	327.90	.219
67.10	.383	128.95	22.648	182.05	.174	243.05	.686	332.00	.152
68.95	63.051	129.95	1.935	182.85	.146	243.95	8.928	332.40	.084
69.95	.383	131.05	.416	183.95	.354	244.95	1.221	333.10	.191
71.15	.309	131.95	.214	184.95	1.727	245.95	1.800	334.00	1.069
72.95	.574	133.15	.231	185.95	12.871	246.95	.377	334.95	.231
73.95	4.973	133.95	.591	186.95	3.668	247.85	.073	340.95	.191
74.95	8.168	134.95	1.862	187.85	.343	248.95	.338	345.85	.388
76.05	2.380	135.95	.709	188.95	.889	249.85	.068	351.95	.557
77.05	43.367	137.05	.793	189.85	.129	250.85	.096	352.95	.371
78.05	3.173	139.95	.371	191.15	.428	252.95	.203	354.05	.478
79.05	4.259	140.95	2.599	191.85	1.074	255.00	47.041	354.95	.174
79.95	2.852	141.95	1.001	193.05	1.074	256.00	6.841	365.00	2.098
80.95	4.613	142.95	.608	193.85	.225	257.10	.484	365.90	.264
81.95	.810	143.75	.107	194.95	.208	257.90	2.543	370.80	.107
82.95	1.013	143.95	.107	195.95	2.605	258.90	.450	372.00	.951
84.05	.152	144.85	.158	197.85	100.000	259.90	.090	372.80	.186
84.95	.861	146.05	.456	198.85	6.863	263.80	.141	382.90	.242
85.95	1.018	146.95	1.491	199.95	.478	264.90	1.058	391.95	.113
87.05	.506	148.00	2.605	201.50	.439	265.90	.264	400.65	.084
88.95	.163	148.90	.534	203.00	.669	267.80	.146	401.05	.062
90.95	1.074	150.10	.231	203.90	3.302	269.90	.107	401.95	.405
91.95	1.029	150.90	.383	205.00	5.451	270.90	.113	403.05	.444
92.95	6.340	151.70	.225	206.00	21.844	272.10	.174	404.05	.186
93.85	.489	152.00	.225	207.00	2.993	272.90	1.451	415.00	.062
95.00	.399	153.00	.894	207.90	.793	273.90	3.567	421.10	.439
96.10	.422	153.90	.681	208.90	.343	274.90	20.066	422.10	.388
98.00	4.292	155.00	1.541	210.10	.450	275.90	2.464	423.00	3.066
99.00	3.533	156.00	1.716	211.00	.906	276.90	1.626	423.90	.641
100.00	.321	157.00	.444	212.90	.062	278.00	.253	441.00	7.572
100.90	2.104	157.90	.439	215.00	.332	282.95	.174	442.05	53.336
101.80	.203	159.00	.354	216.00	.596	283.85	.124	443.05	10.582
103.00	.681	159.90	.765	216.90	6.081	284.95	.259	443.95	1.035

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	47.69	47.69	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	63.05	63.05	Ok
70	Less than 2% of mass 69	.38	.61	Ok
127	40-60% of mass 198	47.18	47.18	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.86	6.86	Ok
275	10-30% of mass 198	20.07	20.07	Ok
365	Greater than 1% of mass 198	2.10	2.10	Ok
441	0-100% of mass 443	7.57	71.56	Ok
442	Greater than 40% of mass 198	53.34	53.34	Ok
443	17-23% of mass 442	10.58	19.84	Ok

Injection Date: 07/23/91
Injection Time: 10:29
Data File: >FA723
Scan: 280

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.702	1.768	1.707	1.763	1.732	1.734	1.8*
bis(2-Chloroethyl)ether	1.452	1.530	1.511	1.511	1.482	1.497	2.0
2-Chlorophenol	1.385	1.392	1.397	1.415	1.363	1.391	1.4
1,3-Dichlorobenzene	1.561	1.513	1.524	1.505	1.480	1.517	1.9
1,4-Dichlorobenzene *	1.585	1.555	1.554	1.552	1.502	1.550	1.9*
Benzyl alcohol	.861	.871	.856	.887	.832	.861	2.4
1,2-Dichlorobenzene	1.470	1.465	1.464	1.457	1.379	1.447	2.7
2-Methylphenol	1.182	1.186	1.158	1.195	1.141	1.172	1.9
bis(2-chloroisopropyl)ether	1.495	1.498	1.499	1.483	1.587	1.513	2.8
4-Methylphenol	1.189	1.274	1.210	1.207	1.142	1.204	4.0
N-Nitroso-di-n-propylamine #	.972	.993	.830	.869	.883	.909	7.7#
Hexachloroethane	.736	.726	.778	.746	.672	.732	5.3
Nitrobenzene	.421	.437	.422	.418	.431	.426	1.8
Isophorone	.898	.826	.823	.790	.792	.826	5.3
2-Nitrophenol *	.206	.215	.205	.208	.220	.211	3.0*
2,4-Dimethylphenol	.247	.300	.277	.289	.296	.282	7.6
Benzoic acid	.178	.206	.188	.195	.234	.200	10.7
bis(2-Chloroethoxy)methane	.518	.526	.515	.527	.509	.519	1.4
2,4-Dichlorophenol *	.319	.322	.316	.318	.321	.319	.7*
1,2,4-Trichlorobenzene	.364	.354	.345	.343	.343	.350	2.6
Naphthalene	1.081	1.096	1.068	1.091	.954	1.058	5.6
4-Chloroaniline	.440	.422	.402	.411	.418	.419	3.4
Hexachlorobutadiene *	.250	.236	.247	.229	.220	.237	5.3*
4-Chloro-3-methylphenol *	.368	.375	.361	.356	.359	.364	2.0*
2-Methylnaphthalene	.653	.664	.649	.647	.650	.653	1.0
Hexachlorocyclopentadiene #	.402	.447	.488	.471	.422	.446	7.8#
2,4,6-Trichlorophenol *	.432	.443	.429	.429	.452	.437	2.3*
2,4,5-Trichlorophenol	.462	.470	.451	.457	.452	.459	1.7
2-Chloronaphthalene	1.287	1.313	1.282	1.283	1.270	1.287	1.2
2-Nitroaniline	.441	.470	.444	.464	.486	.461	4.1
Dimethylphthalate	1.656	1.652	1.637	1.612	1.531	1.618	3.2
Acenaphthylene	2.029	2.042	2.003	2.084	1.822	1.996	5.1
2,6-Dinitrotoluene	.354	.377	.364	.377	.401	.375	4.7
3-Nitroaniline	.323	.352	.309	.345	.362	.338	6.4
Acenaphthene *	1.232	1.236	1.208	1.215	1.209	1.220	1.1*
2,4-Dinitrophenol #	.141	.191	.165	.196	.230	.185	18.2#
4-Nitrophenol #	.244	.265	.236	.265	.264	.255	5.4#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.755	1.783	1.721	1.761	1.818	1.768	2.0
2,4-Dinitrotoluene	.322	.356	.335	.371	.355	.348	5.5
Diethylphthalate	1.884	1.858	1.909	1.910	1.672	1.847	5.4
4-Chlorophenyl-phenylether	.709	.712	.689	.714	.680	.701	2.2
Fluorene	1.384	1.412	1.361	1.416	1.375	1.389	1.7
4-Nitroaniline	.305	.338	.275	.309	.332	.312	8.1
4,6-Dinitro-2-methylphenol	.139	.168	.154	.165	.167	.158	7.6
N-Nitrosodiphenylamine (1) *	.565	.595	.583	.591	.546	.576	3.5*
4-Bromophenyl-phenylether	.260	.261	.256	.245	.241	.253	3.5
Hexachlorobenzene	.342	.330	.333	.317	.304	.325	4.6
Pentachlorophenol *	.189	.201	.196	.192	.203	.196	3.0*
Phenanthrene	1.157	1.181	1.162	1.157	1.117	1.155	2.0
Anthracene	1.147	1.160	1.136	1.125	1.070	1.128	3.1
Di-n-butylphthalate	2.009	1.997	2.064	1.909	1.284	1.853	17.4
Fluoranthene *	1.335	1.298	1.260	1.213	1.143	1.250	6.0*
Pyrene	1.377	1.609	1.396	1.492	1.774	1.530	10.8
Butylbenzylphthalate	.862	.954	.934	1.011	1.010	.954	6.5
3,3'-Dichlorobenzidine	.370	.361	.368	.374	.350	.365	2.7
Benzo(a)anthracene	1.179	1.184	1.178	1.196	1.156	1.179	1.2
Chrysene	1.134	1.123	1.128	1.109	1.063	1.111	2.6
bis(2-Ethylhexyl)phthalate	1.159	1.216	1.362	1.428	1.330	1.299	8.5
Di-n-octylphthalate *	2.461	3.887	3.662	4.980	5.545	4.107	29.3*
Benzo(b)fluoranthene	1.431	1.672	1.435	1.657	1.710	1.581	8.6
Benzo(k)fluoranthene	1.296	1.523	1.497	1.508	1.685	1.502	9.2
Benzo(a)pyrene *	1.122	1.171	1.127	1.136	1.150	1.141	1.7*
Indeno(1,2,3-cd)pyrene	.567	.420	.463	.377	.365	.438	18.6
Dibenzo(a,h)anthracene	.649	.496	.526	.439	.424	.507	17.7
Benzo(g,h,i)perylene	.576	.407	.432	.348	.327	.418	23.4
Nitrobenzene-d5	.394	.400	.400	.400	.390	.397	1.1
2-Fluorobiphenyl	1.319	1.339	1.337	1.319	1.310	1.325	1.0
Terphenyl-d14	1.043	1.214	1.105	1.148	1.337	1.170	9.6
Phenol-d5	1.440	1.430	1.399	1.432	1.411	1.423	1.2
2-Fluorophenol	1.232	1.237	1.260	1.227	1.218	1.235	1.3
2,4,6-Tribromophenol	.271	.285	.276	.279	.293	.281	3.0

(1) Cannot be separated from Diphenylamine

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date: 7/23/91 Time: 10:49

Lab File ID: >GA723 Init. Calib. Date(s): 06/17/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = **25.0%**

COMPOUND	RRF	RRF50	%D	
Phenol	1.734	1.530	11.8	*
bis(2-Chloroethyl)ether	1.497	1.402	6.4	
2-Chlorophenol	1.391	1.362	2.0	
1,3-Dichlorobenzene	1.517	1.546	1.9	
1,4-Dichlorobenzene	1.550	1.550	.0	*
Benzyl_alcohol	.861	.665	22.8	
1,2-Dichlorobenzene	1.447	1.491	3.1	
2-Methylphenol	1.172	1.225	4.5	
bis(2-chloroisopropyl)ether	1.513	1.423	5.9	
4-Methylphenol	1.204	1.200	.4	
N-Nitroso-di-n-propylamine	.909	.828	8.9	#
Hexachloroethane	.732	.667	8.9	
Nitrobenzene	.426	.401	5.8	
Isophorone	.826	.763	7.6	
2-Nitrophenol	.211	.226	7.5	*
2,4-Dimethylphenol	.282	.293	4.2	
Benzoic_acid	.200	.114	42.8	
bis(2-Chloroethoxy)methane	.519	.488	6.1	
2,4-Dichlorophenol	.319	.341	6.8	*
1,2,4-Trichlorobenzene	.350	.390	11.6	
Naphthalene	1.058	1.039	1.8	
4-Chloroaniline	.419	.398	4.8	
Hexachlorobutadiene	.237	.247	4.3	*
4-Chloro-3-methylphenol	.364	.355	2.4	*
2-Methylnaphthalene	.653	.675	3.4	
Hexachlorocyclopentadiene	.446	.282	36.8	#
2,4,6-Trichlorophenol	.437	.450	2.8	*
2,4,5-Trichlorophenol	.459	.543	18.5	
2-Chloronaphthalene	1.287	1.326	3.0	
2-Nitroaniline	.461	.440	4.5	
Dimethylphthalate	1.618	1.595	1.4	
Acenaphthylene	1.996	1.966	1.5	
2,6-Dinitrotoluene	.375	.411	9.6	
3-Nitroaniline	.338	.334	1.3	
Acenaphthene	1.220	1.214	.5	*
2,4-Dinitrophenol	.185	.156	15.6	#
4-Nitrophenol	.255	.195	23.3	#

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:GULF COAST LABORATORIES Contract:----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

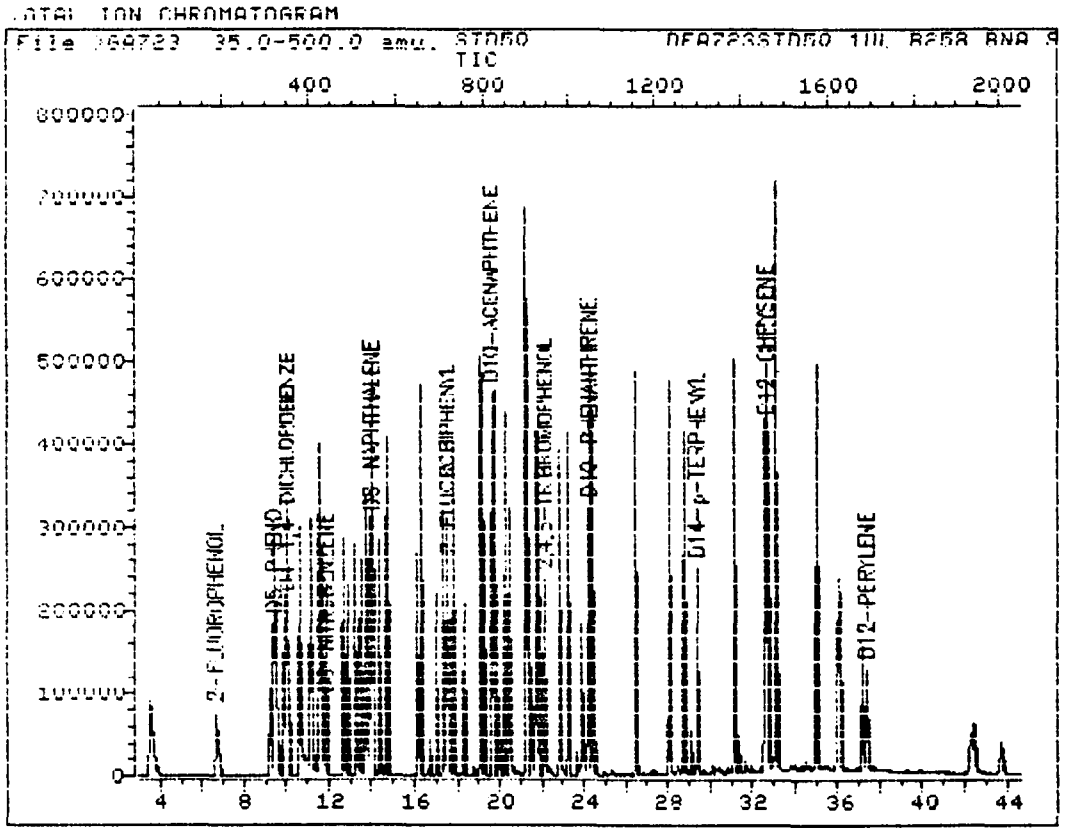
Instrument ID: 70 4 Calibration Date: 7/23/91 Time: 10:49

Lab File ID: >GA723 Init. Calib. Date(s):06/17/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.768	1.969	11.4
2,4-Dinitrotoluene	.348	.332	4.5
Diethylphthalate	1.847	1.734	6.1
4-Chlorophenyl-phenylether	.701	.798	13.9
Fluorene	1.389	1.419	2.1
4-Nitroaniline	.312	.331	6.1
4,6-Dinitro-2-methylphenol	.158	.148	6.7
N-Nitrosodiphenylamine (1) *	.576	.581	.8 *
4-Bromophenyl-phenylether	.253	.261	3.3
Hexachlorobenzene	.325	.340	4.6
Pentachlorophenol *	.196	.193	1.5 *
Phenanthrene	1.155	1.146	.7
Anthracene	1.128	1.132	.4
Di-n-butylphthalate	1.853	1.557	15.9
Fluoranthene *	1.250	1.258	.7 *
Pyrene	1.530	1.536	.4
Butylbenzylphthalate	.954	.862	9.7
3,3'-Dichlorobenzidine	.365	.344	5.7
Benzo(a)anthracene	1.179	1.206	2.3
Chrysene	1.111	1.162	4.6
bis(2-Ethylhexyl)phthalate	1.299	1.260	3.0
Di-n-octylphthalate *	4.107	3.170	22.8 *
Benzo(b)fluoranthene	1.581	1.514	4.2
Benzo(k)fluoranthene	1.502	1.286	14.4
Benzo(a)pyrene *	1.141	1.090	4.5 *
Indeno(1,2,3-cd)pyrene	.438	.679	55.0
Dibenzo(a,h)anthracene	.507	.601	18.6
Benzo(g,h,i)perylene	.418	.467	11.6
Nitrobenzene-d5	.397	.369	6.9
2-Fluorobiphenyl	1.325	1.394	5.3
Terphenyl-d14	1.170	1.222	4.4
Phenol-d5	1.423	1.252	12.0
2-Fluorophenol	1.235	1.136	8.0
2,4,6-Tribromophenol	.281	.334	18.8

(1) Cannot be separated from Diphenylamine



Data File: >GA723::D2 Quant Output File: ^GA723::DU
Name: STD50 DFA723
Misc: STD50 1UL B258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BTL# 1

Id File: ID_MS4::D5
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#4
Last Calibration: 910722 15:44

Operator ID: MANAGER
Quant Time: 910723 11:35
Injected at: 910723 10:49

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 910/23 11:35
Output File: ^GA/23::D0 Injected at: 910/23 10:49
Data File: >GA/23::D2 Dilution Factor: 1.00000
Name: STD50 DFA/23
Misc: STD50 IUL 8258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BTC# 1

ID File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#4
Last Calibration: 910/22 15:34

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	10.03	152.1	124642	40.00	ng	93
2)	PHENOL	9.42	94.1	238549M	46.90	ng	
3)	BIS(2-CHLOROETHYL)ETHER	9.46	93.1	218403	48.14	ng	95
4)	2-CHLOROPHENOL	9.54	128.0	212214	48.38	ng	84
5)	1,3-DICHLOROBENZENE	9.91	146.0	240906	49.44	ng	93
6)	1,4-DICHLOROBENZENE	10.07	146.0	241523	49.72	ng	94
7)	1,2-DICHLOROBENZENE	10.67	146.0	232380	50.17	ng	88
8)	BENZYL ALCOHOL	10.64	108.1	103629	56.95	ng	88
9)	2-METHYLPHENOL	11.15	108.1	190930	53.27	ng	82
10)	BIS(2-CHLOROISOPROPYL)ETHER	11.13	45.1	221725	40.99	ng	37
11)	HEXACHLOROETHANE	11.55	117.0	103888	51.54	ng	88
12)	N-NITROSO-DI-N-PROPYLAMINE	11.57	70.1	129017	58.63	ng	82
13)	4-METHYLPHENOL	11.64	108.1	186895	47.55	ng	99
14)	2-FLUOROPHENOL	6.60	112.1	177065	47.41	ng	85
15)	PHENOL-D5	9.38	99.1	195115	46.37	ng	95
16)	*D8-NAPHTHALENE	13.97	136.2	445035	40.00	ng	94
17)	NITROBENZENE	11.88	77.1	223127	48.49	ng	90
18)	ISOPHORONE	12.65	82.1	424523	48.28	ng	90
19)	2-NITROPHENOL	12.87	139.1	125915	49.01	ng	90
20)	2,4-DIMETHYLPHENOL	13.24	122.1	163217	49.05	ng	96
21)	BIS(2-CHLOROETHOXY)METHANE	13.46	93.1	271320	48.71	ng	98
22)	2,4-DICHLOROPHENOL	13.69	162.0	189523	49.94	ng	91
23)	BENZOIC ACID	13.87	122.1	63679	29.00	ng	88
24)	1,2,4-TRICHLOROBENZENE	13.87	180.0	217033	49.67	ng	99
25)	NAPHTHALENE	14.03	128.1	578052	51.05	ng	94
26)	4-CHLOROANILINE	14.34	127.1	221668	48.61	ng	98
27)	HEXACHLOROBUTADIENE	14.68	225.0	137310	49.56	ng	98
28)	4-CHLORO-3-METHYLPHENOL	16.06	107.1	197499	48.91	ng	93
29)	2-METHYLNAPHTHALENE	16.23	142.2	375377	51.50	ng	95
30)	NITROBENZENE-D5	11.80	82.1	102752	23.78	ng	83
31)	*D10-ACENAPHTHENE	19.56	164.2	238679	40.00	ng	96
32)	HEXACHLOROCYCLOPENTADIENE	16.98	237.0	84056	46.42	ng	96
33)	2,4,6-TRICHLOROPHENOL	17.28	196.1	134153	46.02	ng	98
34)	2,4,5-TRICHLOROPHENOL	17.43	196.1	162116	48.57	ng	99
35)	2-CHLORONAPHTHALENE	17.73	162.1	395695	50.68	ng	93
36)	2-NITROANILINE	18.24	65.1	151783	46.11	ng	75
37)	ACENAPHTHYLENE	19.05	152.1	586461	50.05	ng	97
38)	DIMETHYLPHTHALATE	19.01	163.1	475770	50.81	ng	98
39)	2,6-DINITROTOLUENE	19.20	165.1	122539	49.54	ng	89
40)	3-NITROANILINE	19.58	138.1	99519	48.84	ng	67
41)	ACENAPHTHENE	19.66	153.2	362281	51.28	ng	97
42)	2,4-DINITROPHENOL	19.91	184.2	46444	53.62	ng	88
43)	DIBENZOFURAN	20.17	168.1	587487	49.43	ng	91

