VOLUME 3
RESULTS OF ENVIRONMENTAL INVESTIGATIONS
APPENDIX 1, PART 2 OF 2

Of The

COMM 100 ASSOCIATES FACILITY
100 COMMERCIAL STREET
PLAINVIEW, NASSAU COUNTY, NEW YORK
SITE NO. 1-30-075

For

ROBIN S. WEINSTEIN, ESQ.
KENSINGTON & RESSLER, P.C.
400 MADISON AVENUE
NEW YORK, NEW YORK 10017-1910

By

EIKON PLANNING AND DESIGN CORP.
P.O. BOX 469 - 221 HIGH STREET
HACKETTSTOWN, NEW JERSEY 07840

February 1, 1995

Laboratory Resources INC.
Teterboro Division
100 Hollister Road
Teterboro, New Jersey 07608
FAX: 201-288-5311
201-288-3700 800-729-0852

APR 09 1993

LABORATORY ANALYSIS REPORT

Client: Eikon Planning & Design
221 High Street, P.O. Box 469
Hackettstown, NJ 07840

Project Manager: Andreas Eisenberger

Project: Plainview
Plainview, NJ

Laboratory Report #: T303087

Lab ID No.:	Sample Reference	Matrix	Collection Date & Time
T303087-01	SS4-3	Soil	03/03/93 07:45
T303087-02	SS5-3	Soil	03/03/93 07:15
T303087-03	FB 3-3-93	Aqueous	03/03/93 15:45

Date Received: March 4, 1993

Date of Report: April 7, 1993

Stephanie Majeski
for Kenneth Vara
Systems Manager

N.J. Certification #02046
N.Y. Certification #10588

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAIN OF CUSTODY

BILLING INFORMATION

CUSTOMER: EIKON PLANNING & DESIGN CORP.
ADDRESS: P.O. BOX 467, 221 HIGH ST.
HACKETTSTOWN, NJ 07840
PROJECT: PLAINVIEW
PROJECT MANAGER: ANDREA EISENBERGER
PROJECT LOCATION: PLAINVIEW STATE: NY
PO NUMBER: 408

REPORT INFORMATION

SEND REPORT TO: ANDREA EISENBERGER
DATE REPORT REQUIRED: 3/14/93
RUSH RESULTS: FAX (908) 813-8360

PROJECT INFORMATION

DELIVERABLES/REGULATION (PLEASE INDICATE): Tier II
TURNAROUND (INDICATE CALENDAR DAYS. CONFIRM WITH LAB): NAME OF PERSON CONFIRMING: 21 Days
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
NAME: RICK WEAK / ANDREA EISENBERGER
TELEPHONE: (908) 813-8360

ANALYTICAL REQUESTS

LAB ID CODE	SAMPLE IDENTIFICATION	NO. BOTTLES	COLLECTED DATE	COLLECTED TIME	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX: SOLID	SAMPLE MATRIX: LIQUID	SAMPLE MATRIX: PHASIC	SAMPLE MATRIX: SLUDGE	SAMPLE MATRIX: OTHER	ANALYSES	H_2SO_4	NaOH	HCl	HNO_3	OTHER
01	SS4-3	2	3-3-93	7:45		X	X					VOA+15, Total Xylenes, Semi-VOA (625+25), P.P. Metals			J		
02	SS5-3	2	3-3-93	7:15		X	X					VOA+15, Total Xylenes, Semi-VOA (625+25), P.P. Metals			J		
03	FLD BLK, 3-3-93	3	3-3-93	15:45		X		X				VOA+15, Total Xylenes			J		

CUSTODY

RELINQUISHED: [signature]	DATE: 3/4/93	
RECEIVED: [signature] Fed Ex	TIME: 12:30	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	

COMMENTS, REQUESTS OR REMARKS:

NO SUBCONTRACTORS WITHOUT PRIOR EIKON APPROVAL

SAMPLE DISPOSAL: Return to Client ☐ Lab Disposal ☐ (additional Fee)
CONCENTRATIONS EXPECTED High ☐ Medium ☐ Low ☐
KNOWN HAZARD YES ☐ NO ☐
DESCRIBE:

METHODS SUMMARY

ORGANIC EXTRACTIONS

Routine aqueous samples are prepared using Method 3510 (separatory funnel extraction) or Method 3520 (continuous liquid-liquid extraction) cited in SW846. Soil samples are extracted using Method 3550 (sonication extraction) from SW846.

ALUMINA COLUMN CLEANUP

After the sample has been extracted for base/neutral semivolatiles using Method 3550, it then undergoes acid-base partition cleanup using SW846 Method 3650. The base neutral extract is then further separated using alumina column cleanup Method 3611 in SW846.