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	4-NITROPHENOL	20.38	109.1	58298	50.40	ng	79
45)	2,4-DINITROTOLUENE	20.40	89.1	99127	50.70	ng	78
46)	FLUORENE	21.27	166.1	423356	50.81	ng	96
47)	DIETHYLPHTHALATE	21.29	149.1	517224	54.80	ng	97
48)	4-CHLOROPHENYL-PHENYLETHER	21.35	204.2	238058	50.18	ng	89
49)	4-NITROANILINE	21.55	138.1	98652	46.61	ng	73
50)	2-FLUOROBIPHENYL	17.51	172.1	208014	23.73	ng	98
51)	2,4,6-TRIBROMOPHENOL	22.10	330.0	99630	44.49	ng	97
52)	*D10-PHENANTHRENE	24.20	188.2	458206	40.00	ng	89
53)	4,6-DINITRO-2-METHYLPHENOL	21.70	198.2	84700	40.63	ng	77
54)	N-NITROSODIPHENYLAMINE	21.78	169.1	352745	50.08	ng	97
55)	4-BROMOPHENYL-PHENYLETHER	22.86	248.0	149566M	47.98	ng	
56)	HEXACHLOROBENZENE	23.27	284.0	194951	46.95	ng	97
57)	PENTACHLOROPHENOL	23.90	266.0	110679	45.61	ng	98
58)	PHENANTHRENE	24.28	178.1	656635	51.23	ng	97
59)	ANTHRACENE	24.41	178.1	648624	50.81	ng	98
60)	DI-N-BUTYLPHTHALATE	26.44	149.1	892085	52.44	ng	96
61)	FLUORANTHENE	28.04	202.2	720489	51.69	ng	93
62)	*D12-CHRYSENE	32.61	240.2	365277	40.00	ng	96
63)	PYRENE	28.72	202.2	701420	54.52	ng	88
64)	BUTYLBENZYLPHTHALATE	31.12	149.1	393553	59.52	ng	89
65)	BENZO(A)ANTHRACENE	32.54	228.2	550667	51.82	ng	99
66)	CHRYSENE	32.69	228.2	530675	51.09	ng	98
67)	3,3'-DICHLOROBENZIDINE	32.59	252.1	156973	44.80	ng	98
68)	BIS(2-ETHYLHEXYL)PHTHALATE	33.08	149.1	575452	58.84	ng	99
69)	TERPHENYL-D14	29.37	244.3	278896	26.68	ng	99
70)	*D12-PERYLENE	37.32	264.2	225889	40.00	ng	95
71)	BENZO(B)FLUORANTHENE	35.95	252.2	427481	54.41	ng	98
72)	BENZO(K)FLUORANTHENE	36.03	252.2	363071	43.58	ng	96
73)	DI-N-OCTYLPHTHALATE	34.93	149.1	894973	53.18	ng	98
74)	BENZO(A)PYRENE	37.10	252.2	307850	48.82	ng	94
75)	INDENO(1,2,3-CD)PYRENE	42.31	276.2	191859	58.74	ng	96
76)	DIBENZO(A,H)ANTHRACENE	42.45	278.2	169753	49.22	ng	98
77)	BENZO(G,H,I)PERYLENE	43.75	276.2	131852	46.10	ng	94

* Compound is ISTD

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: ARA711 DFTPP Injection Date: 7/11/91

Instrument ID: GCL#1 DFTPP Injection Time: 930

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.8
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	62.1
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	42.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.0
365	Greater than 1.00% of mass 198	2.15
441	Present, but less than mass 443	9.5
442	Greater than 40.0% of mass 198	68.6
443	17.0 - 23.0% of mass 442	12.4(18.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	ASA711	07/11/91	0951
02	SBLKGB0294-MB1	91GB0294-MB1	AAAZ74.	07/11/91	1148
03	SBLKGB0294-MB1 BS	91GB0294-MB1S	AAAZ87.	07/12/91	0001
04	SBLKGB0294-MB1 BSD	91GB0294-MB1T	AAAZ88.	07/12/91	0057
05					
06					
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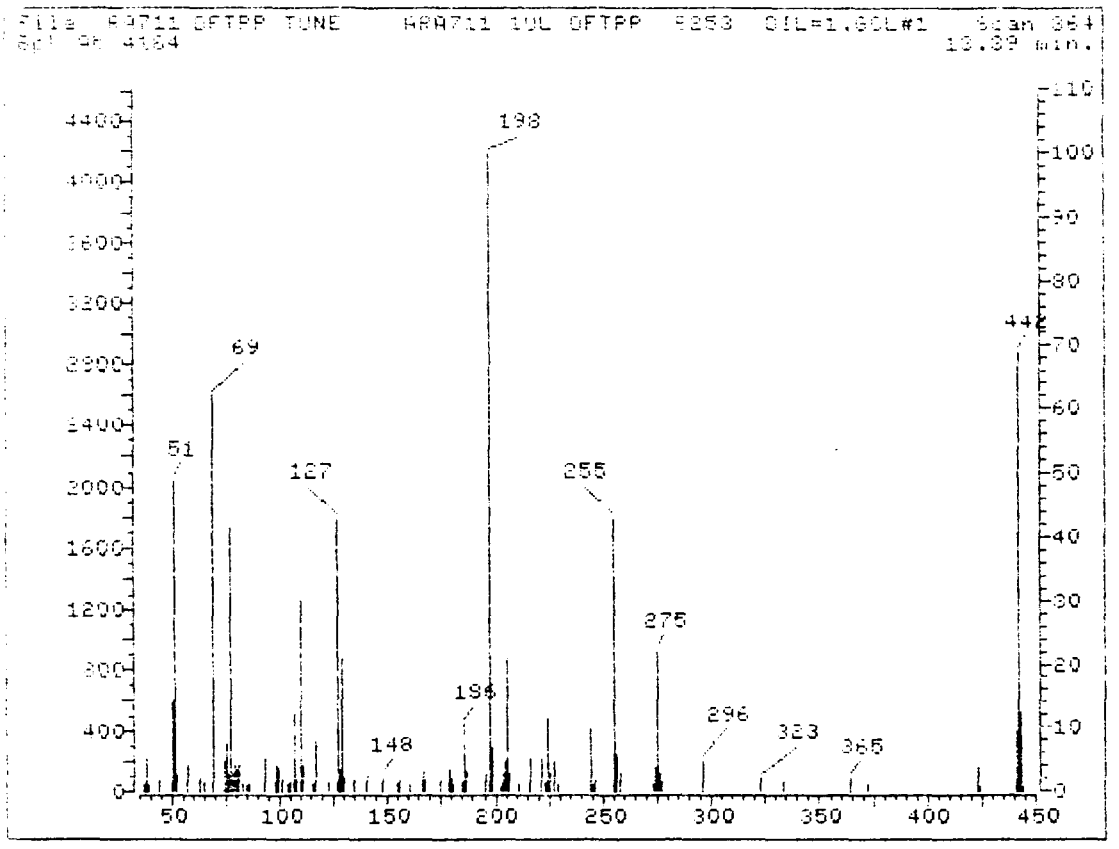
19					
20					



MS data file header from : >RA711

Sample: DFTPP TUNE ARA711 Operator: MANAGER MS 7/11/91 9:30
Misc : 1UL DFTPP 8253 DIL=1,GCL#1 BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: DFTPP Tuning file: TUNE1 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	160.	220.	0.	0.	0.
Chromatographic times, min. :	4.0	3.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	.2	0.0

711 DFTPP TUNE APA711 1UL DFTPP 8253 DIL=1.SOL#1
364 NRM

File: APA711 Scan #: 364 Retn. time: 13.39

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.85	.980	82.90	1.028	129.90	2.079	202.90	.717	255.85	5.664
38.95	4.971	85.00	.837	134.90	1.793	203.90	2.725	257.85	2.653
39.85	1.123	85.90	1.099	140.90	2.247	204.90	4.708	272.95	1.147
43.95	1.745	92.85	5.115	147.90	2.438	205.90	20.793	273.95	3.585
49.95	14.269	97.95	4.087	154.90	1.243	206.90	2.868	274.95	21.989
50.95	48.829	98.85	3.896	156.00	1.816	210.90	.932	275.95	2.557
52.05	2.414	100.85	2.079	160.90	.956	216.80	5.139	276.90	1.482
56.90	4.135	103.95	1.147	166.95	2.916	220.90	4.995	295.90	4.756
62.90	1.960	104.85	1.458	167.75	1.840	221.70	.932	322.95	1.888
65.00	1.243	106.95	12.094	174.95	1.793	222.90	1.315	333.95	1.291
68.90	62.070	107.85	1.816	178.85	3.322	223.90	11.329	364.90	2.151
74.00	4.589	109.95	30.306	179.95	2.079	224.90	2.796	372.00	1.123
74.90	7.505	110.85	4.111	180.85	1.099	226.90	4.589	422.95	3.728
76.00	2.581	115.95	1.052	184.95	1.362	228.90	.908	423.80	.860
77.00	41.372	116.95	7.648	185.95	10.707	243.95	9.728	440.90	9.536
78.00	2.749	122.95	1.482	186.95	3.155	244.95	1.076	441.90	68.571
78.90	3.944	126.95	42.782	195.95	2.796	245.85	1.601	442.90	12.380
79.90	3.298	127.95	3.489	197.85	100.000	254.85	42.782	443.90	.837
80.90	4.159	128.95	20.817	198.85	6.812				

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	48.83	48.83	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	62.07	62.07	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	42.78	42.78	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.81	6.81	Ok
275	10-30% of mass 198	21.99	21.99	Ok
365	Greater than 1% of mass 198	2.15	2.15	Ok
441	0-100% of mass 443	9.54	77.03	Ok
442	Greater than 40% of mass 198	68.57	68.57	Ok
443	17-23% of mass 442	12.38	18.06	Ok

Injection Date: 07/11/91
Injection Time: 09:30
Data File: >RA711
Scan: 364

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 1 Calibration Date(s): 07/04/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>SE704 RRF50 =>SA704
RRF80 =>SD704 RRF120=>SC704 RRF160=>SB704

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.450	1.465	1.403	1.423	1.377	1.424	2.5*
bis(2-Chloroethyl)ether	1.316	1.285	1.231	1.271	1.230	1.267	2.9
2-Chlorophenol	1.192	1.165	1.150	1.144	1.111	1.152	2.6
1,3-Dichlorobenzene	1.461	1.421	1.395	1.372	1.353	1.400	3.0
1,4-Dichlorobenzene *	1.462	1.443	1.411	1.383	1.360	1.412	3.0*
Benzyl alcohol	.651	.692	.702	.682	.671	.679	2.9
1,2-Dichlorobenzene	1.402	1.349	1.303	1.263	1.243	1.312	4.9
2-Methylphenol	.994	.984	.973	.981	.957	.978	1.4
bis(2-chloroisopropyl)ether	1.525	1.445	1.539	1.487	1.440	1.487	3.0
4-Methylphenol	.968	.997	.991	.972	.957	.977	1.7
N-Nitroso-di-n-propylamine #	.765	.749	.696	.778	.757	.749	4.2#
Hexachloroethane	.632	.651	.629	.614	.610	.627	2.6
Nitrobenzene	.389	.439	.392	.399	.399	.404	5.0
Isophorone	.836	.835	.839	.833	.835	.835	.3
2-Nitrophenol *	.173	.196	.191	.192	.197	.190	5.1*
2,4-Dimethylphenol	.265	.260	.243	.259	.257	.257	3.1
Benzoic acid	.069	.052	.144	.131	.123	.104	39.1
bis(2-Chloroethoxy)methane	.502	.493	.492	.490	.486	.492	1.2
2,4-Dichlorophenol *	.296	.306	.311	.303	.304	.304	1.8*
1,2,4-Trichlorobenzene	.390	.382	.377	.369	.366	.377	2.6
Naphthalene	.989	.971	.948	.945	.936	.958	2.3
4-Chloroaniline	.375	.394	.418	.396	.414	.400	4.3
Hexachlorobutadiene *	.260	.250	.248	.241	.235	.247	3.8*
4-Chloro-3-methylphenol *	.288	.315	.331	.317	.320	.314	5.0*
2-Methylnaphthalene	.589	.604	.602	.581	.581	.591	1.9
Hexachlorocyclopentadiene #	.428	.537	.508	.526	.555	.511	9.6#
2,4,6-Trichlorophenol *	.448	.435	.452	.464	.443	.448	2.4*
2,4,5-Trichlorophenol	0.000	.507	.512	.480	.519	.505	3.3
2-Chloronaphthalene	1.288	1.243	1.213	1.225	1.230	1.240	2.3
2-Nitroaniline	0.000	.431	.454	.444	.460	.447	2.8
Dimethylphthalate	1.546	1.594	1.601	1.543	1.557	1.568	1.7
Acenaphthylene	1.980	1.941	1.900	1.918	1.927	1.933	1.6
2,6-Dinitrotoluene	.260	.345	.347	.338	.354	.328	11.9
3-Nitroaniline	0.000	.337	.345	.314	.334	.333	3.9
Acenaphthene *	1.224	1.178	1.159	1.157	1.153	1.174	2.5*
2,4-Dinitrophenol #	0.000	.139	.208	.193	.217	.189	18.5#
4-Nitrophenol #	0.000	.202	.212	.197	.212	.206	3.6#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 1 Calibration Date(s): 07/04/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>SE704 RRF50 =>SA704
RRF80 =>SD704 RRF120=>SC704 RRF160=>SB704

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.668	1.669	1.681	1.612	1.637	1.654	1.7
2,4-Dinitrotoluene	.242	.313	.324	.306	.319	.301	11.2
Diethylphthalate	1.690	1.752	1.780	1.638	1.662	1.704	3.5
4-Chlorophenyl-phenylether	.720	.714	.722	.675	.678	.702	3.3
Fluorene	1.314	1.320	1.308	1.250	1.248	1.288	2.8
4-Nitroaniline	0.000	.319	.292	.241	.260	.278	12.5
4,6-Dinitro-2-methylphenol	0.000	.132	.156	.155	.164	.152	9.0
N-Nitrosodiphenylamine (1) *	.493	.477	.466	.464	.463	.473	2.7*
4-Bromophenyl-phenylether	.256	.248	.249	.244	.242	.248	2.3
Hexachlorobenzene	.381	.360	.356	.355	.345	.360	3.7
Pentachlorophenol *	0.000	.139	.177	.172	.166	.164	10.3*
Phenanthrene	1.076	1.039	1.024	1.029	1.017	1.037	2.2
Anthracene	1.070	1.049	1.032	1.045	1.033	1.046	1.5
Di-n-butylphthalate	1.621	1.702	1.708	1.630	1.627	1.658	2.6
Fluoranthene *	1.246	1.254	1.270	1.232	1.207	1.242	1.9*
Pyrene	1.121	1.091	1.116	1.183	1.163	1.135	3.3
Butylbenzylphthalate	.574	.630	.666	.677	.675	.644	6.8
3,3'-Dichlorobenzidine	.344	.335	.332	.280	.277	.313	10.3
Benzo(a)anthracene	1.142	1.075	1.075	1.076	1.040	1.082	3.4
Chrysene	1.017	1.008	.985	.997	1.009	1.003	1.2
bis(2-Ethylhexyl)phthalate	1.000	1.020	1.043	1.047	1.032	1.028	1.9
Di-n-octylphthalate *	1.744	1.852	1.972	1.928	1.993	1.898	5.4*
Benzo(b)fluoranthene	1.131	1.115	1.100	1.182	1.080	1.122	3.5
Benzo(k)fluoranthene	0.000	1.143	1.071	1.104	1.048	1.091	3.8
Benzo(a)pyrene *	1.092	1.042	1.055	1.092	1.060	1.060	1.8*
Indeno(1,2,3-cd)pyrene	1.071	1.065	1.097	1.161	1.144	1.108	3.9
Dibenzo(a,h)anthracene	.902	.912	.936	.978	.978	.941	3.8
Benzo(g,h,i)perylene	.897	.877	.878	.949	.942	.908	3.8
Nitrobenzene-d5	.285	.287	.337	.349	.351	.322	10.3
2-Fluorobiphenyl	1.174	1.065	1.201	1.231	1.210	1.176	5.6
Terphenyl-d14	.743	.694	.848	.868	.844	.800	9.6
Phenol-d5	1.023	.993	1.131	1.142	1.086	1.067	7.4
2-Fluorophenol	1.016	.918	1.079	1.100	1.060	1.035	7.0
2,4,6-Tribromophenol	.264	.293	.334	.303	.299	.290	11.1

(1) Cannot be separated from Diphenylamine

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 1 Calibration Date: 7/11/91 Time: 9:51

Lab File ID: >SA711 Init. Calib. Date(s): 07/04/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Phenol	1.424	1.473	3.5	*
bis(2-Chloroethyl)ether	1.267	1.328	4.8	
2-Chlorophenol	1.152	1.173	1.8	
1,3-Dichlorobenzene	1.400	1.449	3.5	
1,4-Dichlorobenzene	1.412	1.439	1.9	*
Benzyl alcohol	.679	.667	1.8	
1,2-Dichlorobenzene	1.312	1.364	3.9	
2-Methylphenol	.978	1.007	2.9	
bis(2-chloroisopropyl)ether	1.487	1.490	.2	
4-Methylphenol	.977	.981	.4	
N-Nitroso-di-n-propylamine	.749	.898	19.9	#
Hexachloroethane	.627	.617	1.6	
Nitrobenzene	.404	.466	15.4	
Isophorone	.835	.844	1.1	
2-Nitrophenol	.190	.190	.1	*
2,4-Dimethylphenol	.257	.271	5.4	
Benzoic acid	.104	.107	3.5	
bis(2-Chloroethoxy)methane	.492	.488	.9	
2,4-Dichlorophenol	.304	.299	1.5	*
1,2,4-Trichlorobenzene	.377	.388	2.9	
Naphthalene	.958	.962	.4	
4-Chloroaniline	.400	.357	10.7	
Hexachlorobutadiene	.247	.268	8.5	*
4-Chloro-3-methylphenol	.314	.304	3.1	*
2-Methylnaphthalene	.591	.579	2.1	
Hexachlorocyclopentadiene	.511	.344	32.6	#
2,4,6-Trichlorophenol	.448	.449	.2	*
2,4,5-Trichlorophenol	.505	.514	1.8	
2-Chloronaphthalene	1.240	1.257	1.4	
2-Nitroaniline	.447	.407	9.0	
Dimethylphthalate	1.568	1.545	1.5	
Acenaphthylene	1.933	1.940	.3	
2,6-Dinitrotoluene	.328	.322	1.9	
3-Nitroaniline	.333	.284	14.7	
Acenaphthene	1.174	1.184	.9	*
2,4-Dinitrophenol	.189	.065	65.8	#
4-Nitrophenol	.206	.166	19.2	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 1 Calibration Date: 7/11/91 Time: 9:51

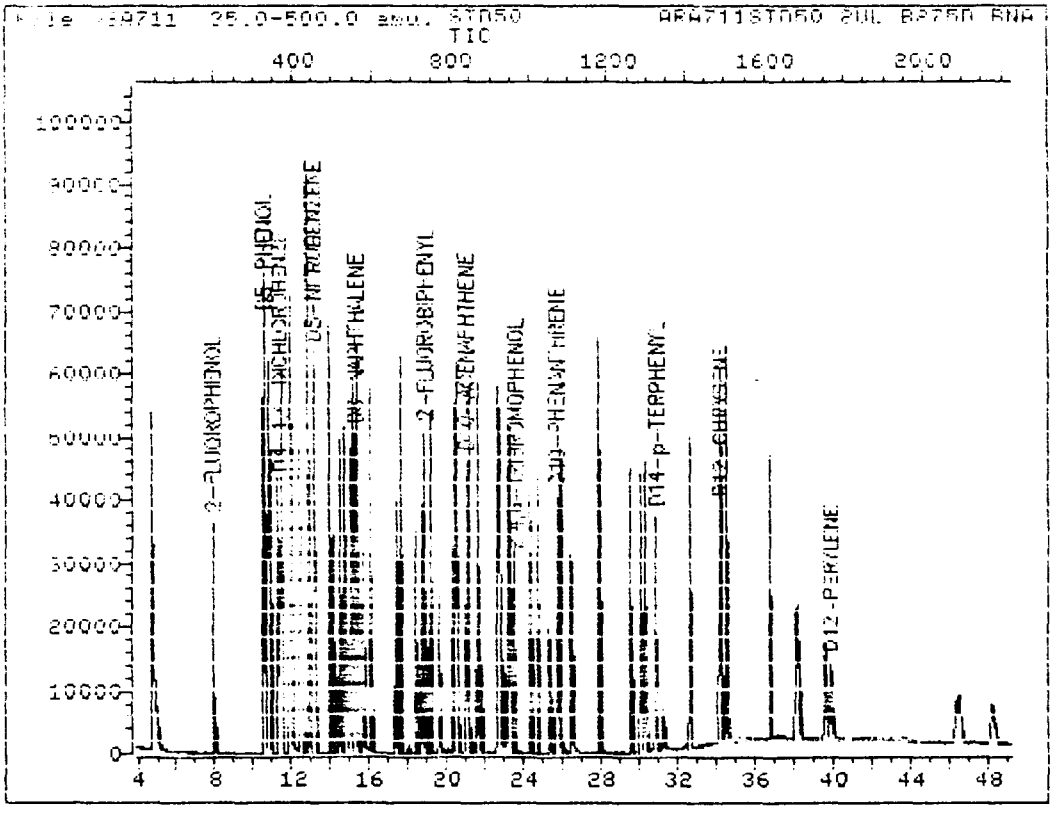
Lab File ID: >SA711 Init. Calib. Date(s): 07/04/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Dibenzofuran	1.654	1.598	3.3	
2,4-Dinitrotoluene	.301	.259	13.9	
Diethylphthalate	1.704	1.615	5.2	
4-Chlorophenyl-phenylether	.702	.690	1.7	
Fluorene	1.288	1.250	3.0	
4-Nitroaniline	.278	.226	18.5	
4,6-Dinitro-2-methylphenol	.152	.086	43.3	
N-Nitrosodiphenylamine (1)	.473	.491	4.0	*
4-Bromophenyl-phenylether	.248	.265	7.1	
Hexachlorobenzene	.360	.397	10.3	
Pentachlorophenol	.164	.144	12.3	*
Phenanthrene	1.037	1.029	.8	
Anthracene	1.046	1.038	.8	
Di-n-butylphthalate	1.658	1.576	4.9	
Fluoranthene	1.242	1.140	8.2	*
Pyrene	1.135	1.336	17.7	
Butylbenzylphthalate	.644	.676	5.0	
3,3'-Dichlorobenzidine	.313	.359	14.7	
Benzo(a)anthracene	1.082	1.063	1.7	
Chrysene	1.003	1.001	.2	
bis(2-Ethylhexyl)phthalate	1.028	.993	3.5	
Di-n-octylphthalate	1.898	2.062	8.6	*
Benzo(b)fluoranthene	1.122	1.251	11.5	
Benzo(k)fluoranthene	1.091	1.078	1.2	
Benzo(a)pyrene	1.060	1.030	2.8	*
Indeno(1,2,3-cd)pyrene	1.108	.935	15.6	
Dibenzo(a,h)anthracene	.941	.791	15.9	
Benzo(g,h,i)perylene	.908	.761	16.2	
Nitrobenzene-d5	.322	.307	4.6	
2-Fluorobiphenyl	1.176	1.123	4.5	
Terphenyl-d14	.800	.842	5.4	
Phenol-d5	1.067	.986	7.6	
2-Fluorophenol	1.035	.955	7.7	
2,4,6-Tribromophenol	.290	.144	50.6	

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



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Name: STD50 ARA711
Misc: STD50 2UL B275D BNA STD SOLN 25NG/UL DIL=1,GCL#1 BIL# 1

Id File: ID_MS1::03
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#1
Last Calibration: 910711 11:59

Operator ID: MANAGER
Quant Time: 910711 12:[illegible]
Injected at: 910711 09:51

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Date: 910/11 12:[illegible]
Output File: MSA/11::DD Injected at: 910/11 09:51
Data File: MSA/11::DD Dilution Factor: 1.000 0
Name: 51050 AKA711
Note: [illegible] DUL [illegible] MA 51D [illegible] DENS DL DIL=1,GL.#1 SIL# 1

ID File: ID_MS1::D5
Title: ID FILE FOR HAZARDOUS SUBSTANCES, EPA MSL-1
Last Calibration: 910/11 11:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	11.39	152.1	23206	40.00	ng	96
2)	PHENOL	10.29	94.1	42129	53.09	g	84
3)	BIS(2-CHLOROETHYL)ETHER	10.75	93.1	38508	51.73	ng	93
4)	2-CHLOROPHENOL	10.86	128.0	34016	51.19	g	97
5)	1,3-DICHLOROBENZENE	11.26	146.0	42044	50.27	ng	93
6)	1,4-DICHLOROBENZENE	11.43	146.0	41751	50.49	g	94
7)	1,2-DICHLOROBENZENE	11.98	146.0	39557	50.19	ng	87
8)	BENZYL ALCOHOL	11.92	108.1	19256	51.03	g	95
9)	2-METHYLPHENOL	12.36	108.1	29196	51.85	ng	88
10)	BIS(2-CHLOROISOPROPYL)ETHER	12.42	45.1	43228M	57.37	g	
11)	HEXACHLOROETHANE	12.93	117.0	17895	45.99	ng	87
12)	N-NITROSO-DI-N-PROPYLAMINE	12.83	70.1	26051	63.08	g	99
13)	4-METHYLPHENOL	12.83	108.1	28443	51.22	ng	97
14)	2-FLUOROPHENOL	7.88	112.1	47564	91.63	g	5
15)	PHENOL-D5	10.57	99.1	42882	80.05	ng	97
16)	*D8-NAPHTHALENE	15.52	136.2	70500	40.00	g	94
17)	NITROBENZENE	13.20	77.1	41050	53.54	ng	93
18)	ISOPHORONE	13.95	82.1	74388	50.52	g	5
19)	2-NITROPHENOL	14.20	139.1	16704	52.87	ng	92
20)	2,4-DIMETHYLPHENOL	14.46	122.1	23856	51.91	g	93
21)	BIS(2-CHLOROETHOXY)METHANE	14.73	93.1	42998	48.65	ng	98
22)	2,4-DICHLOROPHENOL	14.97	162.0	26391	47.83	g	7
23)	BENZOIC ACID	14.85	122.1	9472	34.65	ng	93
24)	1,2,4-TRICHLOROBENZENE	15.22	180.0	34150	47.63	g	99
25)	NAPHTHALENE	15.38	128.1	84755	48.05	ng	94
26)	4-CHLOROANILINE	15.66	127.1	31451	48.36	g	3
27)	HEXACHLOROBUTADIENE	16.03	225.0	23591	50.13	ng	97
28)	4-CHLORO-3-METHYLPHENOL	17.31	107.1	26827	53.33	g	9
29)	2-METHYLNAPHTHALENE	17.60	142.2	50990	48.15	ng	97
30)	NITROBENZENE-D5	13.14	82.1	30856	62.46	g	93
31)	*D10-ACENAPHTHENE	20.98	164.2	32597	40.00	ng	93
32)	HEXACHLOROCYCLOPENTADIENE	18.37	237.0	14022	36.34	g	93
33)	2,4,6-TRICHLOROPHENOL	18.62	196.1	18305	51.37	ng	97
34)	2,4,5-TRICHLOROPHENOL	18.74	196.1	20954	51.37	g	97
35)	2-CHLORONAPHTHALENE	19.15	162.1	51227	50.39	ng	97
36)	2-NITROANILINE	19.59	65.1	16582	51.51	g	97
37)	ACENAPHTHYLENE	20.47	152.1	79041	50.43	ng	99
38)	DIMETHYLPHTHALATE	20.55	163.1	62940	48.97	g	9
39)	2,6-DINITROTOLUENE	20.51	165.1	13131	50.49	ng	92
40)	3-NITROANILINE	20.92	138.1	11557	43.57	g	10
41)	ACENAPHTHENE	21.08	153.2	48259	50.03	ng	99
42)	2,4-DINITROPHENOL	21.24	184.2	2635	26.82	g	9
43)	DIBENZOFURAN	21.59	168.1	65126	47.95	ng	94

	Compound	RT	MW	Area	Conc	Units	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	g	
[illegible]	2,4-DINITROTOLUENE	21.75	182.1	10554	42.24	ng	91
[illegible]	[illegible]	22.71	166.1	[illegible]	[illegible]	g	[illegible]
[illegible]	DIETHYLPHTHALATE	22.65	149.1	65802	45.46	ng	98
[illegible]	4-CHLOROPHENYL-PHENYLETHER	22.75	204.2	[illegible]	[illegible]	g	[illegible]
[illegible]	4-NITROANILINE	22.87	138.1	9227	54.55	ng	82
[illegible]	2-FLUOROBIPHENYL	18.88	172.1	[illegible]	[illegible]	g	[illegible]
[illegible]	2,4,6-TRIBROMOPHENOL	23.53	330.0	8276M	39.99	ng	
[illegible]	*D10-PHENANTHRENE	25.69	188.2	[illegible]	[illegible]	g	[illegible]
[illegible]	4,6-DINITRO-2-METHYLPHENOL	23.04	198.2	5752	37.56	ng	84
[illegible]	N-NITROSODIPHENYLAMINE	23.16	169.1	[illegible]	[illegible]	g	[illegible]
[illegible]	4-BROMOPHENYL-PHENYLETHER	24.30	248.0	17746M	52.99	ng	
[illegible]	HEXACHLOROBENZENE	24.75	284.0	26514	[illegible]	g	[illegible]
[illegible]	PENTACHLOROPHENOL	25.32	266.0	9596	38.64	ng	98
[illegible]	PHENANTHRENE	25.[illegible]	178.1	58[illegible]	[illegible]	g	[illegible]
[illegible]	ANTHRACENE	25.89	178.1	69374	47.93	ng	99
[illegible]	DI-N-BUTYLPHTHALATE	27.36	149.1	[illegible]	[illegible]	g	[illegible]
[illegible]	FLUORANTHENE	29.57	202.2	76213	44.00	ng	92
[illegible]	*D12-CHRYSENE	34.28	240.2	44273	[illegible]	g	[illegible]
[illegible]	PYRENE	30.29	202.2	73957	55.79	ng	90
[illegible]	BUTYLBENZYLPHTHALATE	32.61	149.1	3744[illegible]	50.16	g	[illegible]
[illegible]	BENZO(A)ANTHRACENE	34.14	228.2	58865	48.52	ng	98
[illegible]	CHRYSENE	34.28	228.2	55214	[illegible]	g	[illegible]
[illegible]	3,3'-DICHLOROBENZIDINE	34.14	252.1	19903	50.19	ng	99
[illegible]	BIS(2-ETHYLHEXYL)PHTHALATE	34.57	149.1	54964	[illegible]	g	[illegible]
[illegible]	TERPHENYL-D14	30.90	244.3	46646	54.87	ng	97
[illegible]	*D12-PERYLENE	39.89	264.2	32995	40.00	g	[illegible]
[illegible]	BENZO(B)FLUORANTHENE	38.16	252.2	51602	56.64	ng	99
[illegible]	BENZO(K)FLUORANTHENE	38.24	252.2	44471	49.28	g	[illegible]
[illegible]	DI-N-OCTYLPHTHALATE	36.75	149.1	85025	56.44	ng	98
[illegible]	BENZO(A)PYRENE	39.60	252.2	42247	50.18	g	[illegible]
[illegible]	INDENO(1,2,3-CD)PYRENE	46.33	276.2	38573	49.58	ng	97
[illegible]	DIBENZO(A,H)ANTHRACENE	46.53	278.2	32618	49.28	g	[illegible]
[illegible]	BENZO(G,H,I)PERYLENE	48.24	276.2	31378	49.84	ng	94

* Compound is D10

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID Lab Sample ID: 9106G820-001

Sample wt/vol: 8.96 (g/mL) G Lab File ID: DBBF28

Level: (low/med) LOW Date Received: 06/14/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/15/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 500

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

CAS NO.	COMPOUND		
108-95-2	Phenol	560000	U
111-44-4	bis(2-Chloroethyl)ether	560000	U
95-57-8	2-Chlorophenol	560000	U
541-73-1	1,3-Dichlorobenzene	560000	U
106-46-7	1,4-Dichlorobenzene	560000	U
100-51-6	Benzyl alcohol	560000	U
95-50-1	1,2-Dichlorobenzene	560000	U
95-48-7	2-Methylphenol	560000	U
108-60-1	bis(2-Chloroisopropyl)ether	560000	U
106-44-5	4-Methylphenol	560000	U
621-64-7	N-Nitroso-Di-n-propylamine	560000	U
67-72-1	Hexachloroethane	560000	U
98-95-3	Nitrobenzene	560000	U
78-59-1	Isophorone	560000	U
88-75-5	2-Nitrophenol	560000	U
105-67-9	2,4-Dimethylphenol	560000	U
65-85-0	Benzoic acid	2800000	U
111-91-1	bis(2-Chloroethoxy)methane	560000	U
120-83-2	2,4-Dichlorophenol	560000	U
120-82-1	1,2,4-Trichlorobenzene	560000	U
91-20-3	Naphthalene	560000	U
106-47-8	4-Chloroaniline	560000	U
87-68-3	Hexachlorobutadiene	560000	U
59-50-7	4-Chloro-3-methylphenol	560000	U
91-57-6	2-Methylnaphthalene	560000	U
77-47-4	Hexachlorocyclopentadiene	560000	U
88-06-2	2,4,6-Trichlorophenol	560000	U
95-95-4	2,4,5-Trichlorophenol	2800000	U
91-58-7	2-Chloronaphthalene	560000	U
88-74-4	2-Nitroaniline		E
131-11-3	Dimethylphthalate	560000	U
208-96-8	Acenaphthylene	560000	U
606-20-2	2,6-Dinitrotoluene	560000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID Lab Sample ID: 9106G820-001

Sample wt/vol: 8.96 (g/mL) G Lab File ID: DBBF28

Level: (low/med) LOW Date Received: 06/14/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/15/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 500

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2800000	U
83-32-9	Acenaphthene	560000	U
51-28-5	2,4-Dinitrophenol	2800000	U
100-02-7	4-Nitrophenol	2800000	U
132-64-9	Dibenzofuran	560000	U
121-14-2	2,4-Dinitrotoluene	560000	U
84-66-2	Diethylphthalate	560000	U
7005-72-3	4-Chlorophenyl-phenylether	560000	U
86-73-7	Fluorene	560000	U
100-01-6	4-Nitroaniline	2800000	U
534-52-1	4,6-Dinitro-2-methylphenol	2800000	U
86-30-6	N-Nitrosodiphenylamine (1)	560000	U
101-55-3	4-Bromophenyl-phenylether	560000	U
118-74-1	Hexachlorobenzene	560000	U
87-86-5	Pentachlorophenol	2800000	U
85-01-8	Phenanthrene	560000	U
120-12-7	Anthracene	560000	U
84-74-2	Di-n-Butylphthalate	560000	U
206-44-0	Fluoranthene	560000	U
129-00-0	Pyrene	560000	U
85-68-7	Butylbenzylphthalate	560000	U
91-94-1	3,3'-Dichlorobenzidine	1100000	U
56-55-3	Benzo(a)anthracene	560000	U
218-01-9	Chrysene	560000	U
117-81-7	bis(2-Ethylhexyl)phthalate	560000	U
117-84-0	Di-n-Octyl phthalate	560000	U
205-99-2	Benzo(b)fluoranthene	560000	U
207-08-9	Benzo(k)fluoranthene	560000	U
50-32-8	Benzo(a)pyrene	560000	U
193-39-5	Indeno(1,2,3-cd)pyrene	560000	U
53-70-3	Dibenzo(a,h)anthracene	560000	U
191-24-2	Benzo(g,h,i)perylene	560000	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

Truck Lot Discolor.

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID

Lab Sample ID: 9106G820-001

Sample wt/vol: 8.96 (g/mL) G

Lab File ID: DBBF28

Level: (low/med) LOW

Date Received: 06/14/91

% Moisture: not dec. 0 dec.

Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/15/91

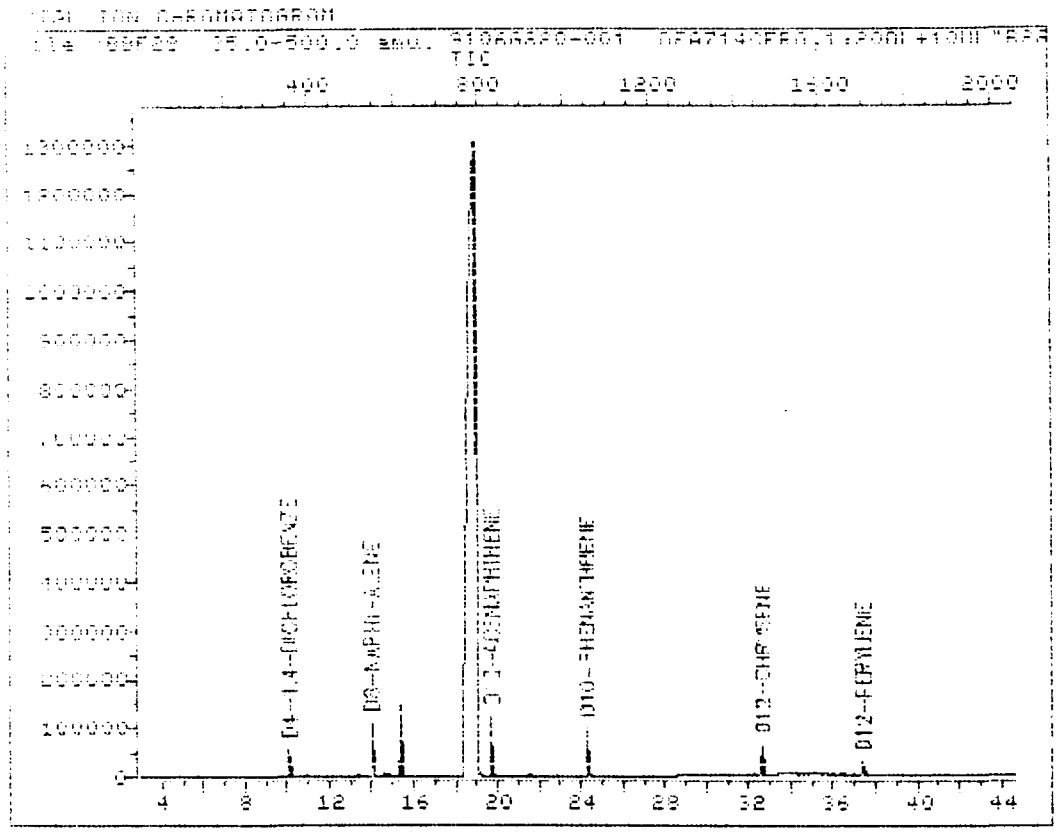
GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 500

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN(C6H8N2)	14.80	600000	J
2.	SUB.CHLORO-NITRO-BENZENE	15.30	3000000	J



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Misc: [illegible]

IS File: [illegible]
Title: [illegible] HAZARDOUS SUBSTANCES,EPA,MSD#4
Last Calibration: [illegible]

Operator ID: MANAGER
Quant Time: [illegible]
Injected At: [illegible]

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 910715 03:43
Output File: [illegible]88F28::DO Injected at: 910715 02:56
Data File: [illegible]88F28::D8 Dilution Factor: 1.00000
Name: 9106G820-001 DFA714
Misc: CERO,1:20DL+10UL"8280"IS,F=25000,E=8.96,DIL=20,GCL#4 STL#61

ID File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#4
Last Calibration: 910714 18:21

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	10.09	350	38513	40.00	ng	96
16)	*D8-NAPHTHALENE	14.00	543	136147	40.00	ng	90
31)	*D10-ACENAPHTHENE	19.71	824	72562	40.00	ng	98
36)	2-NITROANILINE	18.89	784	6760717M	7976.44	ng	
52)	*D10-PHENANTHRENE	24.27	1049	122475	40.00	ng	80
62)	*D12-CHRYSENE	32.64	1461	71053	40.00	ng	99
70)	*D12-PERYLENE	37.40	1695	43992	40.00	ng	82

* Compound is ISTD

Data file header from : [illegible]

Sample: 91066820-001 DFA/14 Operator: MANAGER [illegible] 15-[illegible]-91 2:[illegible]
[illegible] : [illegible] Inj. #: [illegible] MS model: [illegible] SW/HW rev.: 1A ALS # : [illegible]
Method file: [illegible] Running time: [illegible] 4 No. of extra scans: [illegible]
Source temp.: 0 Analyzer temp.: 200 Transfer line temp.: 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	4.0	10.6	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	.2	0.0

DFA/14 91066820-001 DFA/14CERO,1:200L+100L"8280"15,F=25000,E=8.96,

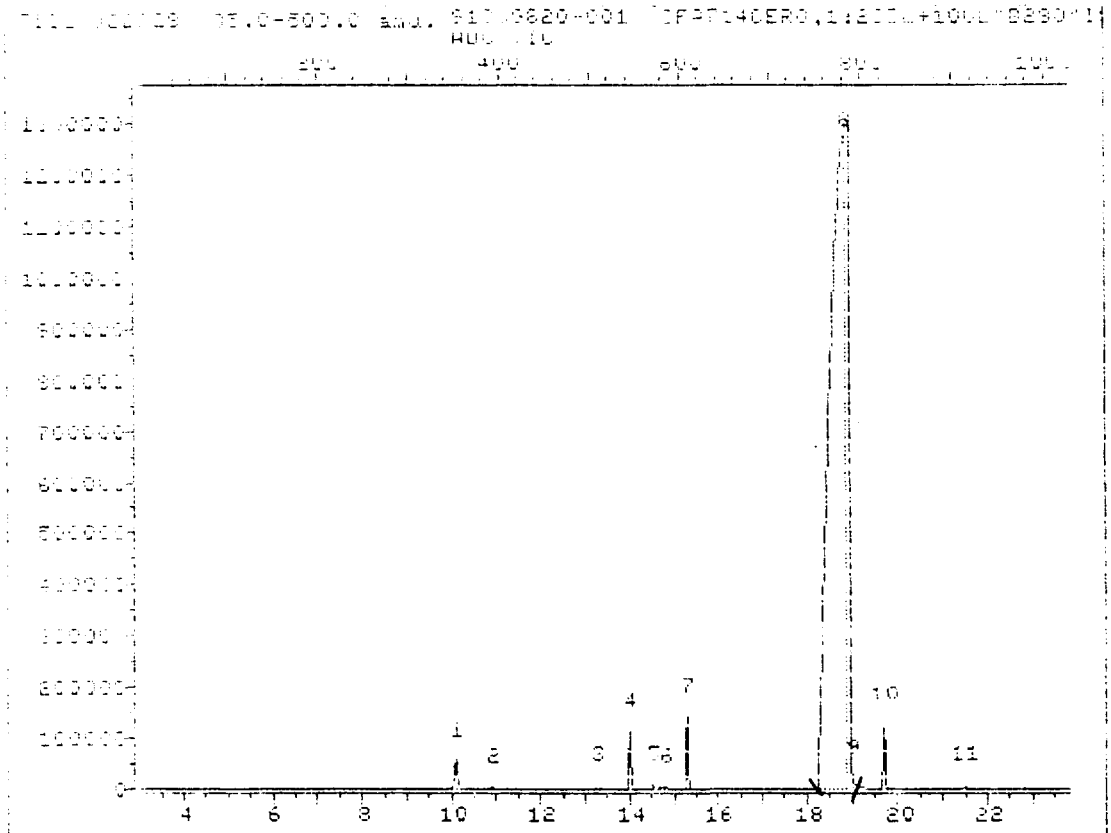
[illegible].01 00.0 [illegible]UL [illegible]
Upslope: .20 Area Reject: .05 % Max Peaks: 14 Bunching: 1
Dslope: [illegible] Results File VOL: 8 Sorted by [illegible] [illegible]

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % area	% of total
1	13.39	[illegible]6	[illegible]0	[illegible]6	[illegible]	[illegible]	[illegible]	[illegible]8	[illegible]
2	14.90	586	590	595	5402	21606	21606	.07	.068
3	15.[illegible]	[illegible]4	5[illegible]	511	[illegible]	25[illegible]	[illegible]	.09	[illegible]
4	14.00	540	543	547	111301	306811	306069	1.04	.968
5	14.[illegible]	[illegible]4	69	[illegible]	[illegible]	40[illegible]	40[illegible]	.4	[illegible]
6	14.80	576	582	587	5619	45431	45356	.15	.15[illegible]
7	15.[illegible]0	[illegible]	507	10	144[illegible]	[illegible]	[illegible]	1.[illegible]2	1.2[illegible]
8	18.85	750	781	782	1276931	29432020	29432020	100.00	93.089
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.6	[illegible]
10	19.71	820	824	827	125195	329280	329449	1.12	1.042
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.11	[illegible]
12	24.27	1045	1049	1055	101063	356252	352556	1.19	1.051
13	32.[illegible]4	[illegible]	[illegible]	[illegible]	62[illegible]	301[illegible]	[illegible]	.6	[illegible]
14	[illegible].40	1690	1695	1701	27350	210012	134844	.46	.426

Sum of corrected areas: [illegible]161[illegible]16.

9:03 AM MON., 15 JULY, 1991

37384776
HCL
M.F.
ADD
ADD
4530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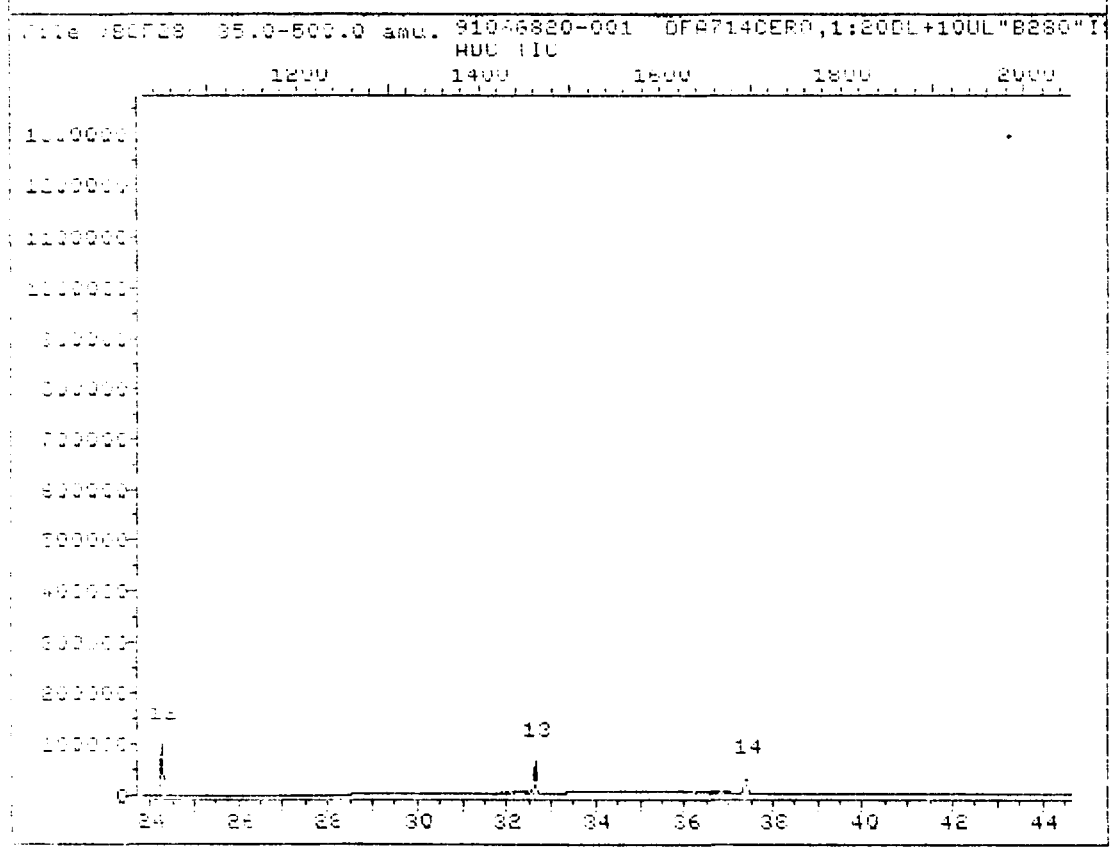
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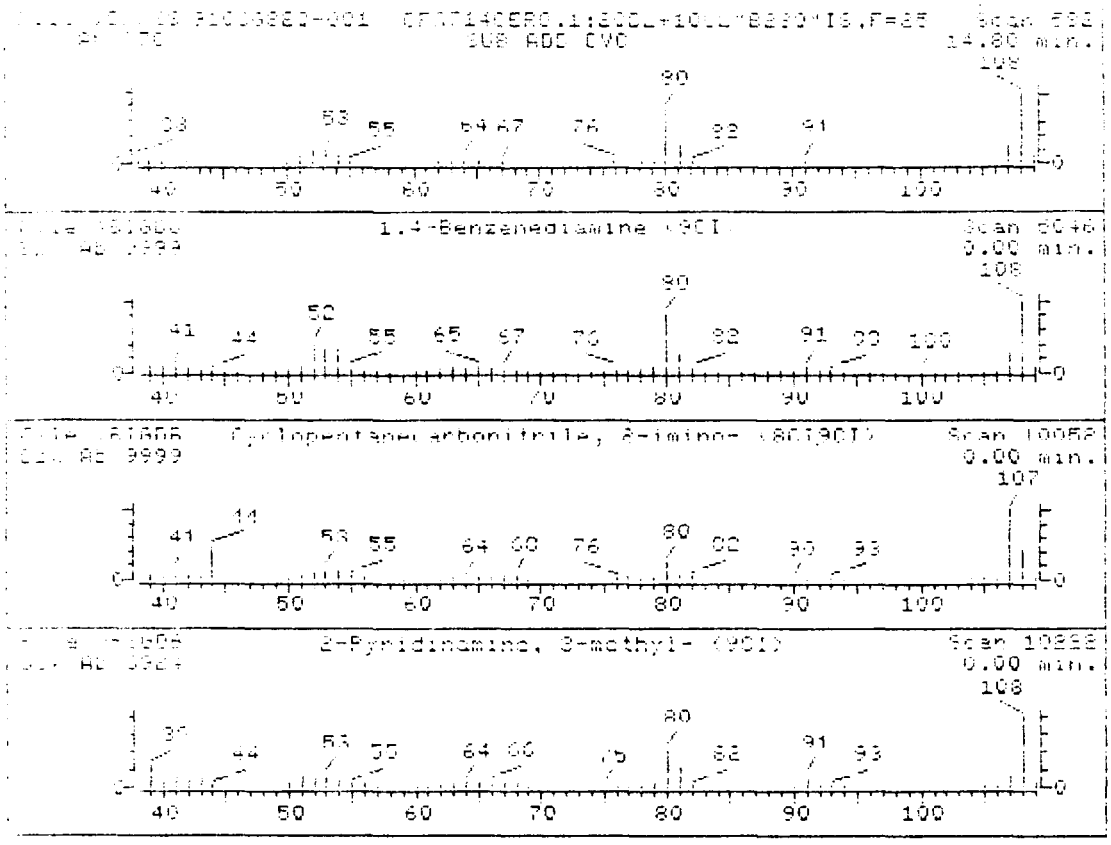
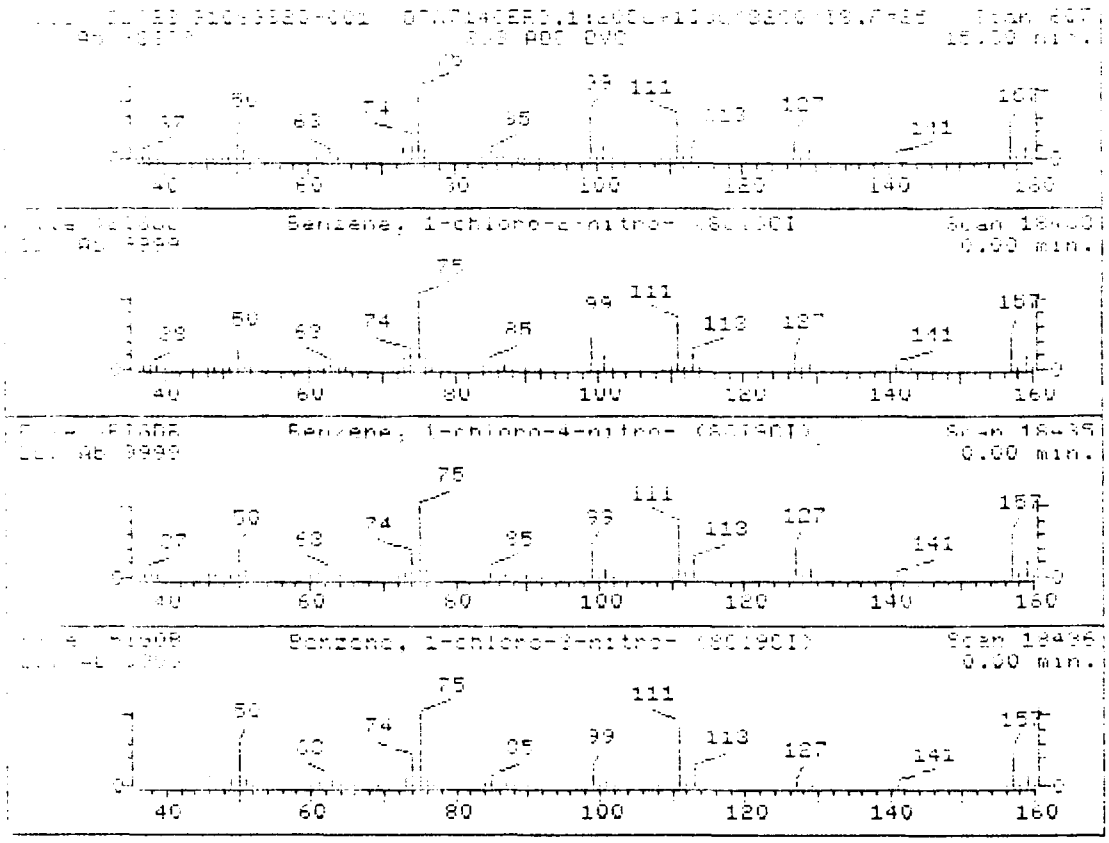


5.7

1. 1,4-Benzenediamine (9CI) 108 $C_6H_8N_2$
2. [illegible] 2-[illegible]- (9CI,[illegible]) 92 [illegible]
3. 2-Pyridinamine, 3-methyl- (9CI) 108 $C_6H_8N_2$
4. 2-Pyridinamine, 4-methyl- (9CI) 108 [illegible]
5. 1,2-Benzenediamine (9CI) 108 $C_6H_8N_2$

Library file: [illegible] Spectrum #: [illegible]
Search speed: 1 Filtering option: N No. of ion ranges searched: 42

	Comp.	CA #	CL #	CI	K	OK	CLB	ILI	%	IN	L_I	H_I
[illegible]	70*	106501	5046	"B1GDB	47	68	[illegible]	0	[illegible]	[illegible]	42	13
[illegible]	[illegible]*	[illegible]	[illegible]	"B [illegible]B	36	71	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	61*	1603403	10222	"B1GDB	45	61	[illegible]	0	107	1[illegible]	[illegible]	13
[illegible]	[illegible]*	[illegible]	[illegible]	"B [illegible]B	29	72	[illegible]	0	[illegible]	[illegible]	0	[illegible]
[illegible]	45*	99648	10209	"B1GDB	52	46	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]



51

1. Benzene, 1-chloro-2-nitro- (8L19LI) 19% C6H4ClNO2
2. Benzene, 1-chloro-4-nitro- (8L19LI) 9% C6H4ClNO2
3. Benzene, 1-chloro-3-nitro- (8L19LI) 15% C6H4ClNO2

File file: [illegible] Spectrum #: [illegible]
Mirror speed: 1 Filtering option: N No. of ion ranges searched: 40

	Prob.	LR	#	LI	#	Mol	K	UK	MLB	ILI	%	MN	CLI	RL
1.	94*	88/33	18433			"B1GUB	83	4-	0	0	6[illegible]	11	6-	9[illegible]
2.	7[illegible]*	10[illegible]/[illegible]5	18435			"B[illegible]0B	78	3/	1	0	7/	1	4	[illegible]
3.	7[illegible]*	121/3[illegible]	18436			"B1GUB	76	5-	1	0	6-	3[illegible]	3[illegible]	7-

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.DL

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID Lab Sample ID: 9106G820-001 DL

Sample wt/vol: 8.96 (g/mL) G Lab File ID: DBBG36

Level: (low/med) LOW Date Received: 06/14/91

% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/23/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 50000

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

CAS NO.	COMPOUND			
108-95-2	Phenol	NA		
111-44-4	bis(2-Chloroethyl)ether	NA		
95-57-8	2-Chlorophenol	NA		
541-73-1	1,3-Dichlorobenzene	NA		
106-46-7	1,4-Dichlorobenzene	NA		
100-51-6	Benzyl alcohol	NA		
95-50-1	1,2-Dichlorobenzene	NA		
95-48-7	2-Methylphenol	NA		
108-60-1	bis(2-Chloroisopropyl)ether	NA		
106-44-5	4-Methylphenol	NA		
621-64-7	N-Nitroso-Di-n-propylamine	NA		
67-72-1	Hexachloroethane	NA		
98-95-3	Nitrobenzene	NA		
78-59-1	Isophorone	NA		
88-75-5	2-Nitrophenol	NA		
105-67-9	2,4-Dimethylphenol	NA		
65-85-0	Benzoic acid	NA		
111-91-1	bis(2-Chloroethoxy)methane	NA		
120-83-2	2,4-Dichlorophenol	NA		
120-82-1	1,2,4-Trichlorobenzene	NA		
91-20-3	Naphthalene	NA		
106-47-8	4-Chloroaniline	NA		
87-68-3	Hexachlorobutadiene	NA		
59-50-7	4-Chloro-3-methylphenol	NA		
91-57-6	2-Methylnaphthalene	NA		
77-47-4	Hexachlorocyclopentadiene	NA		
88-06-2	2,4,6-Trichlorophenol	NA		
95-95-4	2,4,5-Trichlorophenol	NA		
91-58-7	2-Chloronaphthalene	NA		
88-74-4	2-Nitroaniline	0.19E+09	J	190,000,000 ug/Kg
131-11-3	Dimethylphthalate	NA		
208-96-8	Acenaphthylene	NA		
606-20-2	2,6-Dinitrotoluene	NA		

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot Discolor.DL

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: SOLID Lab Sample ID: 9106G820-001 DL