TCLP EXTRACTION SUMMARY

Sample requiring TCLP analyses are extracted according to Method 1311, cited in 40 CFR 261 et seq, June 29, 1990.

VOLATILES BY GC/MS

Samples requesting volatiles by GC/MS have been analyzed using Method 8240 as cited in USEPA SW846.

BASE/NEUTRALS AND ACID EXTRACTABLES BY GC/MS

Samples requesting semi-volatiles have been analyzed using Method 8270 as cited in USEPA SW846.

PESTICIDES/PCBs

Aqueous samples are analyzed for pesticides and PCBs via USEPA Method 608. Non-aqueous samples are analyzed using Method 8080 as cited in USEPA SW846.

HERBICIDES

The herbicide extraction and analysis is performed according to Method 509B, cited in the 16th edition of Standard Methods. Samples are extracted, derivitized, and then analyzed via a gas chromatograph utilizing an electron capture detector (ECD).

METHODS SUMMARY

TRACE METALS

Reference: EPA SW846 3rd Edition, 1986 Vol. 1 A

Non-aqueous samples are digested for ICAP and GFAA according to method 3050 and for CV according to method 7470. Extracts and aqueous samples (ECRA and RCRA projects) are digested for ICAP, GFAA, and CV according to methods 3010, 3020, and 7470 respectively.

ICAP analyses are conducted in accordance with Method 6010. GFAA analyses are conducted in accordance with methods 7041 for antimony, 7060 for arsenic, 7740 for selenium and 7841 for thallium. CV analyses are conducted in accordance with method 7470.

Titanium and tin are analyzed for GFAA according to methods 282.2 and 283.3 respectively (EPA 600/4-79-020, 1983 revision).

TRACE METALS

Reference: EPA 600/4-79-020, 1983 revision.

Potable water, aqueous wastes, and surface water are digested according to EPA methods 4.1.4 for GFAA and FLAA, 200.7 for ICAP, and 245.1 for CV. GFAA analyses are conducted in accordance with methods 204.4 for antimony, 206.2 for arsenic, 239.2 for lead, 270.2 for selenium, 279.2 for thallium, 282.2 for tin, and 283.2 for titanium. ICAP analyses are conducted in accordance with method 200.7, CV analyses with method 245.1, and FLAA analyses with method 273.1 for sodium only.

GFAA = Graphite furnace atomic absorption.
ICAP = Inductively Coupled Argon Plasma.
FLAA = Flame atomic absorption.
CV = Cold vapor atomic absorption for Hg.

TCLP METALS

Samples are extracted and analyzed in accordance with method 1311 published in the Federal Register, 40 CFR 261, June 29, 1990.

LABORATORY RESOURCES, INC. - TETERBORO 1993
GENERAL CHEMISTRY METHODOLOGY
SOIL MATRIX

PARAMETER	METHOD (1)
Acidity	305.1
Alkalinity	310.1
BOD, 5 day	507(4)
BOD, 20 day	507(4)
Chloride	9252
Chlorine, Residual	330.5
COD	HACH
Conductivity	9050
Cyanide, Total	9010
Cyanide, Amenable	9010
Ignitability	1010
MBAS, Surfactants	512B(4)
Nitrogen, NH3	350.1(2)
Nitrogen, NO3	9200
Nitrogen, NO2	354.1
Nitrogen, TKN	351.2(2)
Odor	140.1
Petroleum Hydro, Soil	418.1(5)
pH	9045
Phenolics, Total	9065
Phosphorous, Total	365.2(2)
Solids, Fixed	209D(4)
Solids, Total	CLP
Solids, Volatile	209D(4)
Sulfate	9038
Sulfide	9030
Sulfite	377.1(2)
TOC	415.1
Turbidity	180.1

(1) = Solid and hazardous waste methods approved by NJDEP ECRA and RCRA and listed in EPS SW 846 3rd Edition, 1986.
(2) = Water and wastewater methods approved in the Federal Register in section 40 CFR 136 and listed in EPA 600/4-79-020.
(4) = Methods cited in Standard Methods 16th Edition, 1986.
(5) = NJDEP modification of EPA Method 418.1.
CLP = Contract Laboratory Program procedure for total solids determination, SOW 7/88, Part F, page D-83.
HACH = Method 8000, Hach Handbook of Water Analysis, 1979. Approved in the Federal Register, April 21, 1980, page 26811.