Sample wt/vol: 8.96 (g/mL) G Lab File ID: DBBG36

Level: (low/med) LOW Date Received: 06/14/91

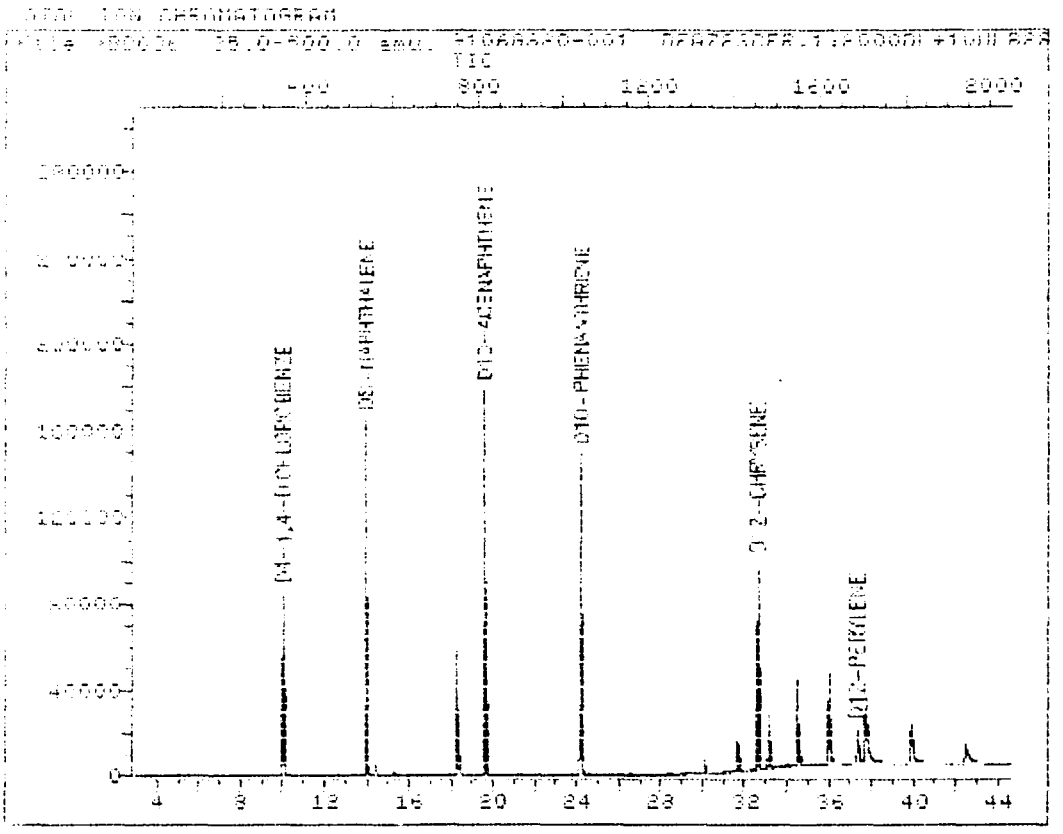
% Moisture: not dec. 0 dec. Date Extracted: 06/26/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/23/91

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 50000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
99-09-2	3-Nitroaniline	NA	
83-32-9	Acenaphthene	NA	
51-28-5	2,4-Dinitrophenol	NA	
100-02-7	4-Nitrophenol	NA	
132-64-9	Dibenzofuran	NA	
121-14-2	2,4-Dinitrotoluene	NA	
84-66-2	Diethylphthalate	NA	
7005-72-3	4-Chlorophenyl-phenylether	NA	
86-73-7	Fluorene	NA	
100-01-6	4-Nitroaniline	NA	
534-52-1	4,6-Dinitro-2-methylphenol	NA	
86-30-6	N-Nitrosodiphenylamine (1)	NA	
101-55-3	4-Bromophenyl-phenylether	NA	
118-74-1	Hexachlorobenzene	NA	
87-86-5	Pentachlorophenol	NA	
85-01-8	Phenanthrene	NA	
120-12-7	Anthracene	NA	
84-74-2	Di-n-Butylphthalate	NA	
206-44-0	Fluoranthene	NA	
129-00-0	Pyrene	NA	
85-68-7	Butylbenzylphthalate	NA	
91-94-1	3,3'-Dichlorobenzidine	NA	
56-55-3	Benzo(a)anthracene	NA	
218-01-9	Chrysene	NA	
117-81-7	bis(2-Ethylhexyl)phthalate	NA	
117-84-0	Di-n-Octyl phthalate	NA	
205-99-2	Benzo(b)fluoranthene	NA	
207-08-9	Benzo(k)fluoranthene	NA	
50-32-8	Benzo(a)pyrene	NA	
193-39-5	Indeno(1,2,3-cd)pyrene	NA	
53-70-3	Dibenzo(a,h)anthracene	NA	
191-24-2	Benzo(g,h,i)perylene	NA	

(1) - Cannot be separated from Diphenylamine



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Last Calibration: 910/23 11:47

Operator ID: MANAGER
Quant Time: 910/23 15:53
Injected at: 910/23 15:05

[illegible]

[illegible] Grant [illegible]: [illegible] Grant Date: [illegible]
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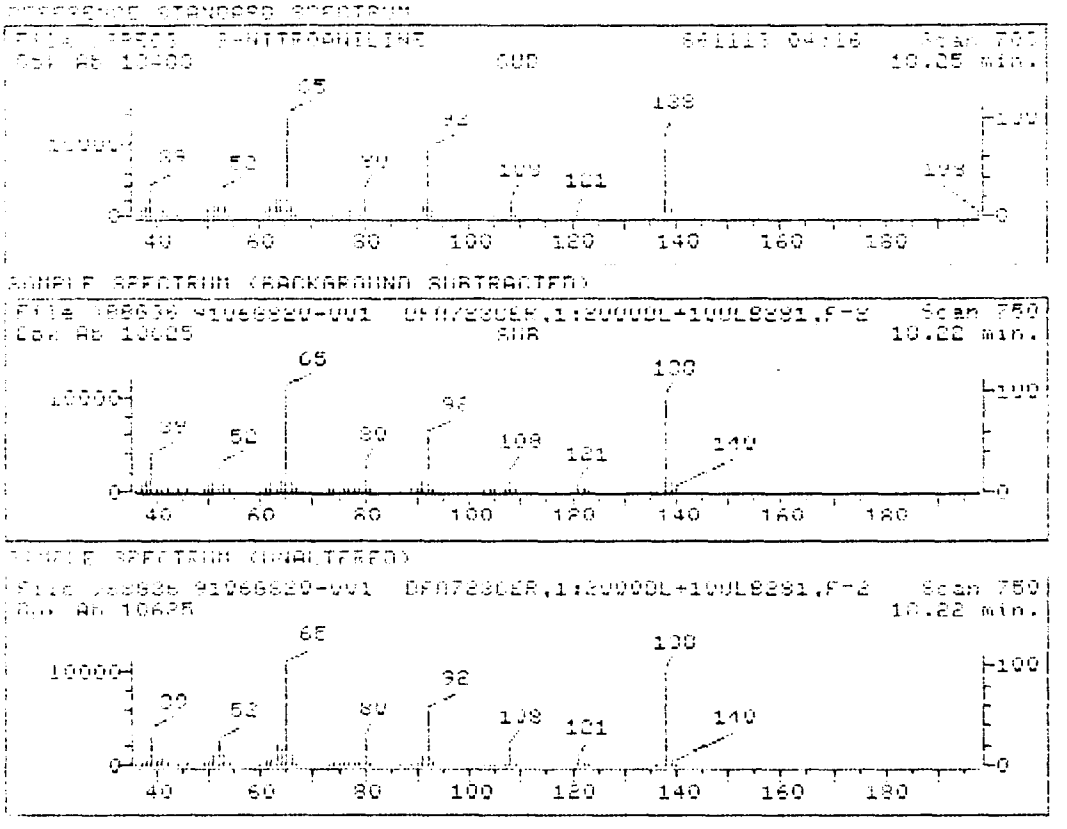
[illegible] Dilution factor: [illegible]
[illegible]

[illegible]

[illegible]
[illegible]
[illegible] Calibration: [illegible]

	Compound	R.T.	m/z	Area	Conc	Units	q
[illegible]	* [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	* [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	* [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	* [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]
[illegible]	* [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ng	[illegible]

* Compound is [illegible]



Data File: >BBG56::12 Quant Output File: ^BBG56::UU
Name: 91066820-001 DFA/26
Misc: LBK,1:20000L+100LB281,F=25000,E=8.96,DIL=2000,GCL#4 BTL#80
Quant Time: 910/26 15:55 Quant ID File: ID_MS4::06
Injected at: 910/26 15:05 Last Calibration: 910/26 11:47

Compound No: 16
Compound Name: 2-NITROANILINE
Scan Number: 750
Retention Time: 18.27 min.
Quant Ion: 65.0
Area: 42055
Concentration: 14.88 ng
Q-value: 91

WESTON

Roy F. Weston, Inc. - Gulf Coast Laboratories
BNA ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #		MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot DiscolTCLP	002		W	91GB0292	06/13/91	06/25/91	07/08/91
Truck Lot DiscolTCLP	002	R1	W	91GB0339	06/13/91	07/29/91	07/31/91
Truck Lot DiscolTCLP	002 MS		W	91GB0292	06/13/91	06/25/91	07/08/91
Truck Lot DiscolTCLP	002 MS	R1	W	91GB0339	06/13/91	07/29/91	07/31/91

LAB QC:

SBLK	MB1	W	91GB0292	N/A	06/25/91	07/08/91
SBLK	TC1	W	91GB0292	N/A	06/25/91	07/08/91
SBLK	MB1	W	91GB0339	N/A	07/29/91	07/31/91
SBLK	TC1	W	91GB0339	N/A	07/29/91	07/31/91

SIGNATURE Jeff A. Kazinski DATE 8-7-91

WESTON

CASE NARRATIVE
VOA, BNA GC/MS

WESTON/Gulf Coast
Cerro Copper Products
RFW# 9106G820

BNA DATA:

1. All initial extraction and analyses were performed within the recommended hold times. Sample 002 and the TCLP spike of sample 002 required REPREP analyses in order to try to attain lower bias corrected detection limits for several compounds. The reextraction occurred beyond the recommended hold time.

2. All Method Blank target compounds were below CRQL's. (** or five times the CRQL for the phthalate esters).

3. All LCS (Method Blank Spike) recoveries were within recommended control limits.

4. Matrix spike analyses were conducted on sample 9106G820-002 for the purpose of bias corrections.

5. All surrogate recoveries in the semi-volatile analyses were within USEPA QC limits.

6. All analyses were performed using Method SW846-8270 unless otherwise noted. The Internal Standard and Surrogate peaks are labelled by name.

7. All of the samples were extracted as low level waters following an initial TCLP extraction procedure. An initial dilution was required on sample 002 and 002 MS due to the nature of the sample extract. The bias corrected detection limits for the compounds hexachlorobutadiene, 2,4-dinitrotoluene, pyridine, and pentachlorophenol were above the hazardous limit for each compound due to poor spike recoveries from the matrix effect. Each of these compounds is listed as undetected in the unbias corrected analysis at a level below the hazardous limit.

Jeff A. Kazinski GC/MS Section Mgr — 8-9-91
Name/Title — Date

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Wednesday August 7th, 1991

RE: **Truck Lot DiscolTCLP**
Project # 0000-00-00-0000
Lab ID: **9106G820-002**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/L

SEMIVOLATILES BY GC/MS, TCLP LEACHATE

Semivolatile Compound	Result	Reporting Limit	Flag
1,4-Dichlorobenzene	BDL	1100	U
ortho-cresol	BDL	550	U
meta & para-cresol	BDL	540	U
Hexachloroethane	BDL	1900	U
Nitrobenzene	230	450	J
Hexachlorobutadiene	BDL	1900	U
2,4,6-Trichlorophenol	BDL	420	U
2,4,5-Trichlorophenol	BDL	600	U
2,4-Dinitrotoluene	BDL	320	U
Hexachlorobenzene	BDL	270	U
Pentachlorophenol	BDL	600	U
Pyridine	BDL	14000	U

WESTON-GULF COAST LABORATORIES, INC.
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Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Wednesday August 7th, 1991

RE: **Truck Lot DiscolTCLP**
Project # 0000-00-00-0000
Lab ID: **9106G820-002 REPREP**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/L

SEMIVOLATILES BY GC/MS, TCLP LEACHATE

Semivolatile Compound	Result	Reporting Limit	Flag
1,4-Dichlorobenzene	BDL	2100	U
ortho-cresol	BDL	1100	U
meta & para-cresol	BDL	1000	U
Hexachloroethane	BDL	3800	U
Nitrobenzene	BDL	760	U
Hexachlorobutadiene	BDL	3300	U
2,4,6-Trichlorophenol	BDL	880	U
2,4,5-Trichlorophenol	BDL	1400	U
2,4-Dinitrotoluene	BDL	850	U
Hexachlorobenzene	BDL	520	U
Pentachlorophenol	BDL	1200	U
Pyridine	BDL	16000	U

Roy F. Weston, Inc. - Gulf Coast Laboratories
SEMIVOLATILES BY GC/MS, TCLP LEACHATE

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 08/05/91 13:15 Page: 1a

	Cust ID:	Truck Lot Di scolTCLP		Truck Lot Di scolTCLP		Truck Lot Di scolTCLP		Truck Lot Di scolTCLP		SBLK		SBLK	
Sample Information	RFW#:	002		002		002 MS		002 MS		91GB0292-MB1		91GB0292-TC1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	10.0		10.0		10.0		10.0		1.00		1.00	
	Units:	ug/L		ug/L REPREP		ug/L		ug/L REPREP		ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	98	%	74	%	88	%	60	%	84	%	97	%
	2-Fluorobiphenyl	98	%	79	%	85	%	66	%	76	%	82	%
	Terphenyl-d14	116	%	91	%	107	%	77	%	107	%	117	%
	Phenol-d5	40	%	35	%	31	%	28	%	37	%	41	%
	2-Fluorophenol	62	%	50	%	48	%	40	%	26	%	65	%
	2,4,6-Br3-phenol	58	%	49	%	53	%	45	%	87	%	100	%
			fl		fl		fl		fl		fl		fl
1,4-Dichlorobenzene		500	U	1000	U	47	%	46	%	5	U	50	U
ortho-cresol		300	U	600	U	55	%	55	%	3	U	30	U
meta & para-cresol		300	U	600	U	56	%	58	%	3	U	30	U
Hexachloroethane		700	U	1400	U	37	%	37	%	7	U	70	U
Nitrobenzene		150	J	600	U	66	%	79	%	3	U	30	U
Hexachlorobutadiene		800	U	1600	U	43	%	49	%	8	U	80	U
2,4,6-Trichlorophenol		300	U	600	U	72	%	68	%	3	U	30	U
2,4,5-Trichlorophenol		400	U	800	U	67	%	59	%	4	U	40	U
2,4-Dinitrotoluene		200	U	400	U	62	%	47	%	2	U	20	U
Hexachlorobenzene		200	U	400	U	75	%	76	%	2	U	20	U
Pentachlorophenol		600	U	1200	U	D	%	D	%	6	U	60	U
Pyridine		5000	U	10000	U	35	%	61	%	50	U	500	U

*= Outside of EPA CLP QC limits.

	Cust ID:	SBLK		SBLK	
Sample Information	RFW#:	91GB0339-MB1		91GB0339-TC1	
	Matrix:	WATER		WATER	
	D.F.:	1.00		1.00	
	Units:	ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	75	%	71	%
	2-Fluorobiphenyl	60	%	59	%
	Terphenyl-d14	81	%	80	%
	Phenol-d5	37	%	36	%
	2-Fluorophenol	55	%	54	%
	2,4,6-Br3-phenol	69	%	68	%
1,4-Dichlorobenzene		5	U	50	U
ortho-cresol		3	U	30	U
meta & para-cresol		3	U	30	U
Hexachloroethane		7	U	70	U
Nitrobenzene		3	U	30	U
Hexachlorobutadiene		8	U	80	U
2,4,6-Trichlorophenol		3	U	30	U
2,4,5-Trichlorophenol		4	U	40	U
2,4-Dinitrotoluene		2	U	20	U
Hexachlorobenzene		2	U	20	U
Pentachlorophenol		6	U	60	U
Pyridine		50	U	500	U

*= Outside of EPA CLP QC limits.

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

RFW Lot No.: 9106G820

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	Truck Lot DiscolTCLP	98	98	116	40	62	58		0
02	Truck Lot DiscolTCLPRE	74	79	91	35	50	49		0
03	Truck Lot DiscolTCLPMS	88	85	107	31	48	53		0
04	Truck Lot DiscolTCLPMSR	60	66	77	28	40	45		0
05	SBLKGB0292-MB1	84	76	107	37	26	87		0
06	SBLKGB0292-TC1	97	82	117	41	65	100		0
07	SBLKGB0339-MB1	75	60	81	37	55	69		0
08	SBLKGB0339-TC1	71	59	80	36	54	68		0

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10- 94)
S5 (2FP) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Br3-phenol	(10-123)

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

3C
WATER SEMIVOLATILE MATRIX SPIKE RECOVERY

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products RFW Lot No.: 9106G820-002

MATRIX Spike - Sample No.: Truck Lot DiscolTCLPRE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
1,4-Dichlorobenzene	2000	0	930	47	36- 97
ortho-cresol	2000	0	1100	55	25-120
meta & para-cresol	2000	0	1160	58	25-120
Hexachloroethane	2000	0	746	37	25-120
Nitrobenzene	2000	0	1590	79	25-120
Hexachlorobutadiene	2000	0	988	49	25-120
2,4,6-Trichlorophenol	2000	0	1360	68	25-120
2,4,5-Trichlorophenol	2000	0	1180	59	25-120
2,4-Dinitrotoluene	2000	0	944	47	24- 96
Hexachlorobenzene	2000	0	1530	77	25-120
Pentachlorophenol	2000	0	0	D	9-103
Pyridine	2000	0	1230	61	25-120

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 12 outside limits

COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot DiscolTCLPMSRE

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER Lab Sample ID: 9106G820-002 MS

Sample wt/vol: 50.0 (g/mL) ML Lab File ID: DBBH25

Level: (low/med) LOW Date Received: 06/14/91

% Moisture: not dec. _____ dec. Date Extracted: 07/29/91

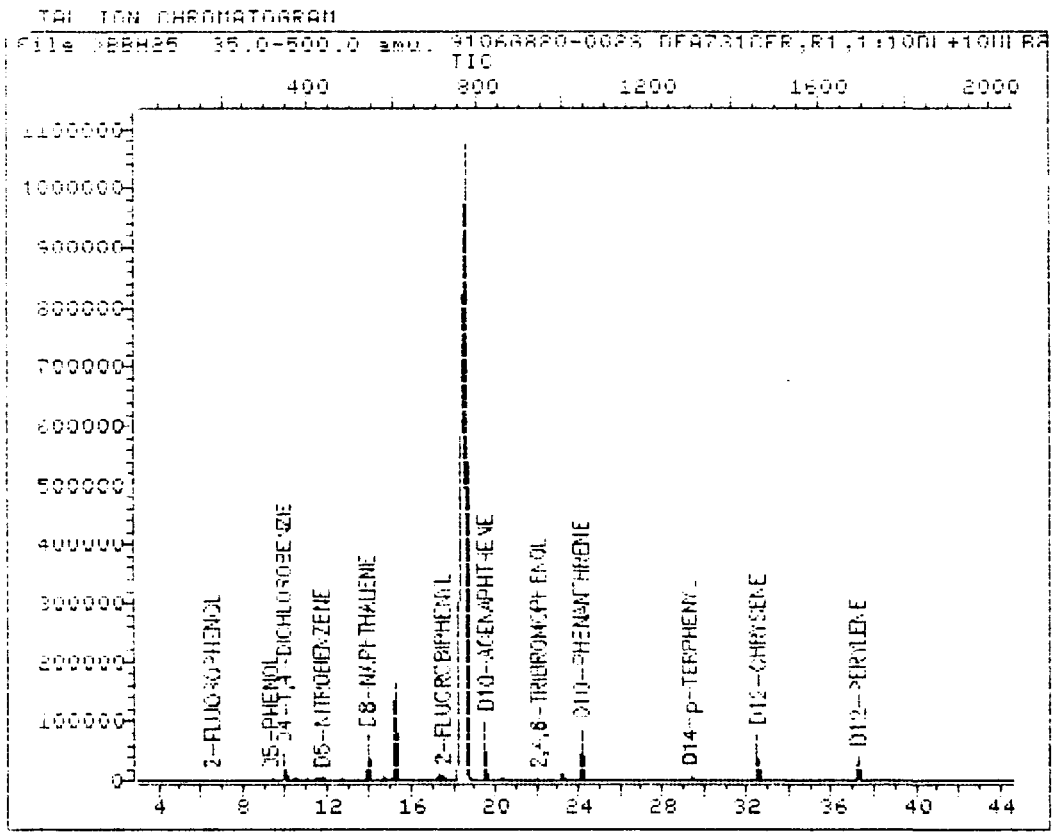
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/31/91

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 10.0

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

CAS NO.	COMPOUND		
106-46-7	1,4-Dichlorobenzene		S
95-48-7	ortho-cresol		S
106-39-4	meta & para-cresol		S
67-72-1	Hexachloroethane		S
98-95-3	Nitrobenzene		S
87-68-3	Hexachlorobutadiene		S
88-06-2	2,4,6-Trichlorophenol		S
95-95-4	2,4,5-Trichlorophenol		S
121-14-2	2,4-Dinitrotoluene		S
118-74-1	Hexachlorobenzene		S
87-86-5	Pentachlorophenol		S
110-86-1	Pyridine		S

S: SPIKE COMPOUND



Data File: >BBH25::D5 Quant Output File: ^BBH25::DD
Name: 910668820-0025 DFA731
Misc: CER,R1,1:100L+100LB283,F=1000,E=50,DIL=10,GCL#4 BIL#81

Id File: ID_ID4::D2
Title: ID FILE FOR HCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

Operator ID: USER6
Quant Time: 910731 15:32
Injected at: 910731 14:43

QUANT REPORT

Operator ID: DSERA Quant Rev: 6 Quant Time: 910/31 15:32
Output File: ^BBH25::DD Injected at: 910/31 14:45
Data File: ^BBH25::D5 Dilution Factor: 1.00000
Name: 9106G820-0025 DFA/31
Misc: CER,P1,I:100L+100L8283,F=1000,E=50,DIL=10,SOL#4 BTL#81

ID File: ID_TC4::D2
Title: ID FILE FOR TCCP SUBSTANCES,MSD#4
Last Calibration: 910/31 10:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.95	152.1	31851	40.00	ng	97
2)	PYRIDINE	3.46	79.1	4142	6.14	ng	80
3)	1,4-DICHLOROBENZENE	9.99	146.0	5780	4.65	ng	90
4)	NITRO-CRESOL	11.07	108.1	5310	5.52	ng	93
5)	HEXACHLOROETHANE	11.48	117.0	1987	3.73	ng	80
6)	META & PARA-CRESOL	11.56	108.1	5810	5.00	ng	85
7)	2-FLUOROPHENOL	6.55	112.1	3112	3.40	ng	86
8)	PHENOL-D5	9.30	99.1	2140	2.08	ng	95
9)	*D8-NAPHTHALENE	13.87	136.2	111746	40.00	ng	93
10)	NITROBENZENE	11.76	77.1	9049	7.94	ng	83
11)	HEXACHLOROBUTADIENE	14.60	225.0	3111	4.94	ng	96
12)	NITROBENZENE-D5	11.72	82.1	3566	3.44	ng	87
13)	*D10-ACENAPHTHENE	19.53	164.2	60071	40.00	ng	99
14)	2,4,6-TRICHLOROPHENOL	17.21	196.1	4653	6.82	ng	96
15)	2,4,5-TRICHLOROPHENOL	17.36	196.1	4740	5.89	ng	95
16)	2,4-DINITROTOLUENE	20.34	89.1	2466	4.72	ng	82
17)	2-FLUOROBIPHENYL	17.44	172.1	6923	3.29	ng	99
18)	2,4,6-TRIBROMOPHENOL	22.04	330.0	1535	3.39	ng	98
19)	*D10-PHENANTHRENE	24.11	188.2	74044	40.00	ng	89
20)	HEXACHLOROBENZENE	23.18	284.0	5818	7.65	ng	96
21)	*D12-CHRYSENE	32.51	240.2	90045	40.00	ng	98
23)	TERPHENYL-D14	29.28	244.3	8980	3.36	ng	98
24)	*D12-PERYLENE	37.22	264.2	75352	40.00	ng	95

* Compound is ISTD

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Roy F. Weston, Inc. Contract: NONE

Case No.: LAB

Lab File ID: DBBH20 Lab Sample ID: 91GB0339-MB1

Date Extracted: 07/29/91 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed: 07/31/91 Time Analyzed: 1025

Matrix:(Soil/Water) WATER Level:(low/med) LOW

Instrument ID: GCL#4

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	Truck Lot DiscolTCLPRE	9106G820-002	DBBH24	07/31/91
02	Truck Lot DiscolTCLPMSR	9106G820-002S	DBBH25	07/31/91

COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER Lab Sample ID: 91GB0339-MB1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DBBH20

Level: (low/med) LOW Date Received: 07/29/91

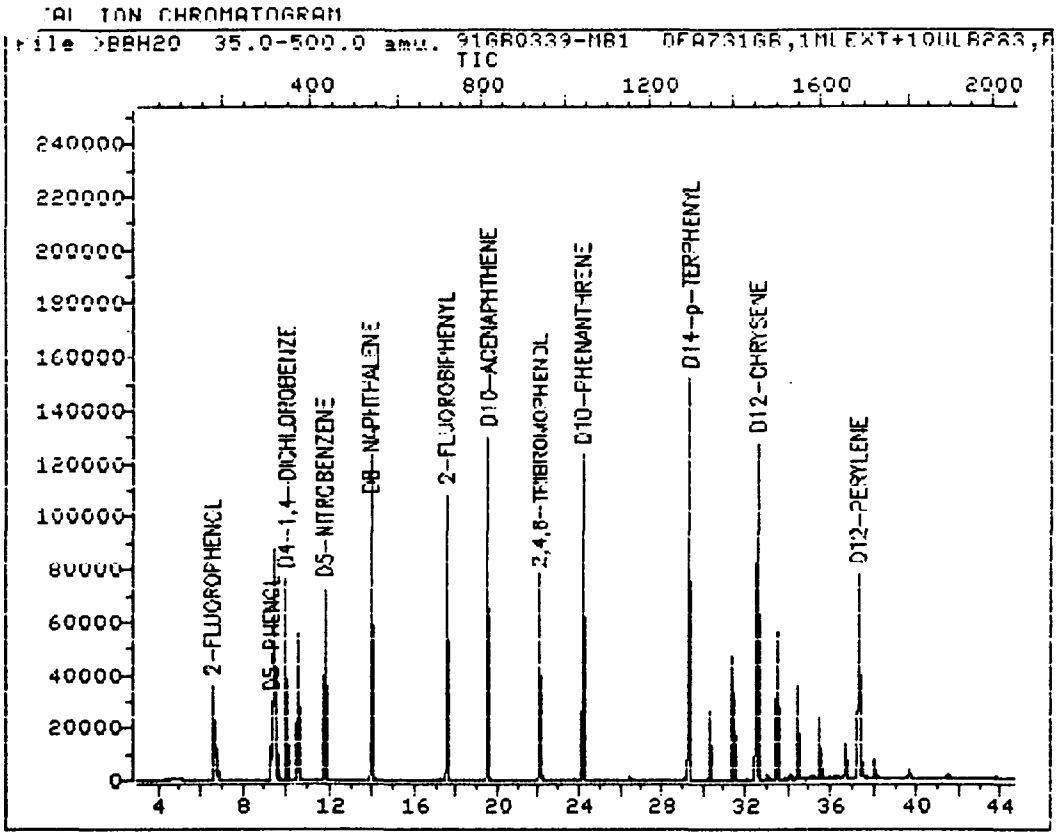
% Moisture: not dec. _____ dec. Date Extracted: 07/29/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/31/91

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
106-46-7	1,4-Dichlorobenzene	5	U
95-48-7	ortho-cresol	3	U
106-39-4	meta & para-cresol	3	U
67-72-1	Hexachloroethane	7	U
98-95-3	Nitrobenzene	3	U
87-68-3	Hexachlorobutadiene	8	U
88-06-2	2,4,6-Trichlorophenol	3	U
95-95-4	2,4,5-Trichlorophenol	4	U
121-14-2	2,4-Dinitrotoluene	2	U
118-74-1	Hexachlorobenzene	2	U
87-86-5	Pentachlorophenol	6	U
110-86-1	Pyridine	50	U



Data File: >BBH20::D5 Quant Output File: ^BBH20::DD
Name: 91GB0339-MB1 DFA731
Misc: GB,1MLEXT+10ULB283,F=1000,E=1000,DIL=1,GCL#4 BTL#76

Id File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

Operator ID: USER6
Quant Time: 910731 11:13
Injected at: 910731 10:25

QUANT REPORT

Operator ID: USER6 Quant Rev: 6 Quant Time: 910731 11:13
Output File: ^BBH20::DD Injected at: 910731 10:25
Data File: >BBH20::D5 Dilution Factor: 1.00000
Name: 91GB0339-MB1 DFA731
Misc: GB,1MLEXT+100LB283,F=1000,E=1000,DIL=1,GCL#4 BIL#76

ID File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.98	152.1	47895	40.00	ng	97
7)	2-FLUOROPHENOL	6.53	112.1	64826	47.05	ng	82
8)	PHENOL-D5	9.31	99.1	42806	27.62	ng	94
9)	*D8-NAPHTHALENE	13.89	136.2	163365	40.00	ng	93
12)	NITROBENZENE-D5	11.74	82.1	64894	42.78	ng	84
13)	*D10-ACENAPHTHENE	19.51	164.2	83318	40.00	ng	97
17)	2-FLUOROBIPHENYL	17.46	172.1	87210	29.92	ng	99
18)	2,4,6-TRIBROMOPHENOL	22.02	330.0	32359	51.55	ng	89
19)	*D10-PHENANTHRENE	24.13	188.2	135121	40.00	ng	90
22)	*D12-CHRYSENE	32.53	240.2	149020	40.00	ng	95
23)	TERPHENYL-D14	29.32	244.3	155221	40.37	ng	99
24)	*D12-PERYLENE	37.24	264.2	143514	40.00	ng	95

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

SBLK

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER Lab Sample ID: 91GB0339-TC1

Sample wt/vol: 100 (g/mL) ML Lab File ID: DBBH21

Level: (low/med) LOW Date Received: 07/29/91

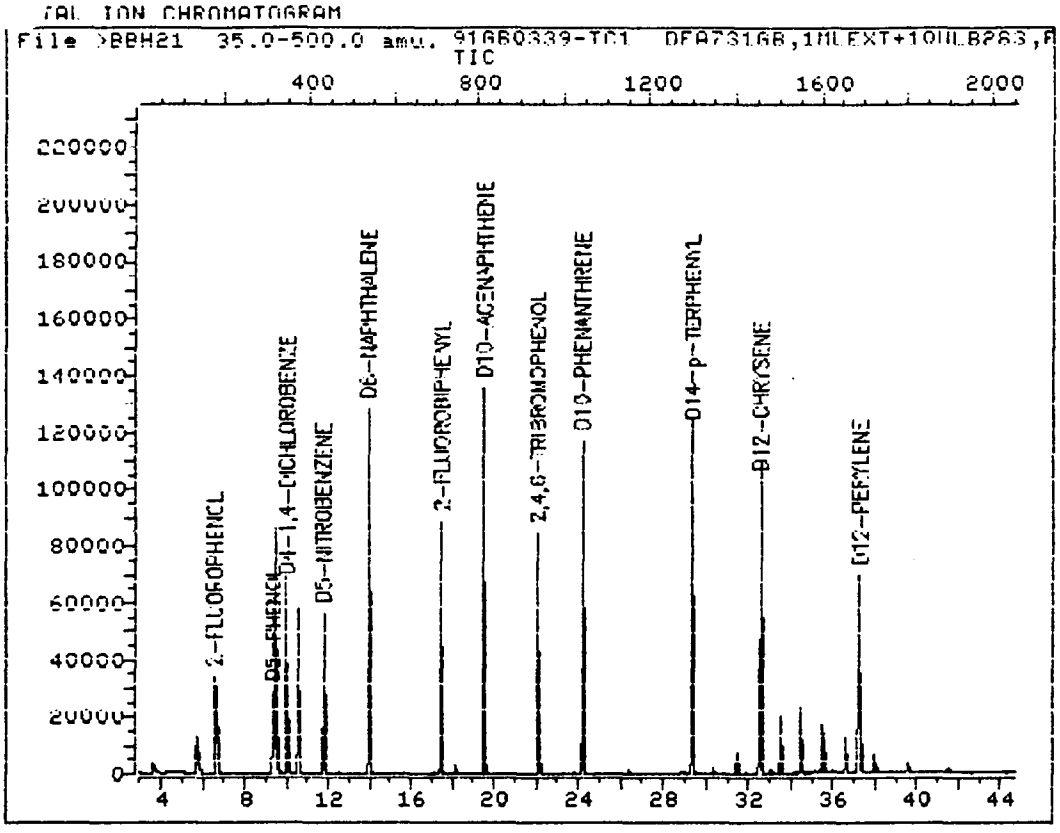
% Moisture: not dec. _____ dec. Date Extracted: 07/29/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/31/91

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
106-46-7	1,4-Dichlorobenzene	50	U
95-48-7	ortho-cresol	30	U
106-39-4	meta & para-cresol	30	U
67-72-1	Hexachloroethane	70	U
98-95-3	Nitrobenzene	30	U
87-68-3	Hexachlorobutadiene	80	U
88-06-2	2,4,6-Trichlorophenol	30	U
95-95-4	2,4,5-Trichlorophenol	40	U
121-14-2	2,4-Dinitrotoluene	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	60	U
110-86-1	Pyridine	500	U



Data File: >BBH21::D5 Quant Output File: ^BBH21::DD
Name: 91GB0339-TC1 DFA731
Misc: GB,1MLEXT+10ULB283,F=1000,E=100,DIL=1,GCL#4 BTL#77

Id File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

Operator ID: USER6
Quant Time: 910731 12:05
Injected at: 910731 11:18

QUANT REPORT

Operator ID: USER6 Quant Rev: 6 Quant Time: 910731 12:05
Output File: ^BBH21::DD Injected at: 910731 11:18
Data File: >BBH21::D5 Dilution Factor: 1.00000
Name: 91GB0339-TC1 DFA731
Misc: GB,1MLEXT+10ULB283,F=1000,E=100,DIL=1,GCL#4 BTL#77

ID File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.94	152.1	45335	40.00	ng	95
7)	2-FLUOROPHENOL	6.51	112.1	60569	46.44	ng	81
8)	PHENOL-D5	9.29	99.1	39941	27.23	ng	97
9)	*D8-NAPHTHALENE	13.88	136.2	154063	40.00	ng	95
12)	NITROBENZENE-D5	11.71	82.1	58162	40.65	ng	79
13)	*D10-ACENAPHTHENE	19.47	164.2	79766	40.00	ng	98
17)	2-FLUOROBIPHENYL	17.42	172.1	82796	29.67	ng	96
18)	2,4,6-TRIBROMOPHENOL	22.01	330.0	30871	51.37	ng	96
19)	*D10-PHENANTHRENE	24.10	188.2	129082	40.00	ng	89
22)	*D12-CHRYSENE	32.49	240.2	139287	40.00	ng	97
23)	TERPHENYL-D14	29.29	244.3	143599	39.95	ng	96
24)	*D12-PERYLENE	37.22	264.2	132166	40.00	ng	96

* Compound is ISTD

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Roy F. Weston, Inc. Contract: 0000-00-00-0000

Case No.: Cerro Copper Products

Lab File ID: DFA731 DFTPP Injection Date: 7/31/91

Instrument ID: GCL#4 DFTPP Injection Time: 913

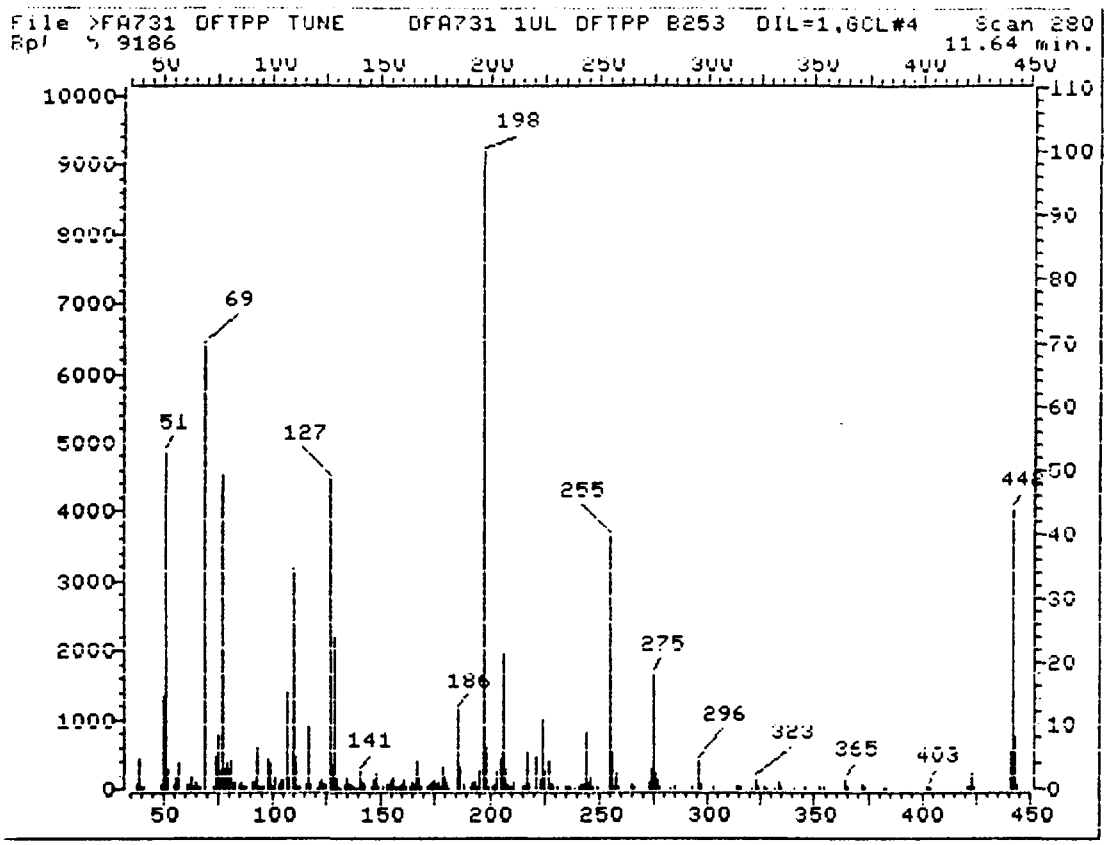
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.8
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	69.5
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	48.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	17.9
365	Greater than 1.00% of mass 198	1.37
441	Present, but less than mass 443	6.1
442	Greater than 40.0% of mass 198	43.7
443	17.0 - 23.0% of mass 442	8.1(18.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD50	STD50	DGA731	07/31/91	0932
02	SBLKGB0339-MB1	91GB0339-MB1	DBBH20.	07/31/91	1025
03	SBLK	91GB0339-TC1	DBBH21.	07/31/91	1118
04	Truck Lot DiscolTCLPRE	9106G820-002	DBBH24.	07/31/91	1351
05	Truck Lot DiscolTCLPMSRE	9106G820-002S	DBBH25.	07/31/91	1443
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

320



MS data file header from : >FA731

Sample: DFTPP TUNE DFA731 Operator: USER6 MS 7/31/91 9:13
Misc : 1UL DFTPP B253 DIL=1,GCL#4 BTL# 1
Sys. #: 4 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: DECAFL Tuning file: TUNE4 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	160.	220.	0.	0.	0.
Chromatographic times, min. :	4.0	3.5	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	.2	0.0