ORGANIC NON-CONFORMANCE SUMMARY

GC/MS VOLATILES

1. Three tentatively identified compounds were present in the method blank, C8366.

GC/MS SEMI-VOLATILES

1. One tentatively identified compound was present in the method blank, D4754.

INORGANIC NON-CONFORMANCE SUMMARY

METALS

1. The relative percent difference was outside of the required quality control limits for the QC sample (T302358-04) due to matrix interference for arsenic analysis.

2. The matrix spike/matrix spike duplicate was outside of the required quality control limits for the QC sample (T302358-04) due to matrix interference for the silver analysis.

LABORATORY RESOURCES, INC.

LABORATORY CHRONICLES

Sample Number T303087	Analyst Initial	SS4-3 01	SS5-3 02	FB 03						
Received & Refrigerated Date:	JT	3/4/93	→	→						
Organics Extraction Date:										
Base/Neutrals/Acids	MD	3/17/93	→	→						
Acids Extractables										
Pesticides/PCBs										
Herbicides										
Analysis Date :										
Volatiles/GCMS	EM/AP	3/10/93	→	3/8/93						
Base/Neutrals/Acids	GT	3/19/93	→	→						
Pesticides/PCBs										
Herbicides										
Volatiles/GC										
Total Solids	OD	3/9/93	→							
Organic Supervisor Review & Approval	WJ	4/7/93	→	→						

LABORATORY RESOURCES, INC.	LABORATORY CHRONICLES								
Sample Number T303087	Analyst Initial	SS4-3 01	SS5-3 02						
Received & Refrigerated Date:	JT	3/4/93	→						
Inorganic Extraction Date:									
Metals - ICAP									
Metals - GFAA									
Metals - Hg									
Analysis Date:									
Metals - ICAP	MG	3/25/93	→						
Antimony (Sb) - GFAA									
Arsenic (As) - GFAA	MP	3/24/93	→						
Lead (Pb) - GFAA									
Selenium (Se) - GFAA	MP	3/26/93	3/24/93						
Thallium (Tl) - GFAA	MP	3/24/93	→						
Tin (Sn) - GFAA									
Titanium (Ti) - GFAA									
Mercury (Hg) - CVAA	BD	3/24/93	→						
Inorganic Supervisor Review & Approval	DG	4/7/93	→						

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TABLE 2-16. REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES

Name	Container[1]	Preservation	Maximum holding time
Bacterial Tests:			
Coliform, fecal and total	P, G	Cool, 4°C, 0.008% $Na_2S_2O_3$	6 hours
Fecal streptococci	P, G	Cool, 4°C, 0.008% $Na_2S_2O_3$	6 hours
Inorganic Tests:			
Acidity	P, G	Cool, 4°C	14 days
Alkalinity	P, G	Cool, 4°C	14 days
Ammonia	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Biochemical oxygen demand	P, G	Cool, 4°C	48 hours
Bromide	P, G	None required	28 days
Biochemical oxygen demand, carbonaceous	P, G	Cool, 4°C	48 hours
Chemical oxygen demand	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Chloride	P, G	None required	28 days
Chlorine, total residual	P, G	None required	Analyze immediately
Color	P, G	Cool, 4°C	48 hours
Cyanide, total and amenable to chlorination	P, G	Cool, 4°C, NaOH to pH>12, 0.6g ascorbic acid	14 days
Fluoride	P	None required	28 days
Hardness	P, G	HNO_3 to pH<2, H_2SO_4 to pH<2	6 months
Hydrogen ion (pH)	P, G	None required	Analyze immediately
Kjeldahl and organic nitrogen	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Metals:			
Chromium VI	P, G	Cool, 4°C	24 hours
Mercury	P, G	HNO_3 to pH<2	28 days
Metals, except chromium VI and mercury	P, G	HNO_3 to pH<2	6 months
Nitrate	P, G	Cool, 4°C	48 hours
Nitrate-nitrite	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Nitrite	P, G	Cool, 4°C	48 hours
Oil and grease	G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Organic carbon	P, G	Cool, 4°C, HCl or H_2SO_4 to pH<2	28 days
Orthophosphate	P, G	Filter immediately, cool, 4°C	48 hours
Oxygen, Dissolved Probe	G Bottle and top	None required	Analyze immediately
Winkler	do	Fix on site and store in dark	8 hours
Phenols	G only	Cool, 4°C, H_2SO_4 to pH<2	28 days
Phosphorus (elemental)	G	Cool, 4°C	48 hours
Phosphorus, total	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Residue, total	P, G	Cool, 4°C	7 days
Residue, Filterable	P, G	Cool, 4°C	7 days
Residue, Nonfilterable (TSS)	P, G	Cool, 4°C	7 days
Residue, Settleable	P, G	Cool, 4°C	48 hours
Residue, volatile	P, G	Cool, 4°C	7 days
Silica	P	Cool, 4°C	28 days
Specific conductance	P, G	Cool, 4°C	28 days

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TABLE 2-16. REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES (CONTINUED)

Name	Container[1]	Preservation	Maximum holding time
Sulfate	P, G	Cool, 4°C	28 days
Sulfide	P, G	Cool, 4°C, add zinc acetate plus sodium hydroxide to pH>9	7 days
Sulfite	P, G	None required	Analyze immediately
Surfactants	P, G	Cool, 4°C	48 hours
Temperature	P, G	None required	Analyze
Turbidity	P, G	Cool, 4°C	48 hours
Organic Tests:			
Purgeable Halocarbons	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$	14 days
Purgeable aromatic hydrocarbons	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$, HCl to pH2	14 days
Acrolein and acrylonitrile	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$, Adjust pH to 4-5	14 days
Phenols	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	7 days until extraction, 40 days after extraction
Benzidines	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	7 days until extraction
Phthalate esters	G, Teflon-lined cap	Cool, 4°C	7 days until extraction, 40 days after extraction
Nitrosamines	G, Teflon-lined cap	Cool, 4°C, store in dark, 0.008% $Na_2S_2O_3$	40 days after extraction
PCBs, acrylonitrile	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
Nitroaromatics and isophorone	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ store in dark	40 days after extraction
Polynuclear aromatic hydrocarbons	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ store in dark	40 days after extraction
Haloethers	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	40 days after extraction
Chlorinated hydrocarbons	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
TCDD	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	40 days after extraction
Total organic halogens	G, Teflon-lined cap	Cool, 4°C; H_2SO_4 to pH<2	7 days
Pesticides Tests:			
Pesticides	G, Teflon-lined cap	Cool, 4°C, pH 5-9	40 days after extraction
Radiological Tests:			
Alpha, beta and radium	P, G	HNO_3 to pH<2	6 months

[1] Polyethylene (P) or Glass (G)

CASE NARRATIVE

Laboratory Resources, Teterboro, received two soil samples plus a field blank for Reduced Deliverables Format on March 4, 1993. The samples were analyzed for the parameters outlined in the chain of custody.

The samples were analyzed within the required holding time. Any parameters which were outside of their respective quality control ranges are noted in the non-conformance summaries.

Please contact us if there are any questions regarding the enclosed results.

T302097

GC/MS CONFORMANCE/NONCONFORMANCE SUMMARY

	No	Yes
1. Chromatograms Labeled/Compounds Identified	—	✓
2. Tune Specifications		
a. BFB Meets Criteria		✓
b. DFTPP Meets Criteria	—	—
	—	✓
3. Tuning Frequency Performed every 24 hours for 600 series and 12 hours for 8000 series	—	✓
4. Calibration Frequency Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	—	✓
5. Calibration Requirements		
a. Calibration Check Compounds (CCCs)	—	✓
b. System Performance Check Compounds (SPCCs)	—	✓
6. Blank Contamination If yes, list compounds and concentrations in each blank:	✓	—
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
7. Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	—	✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
If not met, were the calculations checked and the results qualified as estimated?	—	—
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	—	✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
9. Internal Standard Areas and Retention Time Shifts Meet Criteria Internal standard areas between -50% and +100% of daily standard	—	✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:	—	✓
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:	—	✓

Laboratory Supervisor: Bill Jimenez / S.C

Date: 4/6/93 C12

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/03/93
DATE RECEIVED : 03/04/93
DATE ANALYZED : 03/10/93
DILUTION FACT.: 1.0

CLIENT : EIKON SS 4-3
LAB SAMPLE : T303087-01A
ANALYST : ED
FILE NAME : >88963

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	11	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	11	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	11	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	11	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	54	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	26	11	4-METHYL-2-PENTANONE	ND	11
ACRYLONITRILE	ND	54	TOLUENE	ND	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	74	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	11
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	11	O-XYLENE	ND	5
2-BUTANONE	ND	11	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	100 %	70 - 121	OK
TOLUENE-D8	103 %	81 - 117	OK
4-BROMOFLUOROBENZENE	88 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 92.0 is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 4-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303087-01A

Sample wt/vol: 5.0 (g/ml) g Lab File ID: >B8963

Level: (low/med) LOW Date Received: 03/04/93

% Solid: 92.0 Date Analyzed: 03/10/93

Column: CAP Dilution Factor: 1

Number of TICs found: 1 CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
11 124389	Carbon Dioxide (B)	1.70	28	

FORM I VOA-TIC 1/87 Rev

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/03/93
DATE RECEIVED : 03/04/93
DATE ANALYZED : 03/10/93
DILUTION FACT.: 1.0

CLIENT : EIKON SS 5-3
LAB SAMPLE : T303087-02A
ANALYST : ED
FILE NAME : >B8964

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	11	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	11	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	11	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	11	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	53	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	33	11	4-METHYL-2-PENTANONE	ND	11
ACRYLONITRILE	ND	53	TOLUENE	3 J	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	ND	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	11
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	11	O-XYLENE	ND	5
2-BUTANONE	ND	11	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	100 %	70 - 121	OK
TOLUENE-D8	97 %	81 - 117	OK
4-BROMOFLUOROBENZENE	96 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 94.3 is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 5-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303087-02A

Sample wt/vol: 5.0 (g/ml) g Lab File ID: >B8964

Level: (low/med) LOW Date Received: 03/04/93

% Solid: 94.3 Date Analyzed: 03/10/93

Column: CAP Dilution Factor: 1

Number of TICs found: 1

CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
11 124389	Carbon Dioxide (B)	1.67	19	

FORM I VOA-TIC 1/87 Rev

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/03/93
DATE RECEIVED : 03/04/93
DATE ANALYZED : 03/08/93
DILUTION FACT.: 1.0

CLIENT : EIKON FB
LAB SAMPLE : T303087-03A
ANALYST : ANDY
FILE NAME : >C8375

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
CHLOROMETHANE	ND	10	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	10	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	10	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	10	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	50	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	ND	10	4-METHYL-2-PENTANONE	ND	10
ACRYLONITRILE	ND	50	TOLUENE	ND	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	ND	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	10
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	10	O-XYLENE	ND	5
2-BUTANONE	ND	10	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	99 %	76 - 114	OK
TOLUENE-D8	97 %	88 - 110	OK
4-BROMOFLUOROBENZENE	102 %	86 - 115	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

FB

Lab Name: Laboratory Resources, Inc.   Contract:-------

Lab Code: GC/MS   Case No.: -----   SAS No.: -----   SDG No.: -----

Matrix: WATER   Lab Sample ID: T303087-03A

Sample wt/vol: 5.0 (g/ml) ml   Lab File ID: >C8375

Level: (low/med) LOW   Date Received: 03/04/93

% Solid: 0   Date Analyzed: 03/08/93

Column: CAP   Dilution Factor: 1

CONCENTRATION UNITS: ug/L

Number of TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC   1/87 Rev

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE RECEIVED :
DATE ANALYZED : 03/10/93
DILUTION FACT.: 1.0

CLIENT :
LAB SAMPLE : METHOD BLANK
ANALYST : ED
FILE NAME : >B8958

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	10	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	10	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	10	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	10	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	50	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	ND	10	4-METHYL-2-PENTANONE	ND	10
ACRYLONITRILE	ND	50	TOLUENE	ND	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	ND	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	10
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	10	O-XYLENE	ND	5
2-BUTANONE	ND	10	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	99 %	70 - 121	OK
TOLUENE-D8	100 %	81 - 117	OK
4-BROMOFLUOROBENZENE	98 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 100. is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.
METHOD BLANK

Lab Name: Laboratory Resources, Inc. Contract: -------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: METHOD BLANK

Sample wt/vol: 5.0 (g/ml) g Lab File ID: >B8958

Level: (low/med) LOW Date Received:

% Solid: 100 Date Analyzed: 03/10/93

Column: CAP Dilution Factor: 1

Number of TICs found: 1 CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
11 124389	Carbon Dioxide	1.66	44	

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE RECEIVED :
DATE ANALYZED : 03/08/93
DILUTION FACT.: 1.0

CLIENT :
LAB SAMPLE : METHOD BLANK
ANALYST : ED
FILE NAME : >C8366

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
CHLOROMETHANE	ND	10	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	10	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	10	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	10	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	50	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	2 J	5
ACETONE	ND	10	4-METHYL-2-PENTANONE	ND	10
ACRYLONITRILE	ND	50	TOLUENE	ND	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	ND	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	10
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	10	O-XYLENE	ND	5
2-BUTANONE	ND	10	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	4 J	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	2 J	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	98 %	76 - 114	OK
TOLUENE-D8	99 %	88 - 110	OK
4-BROMOFLUOROBENZENE	99 %	86 - 115	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

METHOD BLANK

Lab Name: Laboratory Resources, Inc. Contract: -------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: WATER Lab Sample ID: METHOD BLAN

Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >C8366

Level: (low/med) LOW Date Received:

% Solid: 0 Date Analyzed: 03/08/93

Column: CAP Dilution Factor: 1

CONCENTRATION UNITS:
ug/L

Number of TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TC505 BFB Injection date: 2/15/93

Instrument ID: 0881 BFB Injection time: 9:30

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	21.7
75	30-60% of mass 95	53.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	87.3
175	5.0 - 9.0% of mass 174	7.6(8.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.1(95.3)1
177	5.0 - 9.0% of mass 176	5.7(6.9)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	VSTD 50 PPB	>C8059	2/15/93	11:29
2	----------	VSTD 20 PPB	>C8058	2/15/93	10:53
3	----------	VSTD 100 PPB	>C8060	2/15/93	12:05
4	----------	VSTD 150 PPB	>C8061	2/15/93	12:40
5	----------	VSTD 200 PPB	>C8062	2/15/93	13:16
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22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TB702 BFB Injection date: 2/24/93

Instrument ID: 0891 BFB Injection time: 8:56

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.5
75	30-60% of mass 95	46.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	.5(.6)1
174	Greater than 50.0% of mass 95	78.5
175	5.0 - 9.0% of mass 174	5.7(7.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.3(99.7)1
177	5.0 - 9.0% of mass 176	4.7(6.0)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB VOA S	>B8820	2/24/93	9:37
2	----------	20 PPB VOA	>B8822	2/24/93	11:09
3	----------	200 PPB STD	>B8827	2/24/93	14:58
4	----------	150 PPB STD	>B8828	2/24/93	15:38
5	----------	100 PPB STD	>B8829	2/24/93	16:19
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20					
21					
22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TB712 BFB Injection date: 3/10/93

Instrument ID: 0881 BFB Injection time: 8:37

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.8
75	30-60% of mass 95	50.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	94.4
175	5.0 - 9.0% of mass 174	7.3(7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	93.3(98.9)1
177	5.0 - 9.0% of mass 176	6.0(6.5)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB VOA S	>B8957	3/10/93	9:17
2	----------	METHOD BLANK	>B8958	3/10/93	10:04
3	----------	T302359-03B	>B8959	3/10/93	10:57
4	----------	T303095-02A	>B8960	3/10/93	11:43
5	----------	T303095-03A	>B8961	3/10/93	12:28
6	----------	T303095-04A	>B8962	3/10/93	13:14
7	----------	T303087-01A	>B8963	3/10/93	13:59
8	----------	T303087-02A	>B8964	3/10/93	14:45
9	----------	095-04 MS	>B8965	3/10/93	15:30
10	----------	095-04 MSD	>B8966	3/10/93	16:16
11	----------	T303106-03B	>B8969	3/10/93	18:33
12	----------	T303134-02A	>B8971	3/10/93	20:05
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21					
22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TC521 BFB Injection date: 3/08/93

Instrument ID: 0881 BFB Injection time: 13:16

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	23.8
95	30-60% of mass 95	59.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	7.6(8.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.2(99.7)1
177	5.0 - 9.0% of mass 176	5.6(6.4)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB STD	>C8365	3/08/93	14:42
2	----------	METHOD BLANK	>C8366	3/08/93	15:34
3	----------	T303018-04B	>C8368	3/08/93	16:55
4	----------	T302358-07	>C8370	3/08/93	18:07
5	----------	T303056-02A	>C8371	3/08/93	18:42
6	----------	T303062-01A	>C8372	3/08/93	19:18
7	----------	T303071-05A	>C8373	3/08/93	19:54
8	----------	T303085-02A	>C8374	3/08/93	20:29
9	----------	T303087-03A	>C8375	3/08/93	21:05
10	----------	T303092-01E	>C8376	3/08/93	21:41
11	----------	T303068-08	>C8377	3/08/93	22:16
12					
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17					
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19					
20					
21					
22					

Page 1 of 1

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >B8958 Lab Sample ID: METHOD BLAN

Date Analyzed: 03/10/93 Time Analyzed: 10:04

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>B8959	T302359-03B	10:57
>B8960	T303095-02A	11:43
>B8961	T303095-03A	12:28
>B8962	T303095-04A	13:14
>B8963	T303087-01A	13:59
>B8964	T303087-02A	14:45
>B8965	095-04 MS	15:30
>B8966	095-04 MSD	16:16
>B8969	T303106-03B	18:33
>B8971	T303134-02A	20:05

Comments: _____

_____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >C8366 Lab Sample ID: METHOD BLAN

Date Analyzed: 03/08/93 Time Analyzed: 15:34

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>C8368	T303018-04B	16:55
>C8370	T302358-07	18:07
>C8371	T303056-02A	18:42
>C8372	T303062-01A	19:18
>C8373	T303071-05A	19:54
>C8374	T303085-02A	20:29
>C8375	T303087-03A	21:05
>C8376	T303092-01E	21:41
>C8377	T303068-08	22:16

Comments: _____

_____

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 2824A11 191

Contractor: LAB. RESOURCES Calibration Date: 02/15/93

Contract No: Aqueous

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C8058	>C8059	>C8060	>C8061	>C8062					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	.56178	.46703	.45940	.39940	.37636	.204	.45279	15.932		**
VINYL CHLORIDE	.79809	.64372	.62858	.55596	.54459	.219	.63419	15.990	*	
BROMOMETHANE	1.40693	1.10840	1.06618	.98316	.93945	.266	1.10083	16.679		
CHLOROETHANE	.51169	.41347	.40861	.37535	.36167	.289	.41416	14.185		
ACROLEIN	.07306	.06078	.06294	.04350	.04829	.407	.05771	20.559		(Conc=40.0,100.0,200.0,
TRICHLOROFLUOROMETHANE	4.38764	2.80740	2.84101	2.54561	2.37968	.321	2.99227	26.834		
1,1-DICHLOROETHENE	1.39548	.99695	1.10517	1.00976	.94897	.413	1.09127	16.426	*	
CARBON DISULFIDE	3.01127	2.17090	2.54821	2.31613	2.28904	.434	2.46711	13.518		
ACETONE	.18377	.15812	.16921	.14531	.14377	.449	.16004	10.515		
ACRYLONITRILE	.08486	.11617	.13302	.13071	.10743	.625	.11444	17.129		
METHYLENE CHLORIDE	1.57139	1.03303	1.16145	1.04823	1.01916	.540	1.16665	19.986		
METHYL-TERT-BUTYL-ETHER	3.30069	2.84803	2.94364	2.54706	2.42094	.639	2.81207	12.326		
TERT-BUTYL-ALCOHOL	.07963	.07159	.08134	.07021	.07956	.662	.07647	6.738		(Conc=40.0,100.0,200.0,
TRANS-1,2-DICHLOROETHENE	1.66882	1.17481	1.34004	1.22493	1.18584	.615	1.31889	15.640		
DI-ISOPROPYL-ETHER	2.66558	4.00582	4.28174	3.70733	3.61455	.827	3.65500	16.750		
1,1-DICHLOROETHANE	1.65786	2.00277	2.30184	2.11154	2.05835	.751	2.02647	11.586		**
CIS-1,2-DICHLOROETHENE	1.72432	1.23690	1.42345	1.31420	1.28187	.938	1.39615	14.035		
CHLOROFORM	4.27412	3.06166	3.43773	3.17597	3.03512	1.051	3.39692	15.178	*	
1,2-DICHLOROETHANE	2.66003	1.98865	2.22274	2.09725	2.01422	1.188	2.19658	12.506		
1,2-DICHLOROETHANE-D4	2.24001	1.71735	2.01788	1.85130	1.76341	1.166	1.91799	11.130		
VINYL ACETATE	.97909	.83205	.79539	.63723	.63155	.626	.77506	18.795		
2-BUTANONE	.05504	.04879	.02635	.04937	.04974	.736	.04586	24.401		
1,1,1-TRICHLOROETHANE	.98958	.72823	.78134	.71297	.68768	.813	.77996	15.653		
CARBON TETRACHLORIDE	.98364	.73309	.79878	.73666	.71195	.847	.79283	14.061		
BENZENE	.89357	.66353	.73522	.68556	.67626	.891	.73083	12.992		
TRICHLOROETHENE	.59675	.43696	.47150	.43698	.42827	1.038	.47409	14.880		
1,2-DICHLOROPROPANE	.34061	.26190	.28840	.27250	.27063	1.078	.28681	11.004	*	
BROMODICHLOROMETHANE	.96878	.72855	.80237	.75754	.74655	1.150	.80076	12.213		
2-CHLOROETHYLVINYLETHER	.12513	.10960	.11952	.07300	.11730	1.233	.10891	19.128		
TRANS-1,3-DICHLOROPROPENE	.62449	.48401	.53030	.51820	.51032	1.366	.53347	10.056		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: 2824A11 191

Contractor: LAB. RESOURCES Calibration Date: 02/15/93

Contract No: Aqueous

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C8058	>C8059	>C8060	>C8061	>C8062					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CIS-1,3-DICHLOROPROPENE	.58110	.43654	.48167	.46576	.45337	1.244	.48369	11.767		
1,1,2-TRICHLOROETHANE	.36219	.27494	.29009	.28375	.27640	1.397	.29747	12.331		
DIBROMOCHLOROMETHANE	.90836	.69644	.75384	.72077	.70637	1.468	.75716	11.526		
BROMOFORM	.68654	.53781	.57918	.57874	.55197	1.763	.58685	9.967		**
4-METHYL-2-PENTANONE	.24658	.20848	.21267	.19670	.19444	.816	.21177	9.879		
TOLUENE-D8	1.30408	1.02740	1.17643	1.05733	1.02111	.814	1.11727	10.899		
TOLUENE	.82991	.61495	.68143	.64642	.62351	.823	.67924	12.966	*	
TETRACHLOROETHENE	.75302	.55462	.61069	.57836	.54218	.891	.60777	14.033		
2-HEXANONE	.13594	.12197	.12371	.10945	.11146	.927	.12051	8.848		
CHLOROBENZENE	1.29309	.94021	1.04301	.97898	.95005	1.003	1.04107	14.071		**
ETHYLBENZENE	.57086	.42444	.47065	.44177	.43031	1.026	.46761	12.917	*	
M,P-XYLENE	.73229	.53458	.58753	.54507	.52234	1.044	.58436	14.761		(Conc=40.0,100.0,200.0
O-XYLENE	.70698	.51348	.56782	.53000	.51613	1.094	.56688	14.336		
STYRENE	1.23418	.89662	.99617	.92715	.90489	1.098	.99180	14.220		
4-BROMOFLUOROBENZENE	1.16335	.86286	.97972	.88971	.84937	1.164	.94900	13.714		
1,1,2,2-TETRACHLOROETHANE	.57502	.44570	.48213	.46758	.44829	1.199	.48374	10.987		**
1,3-DICHLOROBENZENE	1.53747	1.08895	1.22612	1.11647	1.06987	1.312	1.20778	16.061		
1,4-DICHLOROBENZENE	1.60365	1.12388	1.24064	1.15122	1.10919	1.326	1.24572	16.576		
1,2-DICHLOROBENZENE	1.44982	1.03353	1.13647	1.06136	1.00979	1.374	1.13820	15.867		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: 2637A0 1713

Contractor: LAB RESOURCES Calibration Date: 02/24/93

Contract No: Soil

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30%

Laboratory ID:	>B8822	>B8820	>B8829	>B8828	>B8827					
	RF	RF	RF	RF	RF					
Compound	20.00	50.00	100.00	150.00	200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	.74654	.83656	.87735	.92764	1.02959	.232	.88354	11.909		**
VINYL CHLORIDE	.85797	.94972	.96589	1.04492	1.17866	.251	.99943	12.028	*	
BROMOMETHANE	1.05417	1.17480	1.06690	1.08947	1.23146	.303	1.12336	6.817		
CHLOROETHANE	.52422	.60704	.53284	.54613	.62139	.324	.56632	7.893		
ACROLEIN	.10793	.11949	.14269	.11760	.09008	.485	.11556	16.548		(Conc=40.0,100.0,200.0
TRICHLOROFLUOROMETHANE	1.72497	1.86360	1.66117	1.60695	1.65405	.372	1.70215	5.849		
1,1-DICHLOROETHENE	.89381	.98921	.90144	.89475	.88515	.481	.91287	4.717	*	
CARBON DISULFIDE	1.52504	2.02947	1.97607	1.98837	2.06875	.505	1.91754	11.600		
ACETONE	.30447	.46704	.51157	.42492	.28576	.542	.39875	24.994		
ACRYLONITRILE	.26411	.26661	.33178	.28876	.22857	.717	.27597	13.742		
METHYLENE CHLORIDE	1.09227	1.08196	1.02181	1.10191	1.03923	.631	1.06744	3.277		
TRANS-1,2-DICHLOROETHENE	1.12360	1.22109	1.18339	1.22279	1.17024	.698	1.18422	3.461		
METHYL-TERT-BUTYL-ETHER	3.29668	3.31720	3.30227	3.18886	2.97300	.725	3.21560	4.506		(Conc=20.0,50.0,100.0,
TERT-BUTYL-ALCOHOL	.12706	.18580	.36052	.22228	.12320	.766	.20377	47.588		(Conc=40.0,100.0,200.0
1,1-DICHLOROETHANE	2.06461	2.12690	2.14618	2.12686	2.02760	.806	2.09843	2.390		**
DI-ISOPROPYL-ETHER	4.22891	4.39473	4.52729	4.32518	3.97893	.865	4.29101	4.790		(Conc=20.0,50.0,100.0,
CIS-1,2-DICHLOROETHENE	1.68140	1.