F :: >FA731 Scan #: 280 Retn. time: 11.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.00	.838	100.00	.381	154.90	1.219	206.05	21.054	277.10	1.285
39.10	4.888	101.00	2.025	156.00	2.025	206.95	2.950	278.00	.250
40.00	.403	102.90	.697	157.05	.359	208.05	.708	283.00	.196
41.00	.337	103.90	1.350	158.05	.512	208.95	.229	285.00	.272
49.10	.555	105.00	1.295	158.95	.337	210.15	.370	293.00	.392
50.00	14.348	107.00	14.990	160.05	.751	210.95	.882	296.00	4.311
51.00	52.765	108.00	2.210	161.05	1.230	215.05	.283	296.90	.621
52.00	2.961	109.95	34.629	162.05	.294	215.95	.457	302.95	.414
55.00	.631	111.05	5.084	164.15	.250	216.95	5.857	314.15	.250
56.00	1.676	111.95	.501	164.95	.947	218.05	.762	314.95	.425
57.00	4.148	113.05	.239	166.05	.675	220.95	4.921	316.15	.327
60.95	.773	116.05	.816	167.05	4.300	222.95	1.328	321.05	.142
62.05	.729	116.95	10.091	167.95	1.676	223.95	10.734	322.95	1.546
63.05	2.155	118.05	.784	168.95	.381	224.95	2.754	323.95	.283
63.95	.348	120.95	.163	171.85	.457	226.95	4.452	327.00	.250
65.05	.914	121.95	.958	173.05	.555	227.85	.621	327.90	.174
65.95	.207	122.95	1.513	173.95	.882	229.00	.806	332.00	.131
66.95	.218	123.85	.751	174.95	1.546	231.00	.457	334.00	.882
68.95	69.497	125.05	.860	175.95	.566	235.00	.316	335.00	.337
73.05	.501	126.95	48.650	176.95	1.002	236.00	.272	340.80	.185
73.95	4.953	127.95	3.625	177.95	.414	237.00	.348	345.90	.294
74.95	8.339	128.95	23.862	178.95	3.364	239.00	.152	352.15	.381
76.05	2.732	129.95	1.753	179.95	1.894	241.00	.261	352.95	.294
77.05	49.390	130.95	.381	181.00	.991	242.00	.599	354.05	.446
78.05	3.201	131.95	.174	181.90	.185	243.10	.588	364.85	1.372
78.95	4.039	134.00	.642	185.10	1.611	244.00	8.698	365.85	.305
79.95	3.037	135.00	1.742	186.00	12.301	245.00	.991	372.05	.642
80.95	4.550	136.00	.762	187.00	3.386	246.00	1.666	373.00	.207
81.95	1.056	137.00	.838	188.10	.370	246.90	.218	382.80	.131
82.95	1.187	137.90	.239	188.90	.784	249.00	.327	383.10	.131
85.00	.718	138.90	.152	191.10	.370	254.95	39.506	402.05	.294
86.00	1.089	139.80	.185	192.00	.969	256.05	5.802	402.95	.305
87.00	.501	141.00	2.580	193.00	.914	256.95	.381	403.95	.152
87.90	.207	142.10	.882	194.00	.218	258.05	2.351	421.10	.294
91.00	1.089	142.90	.621	195.90	2.591	259.05	.327	422.00	.403
92.00	1.154	146.00	.501	197.90	100.000	265.05	.860	423.10	2.341
93.00	6.575	147.00	1.285	198.90	6.325	265.95	.229	424.10	.533
94.10	.435	148.00	2.493	199.90	.381	272.95	1.121	441.10	6.096
95.00	.261	149.00	.501	201.40	.425	273.95	3.113	442.00	43.708
96.00	.370	151.00	.403	202.80	.599	274.95	17.940	443.00	8.143
98.00	4.594	153.00	.827	203.90	2.809	275.95	2.232	444.00	.784
99.00	3.919	153.90	.708	205.05	4.844				

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	52.77	52.77	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	69.50	69.50	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	48.65	48.65	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.32	6.32	Ok
275	10-30% of mass 198	17.94	17.94	Ok
365	Greater than 1% of mass 198	1.37	1.37	Ok
441	0-100% of mass 443	6.10	74.87	Ok
442	Greater than 40% of mass 198	43.71	43.71	Ok
443	17-23% of mass 442	8.14	18.63	Ok

Injection Date: 07/31/91
Injection Time: 09:13
Data File: >FA731
Scan: 280

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.702	1.768	1.707	1.763	1.732	1.734	1.8*
bis(2-Chloroethyl)ether	1.452	1.530	1.511	1.511	1.482	1.497	2.0
2-Chlorophenol	1.385	1.392	1.397	1.415	1.363	1.391	1.4
1,3-Dichlorobenzene	1.561	1.513	1.524	1.505	1.480	1.517	1.9
1,4-Dichlorobenzene *	1.585	1.555	1.554	1.552	1.502	1.550	1.9*
Benzyl alcohol	.861	.871	.856	.887	.832	.861	2.4
1,2-Dichlorobenzene	1.470	1.465	1.464	1.457	1.379	1.447	2.7
2-Methylphenol	1.182	1.186	1.158	1.195	1.141	1.172	1.9
bis(2-chloroisopropyl)ether	1.495	1.498	1.499	1.483	1.587	1.513	2.8
4-Methylphenol	1.189	1.274	1.210	1.207	1.142	1.204	4.0
N-Nitroso-di-n-propylamine #	.972	.993	.830	.869	.883	.909	7.7#
Hexachloroethane	.736	.726	.778	.746	.672	.732	5.3
Nitrobenzene	.421	.437	.422	.418	.431	.426	1.8
Isophorone	.898	.826	.823	.790	.792	.826	5.3
2-Nitrophenol *	.206	.215	.205	.208	.220	.211	3.0*
2,4-Dimethylphenol	.247	.300	.277	.289	.296	.282	7.6
Benzoic acid	.178	.206	.188	.195	.234	.200	10.7
bis(2-Chloroethoxy)methane	.518	.526	.515	.527	.509	.519	1.4
2,4-Dichlorophenol *	.319	.322	.316	.318	.321	.319	.7*
1,2,4-Trichlorobenzene	.364	.354	.345	.343	.343	.350	2.6
Naphthalene	1.081	1.096	1.068	1.091	.954	1.058	5.6
4-Chloroaniline	.440	.422	.402	.411	.418	.419	3.4
Hexachlorobutadiene *	.250	.236	.247	.229	.220	.237	5.3*
4-Chloro-3-methylphenol *	.368	.375	.361	.356	.359	.364	2.0*
2-Methylnaphthalene	.653	.664	.649	.647	.650	.653	1.0
Hexachlorocyclopentadiene #	.402	.447	.488	.471	.422	.446	7.8#
2,4,6-Trichlorophenol *	.432	.443	.429	.429	.452	.437	2.3*
2,4,5-Trichlorophenol	.462	.470	.451	.457	.452	.459	1.7
2-Chloronaphthalene	1.287	1.313	1.282	1.283	1.270	1.287	1.2
2-Nitroaniline	.441	.470	.444	.464	.486	.461	4.1
Dimethylphthalate	1.656	1.652	1.637	1.612	1.531	1.618	3.2
Acenaphthylene	2.029	2.042	2.003	2.084	1.822	1.996	5.1
2,6-Dinitrotoluene	.354	.377	.364	.377	.401	.375	4.7
3-Nitroaniline	.323	.352	.309	.345	.362	.338	6.4
Acenaphthene *	1.232	1.236	1.208	1.215	1.209	1.220	1.1*
2 Dinitrophenol #	.141	.191	.165	.196	.230	.185	18.2#
4- trophenol #	.244	.265	.236	.265	.264	.255	5.4#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

Instrument ID: 70 4 Calibration Date(s): 06/17/91 --------

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>GE617 RRF50 =>GD617
RRF80 =>GC617 RRF120=>GB617 RRF160=>GF617

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.755	1.783	1.721	1.761	1.818	1.768	2.0
2,4-Dinitrotoluene	.322	.356	.335	.371	.355	.348	5.5
Diethylphthalate	1.884	1.858	1.909	1.910	1.672	1.847	5.4
4-Chlorophenyl-phenylether	.709	.712	.689	.714	.680	.701	2.2
Fluorene	1.384	1.412	1.361	1.416	1.375	1.389	1.7
4-Nitroaniline	.305	.338	.275	.309	.332	.312	8.1
4,6-Dinitro-2-methylphenol	.139	.168	.154	.165	.167	.158	7.6
N-Nitrosodiphenylamine (1) *	.565	.595	.583	.591	.546	.576	3.5*
4-Bromophenyl-phenylether	.260	.261	.256	.245	.241	.253	3.5
Hexachlorobenzene	.342	.330	.333	.317	.304	.325	4.6
Pentachlorophenol *	.189	.201	.196	.192	.203	.196	3.0*
Phenanthrene	1.157	1.181	1.162	1.157	1.117	1.155	2.0
Anthracene	1.147	1.160	1.136	1.125	1.070	1.128	3.1
Di-n-butylphthalate	2.009	1.997	2.064	1.909	1.284	1.853	17.4
Fluoranthene *	1.335	1.298	1.260	1.213	1.143	1.250	6.0*
Pyrene	1.377	1.609	1.396	1.492	1.774	1.530	10.8
Butylbenzylphthalate	.862	.954	.934	1.011	1.010	.954	6.5
3,3'-Dichlorobenzidine	.370	.361	.368	.374	.350	.365	2.7
Benzo(a)anthracene	1.179	1.184	1.178	1.196	1.156	1.179	1.2
Chrysene	1.134	1.123	1.128	1.109	1.063	1.111	2.6
bis(2-Ethylhexyl)phthalate	1.159	1.216	1.362	1.428	1.330	1.299	8.5
Di-n-octylphthalate *	2.461	3.887	3.662	4.980	5.545	4.107	29.3*
Benzo(b)fluoranthene	1.431	1.672	1.435	1.657	1.710	1.581	8.6
Benzo(k)fluoranthene	1.296	1.523	1.497	1.508	1.685	1.502	9.2
Benzo(a)pyrene *	1.122	1.171	1.127	1.136	1.150	1.141	1.7*
Indeno(1,2,3-cd)pyrene	.567	.420	.463	.377	.365	.438	18.6
Dibenzo(a,h)anthracene	.649	.496	.526	.439	.424	.507	17.7
Benzo(g,h,i)perylene	.576	.407	.432	.348	.327	.418	23.4
Nitrobenzene-d5	.394	.400	.400	.400	.390	.397	1.1
2-Fluorobiphenyl	1.319	1.339	1.337	1.319	1.310	1.325	1.0
Terphenyl-d14	1.043	1.214	1.105	1.148	1.337	1.170	9.6
Phenol-d5	1.440	1.430	1.399	1.432	1.411	1.423	1.2
2-Fluorophenol	1.232	1.237	1.260	1.227	1.218	1.235	1.3
2,4,6-Tribromophenol	.271	.285	.276	.279	.293	.281	3.0

(1) Cannot be separated from Diphenylamine

/B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

ab Name:GULF COAST LABORATORIES Contract:----

ab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

nstrument ID: /0 4 Calibration Date: 7/31/91 Time: 9:32

ab File ID: >GA731 Init. Calib. Date(s):07/15/91 --------

in RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Phenol	1.734	1.589	8.4	*
bis(2-Chloroethyl)ether	1.492	1.424	4.9	
2-Chlorophenol	1.391	1.372	1.4	
1,3-Dichlorobenzene	1.517	1.546	1.9	
1,4-Dichlorobenzene	1.550	1.559	.6	*
Benzyl alcohol	.861	.682	20.8	
1,2-Dichlorobenzene	1.447	1.483	2.5	
2-Methylphenol	1.172	1.210	3.2	
bis(2-chloroisopropyl)ether	1.513	1.432	5.3	
4-Methylphenol	1.204	1.257	4.4	
N-Nitroso-di-n-propylamine	.909	.887	2.5	#
Hexachloroethane	.732	.668	8.7	
Nitrobenzene	.426	.408	4.1	
Isophorone	.826	.770	6.8	
2-Nitrophenol	.211	.225	6.9	*
2,4-Dimethylphenol	.282	.288	2.4	
Benzoic acid	.200	.147	26.7	
bis(2-Chloroethoxy)methane	.519	.486	6.4	
2,4-Dichlorophenol	.319	.329	3.2	*
1,2,4-Trichlorobenzene	.350	.369	5.5	
Naphthalene	1.058	1.023	3.3	
4-Chloroaniline	.419	.408	2.6	
Hexachlorobutadiene	.237	.226	4.7	*
4-Chloro-3-methylphenol	.364	.351	3.6	*
2-Methylnaphthalene	.653	.644	1.3	
Hexachlorocyclopentadiene	.446	.356	20.2	#
2,4,6-Trichlorophenol	.437	.452	3.5	*
2,4,5-Trichlorophenol	.459	.536	16.8	
2-Chloronaphthalene	1.287	1.317	2.3	
2-Nitroaniline	.461	.458	.7	
Dimethylphthalate	1.618	1.611	.4	
Acenaphthylene	1.996	2.009	.7	
2,6-Dinitrotoluene	.375	.405	8.2	
3-Nitroaniline	.338	.353	4.5	
Acenaphthene	1.220	1.218	.1	*
2,4-Dinitrophenol	.185	.222	20.4	#
4-Nitrophenol	.255	.206	19.0	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GULF COAST LABORATORIES Contract: ----

Lab Code: WESIL Case No.: ---- SAS No.: ---- SDG No.: ----

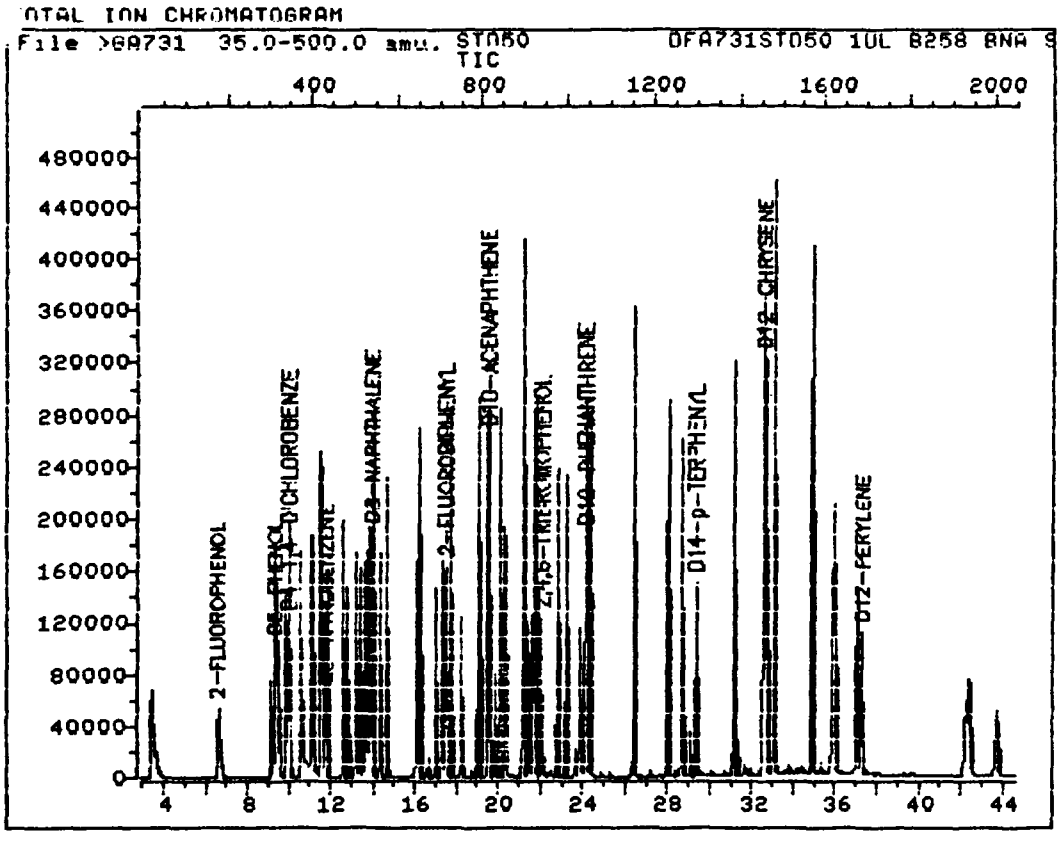
Instrument ID: 70 4 Calibration Date: 7/31/91 Time: 9:32

Lab File ID: >GA731 Init. Calib. Date(s): 07/15/91 --------

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.768	1.989	12.5
2,4-Dinitrotoluene	.348	.348	.0
Diethylphthalate	1.847	1.791	3.0
4-Chlorophenyl-phenylether	.701	.803	14.6
Fluorene	1.389	1.486	6.9
4-Nitroaniline	.312	.377	20.9
4,6-Dinitro-2-methylphenol	.158	.183	15.6
N-Nitrosodiphenylamine (1) *	.576	.591	2.6 *
4-Bromophenyl-phenylether	.253	.253	.1
Hexachlorobenzene	.325	.323	.6
Pentachlorophenol *	.196	.185	5.7 *
Phenanthrene	1.155	1.134	1.8
Anthracene	1.128	1.138	1.0
Di-n-butylphthalate	1.853	1.737	6.2
Fluoranthene *	1.250	1.273	1.8 *
Pyrene	1.530	1.323	13.5
Butylbenzylphthalate	.954	.806	15.5
3,3'-Dichlorobenzidine	.365	.431	18.3
Benzo(a)anthracene	1.179	1.210	2.6
Chrysene	1.111	1.173	5.5
bis(2-Ethylhexyl)phthalate	1.299	1.187	8.7
Di-n-octylphthalate *	4.107	2.403	41.5 *
Benzo(b)fluoranthene	1.581	1.286	18.7
Benzo(k)fluoranthene	1.502	1.276	15.0
Benzo(a)pyrene *	1.141	1.103	3.3 *
Indeno(1,2,3-cd)pyrene	.438	.759	73.1
Dibenzo(a,h)anthracene	.507	.798	57.5
Benzo(g,h,i)perylene	.418	.661	57.9
Nitrobenzene-d5	.397	.371	6.4
2-Fluorobiphenyl	1.325	1.399	5.6
Terphenyl-d14	1.170	1.032	11.8
Phenol-d5	1.423	1.294	9.0
2-Fluorophenol	1.235	1.151	6.8
2,4,6-Tribromophenol	.281	.301	7.2

(1) Cannot be separated from Diphenylamine



Data File: >GA731::D0 Quant Output File: ^GA731::D0
Name: STD50 DFA731
Misc: STD50 1UL B258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BTL# 1

Id File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,IEPA,MSD#4
Last Calibration: 910730 12:17

Operator ID: USER6
Quant Time: 910731 10:[illegible]
Injected at: 910731 09:32

QUANT REPORT

Operator ID: USER6 Quant Rev: 6 Quant Time: 910731 10:20
Output File: ^GA731::DD Injected at: 910731 09:32
Data File: >GA731::DD Dilution Factor: 1.00000
Name: STD50 DFA731
Misc: STD50 1UL B258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BTL# 1

ID File: ID_MS4::D3
Title: ID FILE FOR HAZARDOUS SUBSTANCES,TEPA,MSD#4
Last Calibration: 910730 12:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.96	152.1	75322	40.00	ng	96
2)	PHENOL	9.35	94.1	149611	52.36	ng	92
3)	BIS(2-CHLOROETHYL)ETHER	9.39	93.1	134069	50.42	ng	96
4)	2-CHLOROPHENOL	9.48	128.0	129057	50.94	ng	85
5)	1,3-DICHLOROBENZENE	9.84	146.0	145551	49.77	ng	96
6)	1,4-DICHLOROBENZENE	10.00	146.0	146818	49.83	ng	97
7)	1,2-DICHLOROBENZENE	10.55	146.0	139668	49.58	ng	91
8)	BENZYL ALCOHOL	10.57	108.1	64198	61.81	ng	88
9)	2-METHYLPHENOL	11.08	108.1	113888	46.72	ng	89
10)	BIS(2-CHLOROISOPROPYL)ETHER	11.06	45.1	134817	49.37	ng	88
11)	HEXACHLOROETHANE	11.49	117.0	62915	53.63	ng	86
12)	N-NITROSO-DI-N-PROPYLAMINE	11.51	70.1	83499	54.47	ng	80
13)	4-METHYLPHENOL	11.57	108.1	118367	52.27	ng	99
14)	2-FLUOROPHENOL	6.53	112.1	108343	51.70	ng	84
15)	PHENOL-D5	9.31	99.1	121861	52.31	ng	93
16)	*D8-NAPHTHALENE	13.90	136.2	270261	40.00	ng	94
17)	NITROBENZENE	11.81	77.1	137841	51.95	ng	87
18)	ISOPHORONE	12.58	82.1	260110	49.66	ng	92
19)	2-NITROPHENOL	12.81	139.1	76015	55.14	ng	82
20)	2,4-DIMETHYLPHENOL	13.17	122.1	97438	49.73	ng	97
21)	BIS(2-CHLOROETHOXY)METHANE	13.40	93.1	164201	50.58	ng	96
22)	2,4-DICHLOROPHENOL	13.62	162.0	111207	50.55	ng	91
23)	BENZOIC ACID	13.82	122.1	49519	52.71	ng	89
24)	1,2,4-TRICHLOROBENZENE	13.80	180.0	124648	48.77	ng	97
25)	NAPHTHALENE	13.97	128.1	345524	49.26	ng	94
26)	4-CHLOROANILINE	14.29	127.1	137765	56.10	ng	99
27)	HEXACHLOROBUTADIENE	14.62	225.0	76192	47.45	ng	98
28)	4-CHLORO-3-METHYLPHENOL	16.02	107.1	118531	52.34	ng	96
29)	2-METHYLNAPHTHALENE	16.16	142.2	217702	48.92	ng	97
30)	NITROBENZENE-D5	11.75	82.1	62741	26.43	ng	84
31)	*D10-ACENAPHTHENE	19.49	164.2	136920	40.00	ng	97
32)	HEXACHLOROCYCLOPENTADIENE	16.93	237.0	60916	228.59	ng	94
33)	2,4,6-TRICHLOROPHENOL	17.21	196.1	77418	51.35	ng	98
34)	2,4,5-TRICHLOROPHENOL	17.36	196.1	91657	52.54	ng	98
35)	2-CHLORONAPHTHALENE	17.68	162.1	225410	51.18	ng	97
36)	2-NITROANILINE	18.17	65.1	78338	57.85	ng	77
37)	ACENAPHTHYLENE	19.00	152.1	343890	50.90	ng	98
38)	DIMETHYLPHTHALATE	18.96	163.1	275677	49.65	ng	98
)	2,6-DINITROTOLUENE	19.12	165.1	69380	54.51	ng	86
40)	3-NITROANILINE	19.51	138.1	60460	60.64	ng	69
41)	ACENAPHTHENE	19.61	153.2	208486	50.58	ng	97
42)	2,4-DINITROPHENOL	19.84	184.2	38007	160.32	ng	79
43)	DIBENZOFURAN	20.12	168.1	340488	55.32	ng	92

	Compound	R.I.	Q ion	Area	Conc	Units	q
44)	4-NITROPHENOL	20.30	109.1	35319	63.97	ng	76
45)	2,4-DINITROTOLUENE	20.34	89.1	59534	60.58	ng	89
46)	FLUORENE	21.20	166.1	254292	54.55	ng	95
47)	DIETHYLPHTHALATE	21.24	149.1	306585	51.61	ng	98
48)	4-CHLOROPHENYL-PHENYLETHER	21.28	204.2	137422	54.93	ng	85
49)	4-NITROANILINE	21.48	138.1	64505	68.72	ng	80
50)	2-FLUOROBIPHENYL	17.46	172.1	119750	25.70	ng	96
51)	2,4,6-TRIBROMOPHENOL	22.03	330.0	51580	57.36	ng	91
52)	*D10-PHENANTHRENE	24.12	188.2	260391	40.00	ng	87
53)	4,6-DINITRO-2-METHYLPHENOL	21.64	198.2	59638	102.21	ng	84
54)	N-NITROSODIPHENYLAMINE	21.73	169.1	192452	51.83	ng	95
55)	4-BROMOPHENYL-PHENYLETHER	22.80	248.0	82370	49.57	ng	97
56)	HEXACHLOROBENZENE	23.21	284.0	105271	48.12	ng	95
57)	PENTACHLOROPHENOL	23.83	266.0	60220	52.78	ng	96
58)	PHENANTHRENE	24.20	178.1	369020	49.31	ng	97
59)	ANTHRACENE	24.34	178.1	370535	50.00	ng	98
60)	DI-N-BUTYLPHTHALATE	26.39	149.1	565432	47.44	ng	99
61)	FLUORANTHENE	27.98	202.2	414202	49.12	ng	94
62)	*D12-CHRYSENE	32.55	240.2	241824	40.00	ng	96
63)	PYRENE	28.67	202.2	399898	46.59	ng	94
64)	BUTYLBENZYLPHTHALATE	31.07	149.1	243763	46.18	ng	94
65)	BENZO(A)ANTHRACENE	32.49	228.2	365700	50.00	ng	98
66)	CHRYSENE	32.63	228.2	354575	50.57	ng	99
67)	3,3'-DICHLOROBENZIDINE	32.53	252.1	130395	58.05	ng	99
68)	BIS(2-ETHYLHEXYL)PHTHALATE	33.02	149.1	358722	45.28	ng	99
69)	TERPHENYL-D14	29.30	244.3	155999	23.28	ng	98
70)	*D12-PERYLENE	37.25	264.2	215409	40.00	ng	95
71)	BENZO(B)FLUORANTHENE	35.89	252.2	346217	38.88	ng	98
72)	BENZO(K)FLUORANTHENE	35.99	252.2	343619	45.20	ng	99
73)	DI-N-OCTYLPHTHALATE	34.89	149.1	647138	29.79	ng	98
74)	BENZO(A)PYRENE	37.05	252.2	297044	49.46	ng	96
75)	INDENO(1,2,3-CD)PYRENE	42.23	276.2	204354	66.59	ng	93
76)	DIBENZO(A,H)ANTHRACENE	42.39	278.2	214924	77.98	ng	96
77)	BENZO(G,H,I)PERYLENE	43.69	276.2	177851	86.67	ng	93

* Compound is ISTD

QUANT REPORT

Operator ID: USER6 Quant Rev: 6 Quant Time: 910731 10:26
Output File: !GA731::DD Injected at: 910731 09:32
Data File: >GA731::DD Dilution Factor: 1.00000
Name: STD50 DFA731
Misc: STD50 1UL B258 BNA STD SOLN 50NG/UL DIL=1,GCL#4 BIL# 1

ID File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910702 11:59

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.96	152.1	75322	40.00	ng	96
2)	PYRIDINE	3.39	79.1	159528	87.94	ng	85
3)	1,4-DICHLOROBENZENE	10.00	146.0	146818	49.64	ng	97
4)	ORTHO-CRESOL	11.08	108.1	113832	51.35	ng	89
5)	HEXACHLOROETHANE	11.49	117.0	62915	47.27	ng	86
6)	META & PARA-CRESOL	11.57	108.1	118367	50.19	ng	99
7)	2-FLUOROPHENOL	6.53	112.1	108343	47.79	ng	84
8)	PHENOL-D5	9.31	99.1	121861	45.65	ng	93
9)	*D8-NAPHTHALENE	13.90	136.2	270261	40.00	ng	94
10)	NITROBENZENE	11.81	77.1	137841	45.40	ng	87
11)	HEXACHLOROBUTADIENE	14.62	225.0	76192	46.38	ng	98
12)	NITROBENZENE-D5	11.75	82.1	62741	23.16	ng	84
13)	*D10-ACENAPHTHENE	19.49	164.2	136920	40.00	ng	97
14)	2,4,6-TRICHLOROPHENOL	17.21	196.1	77418	50.00	ng	98
15)	2,4,5-TRICHLOROPHENOL	17.36	196.1	91657	53.67	ng	98
16)	2,4-DINITROTOLUENE	20.34	89.1	59534	42.83	ng	89
17)	2-FLUOROBIPHENYL	17.46	172.1	119750	26.13	ng	96
18)	2,4,6-TRIBROMOPHENOL	22.03	330.0	51580	44.02	ng	91
19)	*D10-PHENANTHRENE	24.12	188.2	260391	40.00	ng	87
20)	HEXACHLOROBENZENE	23.21	284.0	105271	47.12	ng	95
21)	PENTACHLOROPHENOL	23.83	266.0	60220	43.15	ng	96
22)	*D12-CHRYSENE	32.55	240.2	241824	40.00	ng	96
23)	TERPHENYL-D14	29.30	244.3	155999	22.51	ng	98
24)	*D12-PERYLENE	37.25	264.2	215409	40.00	ng	95

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

Truck Lot DiscolTCLPRE

Lab Name: Roy F. Weston, Inc. Work Order: 0000-00-00-0000

Client: Cerro Copper Products

Matrix: WATER Lab Sample ID: 9106G820-002

Sample wt/vol: 50.0 (g/mL) ML Lab File ID: DBBH24

Level: (low/med) LOW Date Received: 06/14/91

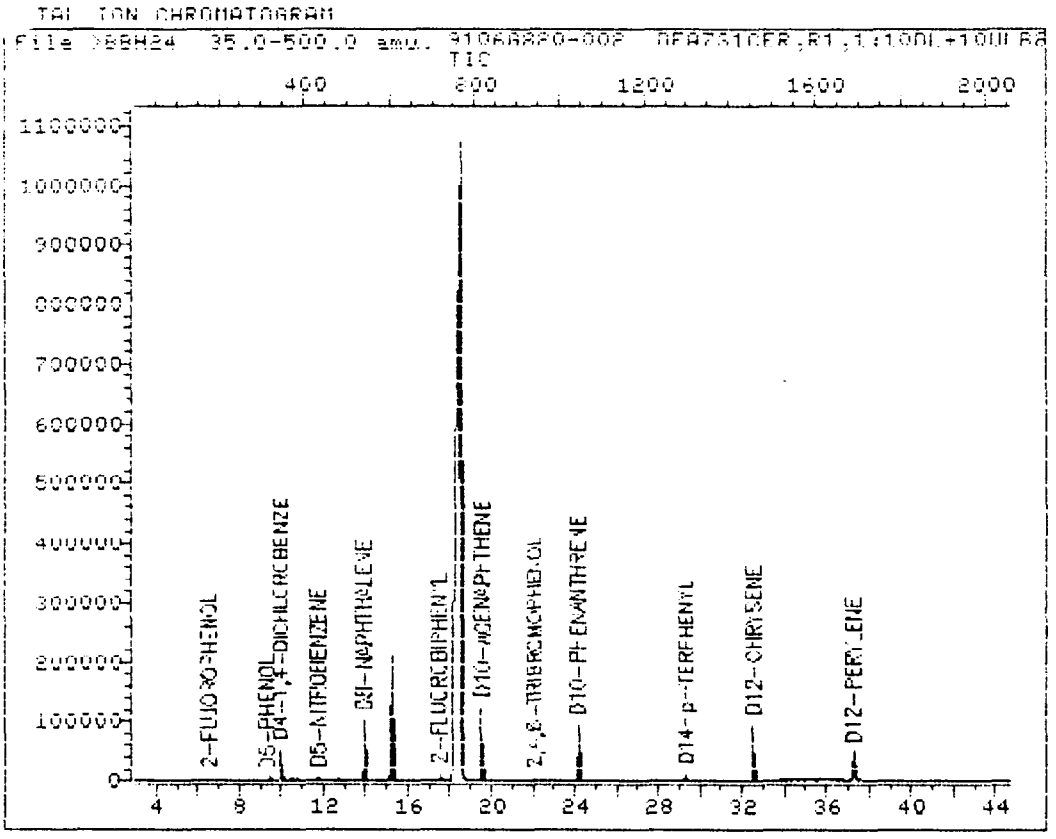
% Moisture: not dec. _____ dec. Date Extracted: 07/29/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/31/91

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 10.0

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

CAS NO.	COMPOUND		
106-46-7	1,4-Dichlorobenzene	1000	U
95-48-7	ortho-cresol	600	U
106-39-4	meta & para-cresol	600	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	600	U
87-68-3	Hexachlorobutadiene	1600	U
88-06-2	2,4,6-Trichlorophenol	600	U
95-95-4	2,4,5-Trichlorophenol	800	U
121-14-2	2,4-Dinitrotoluene	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1200	U
110-86-1	Pyridine	10000	U



Data File: >BBH24::D5 Quant Output File: ^BBH24::DD
Name: 9106G820-002\ DFA751
Misc: CER,R1,1:10DL+10ULB283,F=1000,E=50,DIL=10,GCL#4 BTL#80

Id File: ID_TC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

Operator ID: USER6
Quant Time: 910731 14:38
Injected at: 910731 13:51

QUANT REPORT

Operator ID: USER6 Quant Rev: 6 Quant Time: 910731 14:38
Output File: ^BBH24::DD Injected at: 910731 13:51
Data File: >BBH24::D5 Dilution Factor: 1.00000
Name: 91066820-002 DFA731
Misc: DER,R1,1:100L+100LB283,F=1000,E=50,DIL=10,GCL#4 SIL#80

ID File: ID_IC4::D2
Title: ID FILE FOR TCLP SUBSTANCES,MSD#4
Last Calibration: 910731 10:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*D4-1,4-DICHLOROBENZENE	9.95	152.1	37121	40.00	ng	95
7)	2-FLUOROPHENOL	6.54	112.1	4620	4.33	ng	79
8)	PHENOL-D5	9.30	99.1	3119	2.60	ng	94
9)	*D8-NAPHTHALENE	13.88	136.2	150241	40.00	ng	94
12)	NITROBENZENE-D5	11.71	82.1	5070	4.19	ng	84
13)	*D10-ACENAPHTHENE	19.52	164.2	69918	40.00	ng	96
17)	2-FLUOROBIPHENYL	17.43	172.1	9624	3.93	ng	99
18)	2,4,6-TRIBROMOPHENOL	22.04	330.0	1922	3.65	ng	95
19)	*D10-PHENANTHRENE	24.11	188.2	110100	40.00	ng	88
22)	*D12-CHRYSENE	32.51	240.2	106661	40.00	ng	98
23)	TERPHENYL-D14	29.28	244.3	12525	4.55	ng	98
24)	*D12-PERYLENE	37.20	264.2	90006	40.00	ng	95

* Compound is ISTD

Roy F. Weston, Inc. - Gulf Coast Laboratories
PCB ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot Discolor.	001	SO	91GP0465	06/13/91	06/26/91	07/07/91
LAB QC:						
PBLK	MB1	S	91GP0465	N/A	06/26/91	07/06/91
PBLK	MB1 BS	S	91GP0465	N/A	06/26/91	07/06/91
PBLK	MB1 BSD	S	91GP0465	N/A	06/26/91	07/06/91

SIGNATURE Linda S. Mackly DATE 7-8-91

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Monday July 8th, 1991

RE: **Truck Lot Discolor.**
Project # 0000-00-00-0000
Lab ID: **9106G820-001**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/KG

PCBs by GC

Compound	Result	Reporting Limit	Flag
Aroclor-1016	BDL	7400	U
Aroclor-1221	BDL	7400	U
Aroclor-1232	BDL	7400	U
Aroclor-1242	11000	7400	
Aroclor-1248	BDL	7400	U
Aroclor-1254	BDL	15000	U
Aroclor-1260	50000	15000	

Roy F. Weston, Inc. - Gulf Coast Laboratories
PCBs by GC

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/07/91 13:31 Page: 1

Sample Information	Cust ID:	Truck Lot Discolor	PBLK	PBLK BS	PBLK BSD
	RFW#:	001	91GP0465-MB1	91GP0465-MB1	91GP0465-MB1
	Matrix:	SOLID	SOIL	SOIL	SOIL
	D.F.:	25.0	0.500	0.500	0.500
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg

Surrogate: Di-n-butylchlorendate	D	%	80	%	70	%	68	%
Aroclor-1016	7400	U	40	U	40	U	40	U
Aroclor-1221	7400	U	40	U	40	U	40	U
Aroclor-1232	7400	U	40	U	40	U	40	U
Aroclor-1242	11000		40	U	40	U	40	U
Aroclor-1248	7400	U	40	U	40	U	40	U
Aroclor-1254	15000	U	80	U	117	%	121	%
Aroclor-1260	50000		80	U	80	U	80	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Roy F. Weston, Inc. - Gulf Coast Laboratories
PEST/PCB ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot DiscolTCLP	002	W	91GP0466	06/13/91	06/25/91	07/06/91
Truck Lot DiscolTCLP	002 MS	W	91GP0466	06/13/91	06/25/91	07/06/91
LAB QC:						
PBLK	MB1	W	91GP0466	N/A	06/25/91	07/05/91
PBLK	TC1	W	91GP0466	N/A	06/25/91	07/05/91
PBLK	TC2	W	91GP0466	N/A	06/25/91	07/05/91

SIGNATURE Linda S. Mackley DATE 7-29-91

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Monday July 29th, 1991

RE: **Truck Lot DiscolTCLP**
Project # 0000-00-00-0000
Lab ID: **9106G820-002**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/L

PESTICIDES BY GC, TCLP LEACHATE

Compound	Result	Reporting Limit	Flag
gamma-BHC (Lindane)	BDL	5.0	U
Heptachlor	BDL	7.2	U
Heptachlor epoxide	BDL	8.0	U
Chlordane	BDL	10	U
Endrin	BDL	15	U
Methoxychlor	BDL	70	U
Toxaphene	BDL	500	U

Roy F. Weston, Inc. - Gulf Coast Laboratories
PESTICIDES BY GC, TCLP LEACHATE

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/26/91 15:08 Page: 1

Sample Information	Cust ID:	Truck Lot Di scolTCLP	Truck Lot Di scolTCLP	PBLK	PBLK	PBLK
	RFW#:	002	002 MS	91GP0466-MB1	91GP0466-TC1	91GP0466-TC2
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D.F.:	100	100	10.0	10.0	10.0
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate: Di-n-butylchlorendate		184 %	124 %	100 %	98 %	98 %
gamma-BHC (Lindane)		5.0 U	125 %	0.050 U	0.50 U	0.50 U
Heptachlor		6.0 U	83 %	0.060 U	0.60 U	0.60 U
Heptachlor epoxide		8.0 U	126 %	0.080 U	0.80 U	0.80 U
Chlordane		10 U	140 %	0.10 U	1.0 U	1.0 U
Endrin		15 U	155 %	0.30 U	3.0 U	3.0 U
Methoxychlor		70 U	114 %	0.70 U	7.0 U	7.0 U
Toxaphene		500 U	111 %	5.0 U	50 U	50 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Roy F. Weston, Inc. - Gulf Coast Laboratories
HBGT ANALYTICAL DATA PACKAGE FOR
Cerro Copper Products

LABORATORY CHRONICLE
DATE RECEIVED: 06/14/91 RFW LOT # :9106G820

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
Truck Lot DiscolTCLP	002	W	91GP0460	06/13/91	06/21/91	07/03/91
Truck Lot DiscolTCLP	002 MS	W	91GP0460	06/13/91	06/21/91	07/03/91
Truck Lot DiscolTCLP	002 MS R1	W	91GP0523	06/13/91	07/17/91	07/24/91
LAB QC:						
PBLK	MB1	W	91GP0460	N/A	06/21/91	07/03/91
PBLK	TC1	W	91GP0460	N/A	06/21/91	07/03/91
PBLK	MB1	W	91GP0523	N/A	07/17/91	07/24/91

SIGNATURE Linda S. Mackley DATE 7-26-91

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Cerro Copper Products**

Route 3 and A & S Tracks
Sauget, IL 62201

Attn: **Mr. Joe Grana**

Date: Thursday July 25th, 1991

RE: **Truck Lot DiscolTCLP**
Project # 0000-00-00-0000
Lab ID: **9106G820-002**
Sample Date: 06/13/91
Date Received: 06/14/91
Units: UG/L

HERBICIDES BY GC, TCLP LEACHATE

Compound	Result	Reporting Limit	Flag
2,4,5-TP	BDL	20	U
2,4-D	4400	250	

Roy F. Weston, Inc. - Gulf Coast Laboratories
HERBICIDES BY GC, TCLP LEACHATE

RFW Batch Number: 9106G820 Client: Cerro Copper Products Work Order: 0000-00-00-0000 Report Date: 07/25/91 09:48 Page: 1

Sample Information	Cust ID:	Truck Lot Di scolTCLP	Truck Lot Di scolTCLP	Truck Lot Di scolTCLP	PBLK	PBLK	PBLK
	RFW#:	002	002 MS	002 MS	91GP0460-MB1	91GP0460-TC1	91GP0523-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1000	1000	1000	100	100	100
	Units:	ug/L	ug/L	ug/L REPREP	ug/L	ug/L	ug/L
Surrogate:	2,4-DB	D %	D %	41 %	84 %	90 %	51 %
		fl	fl	fl	fl	fl	fl
2,4,5-TP		20 U	D %	115 %	2.0 U	2.0 U	2.0 U
2,4-D		3500	749 * %	80 %	20 U	20 U	20 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC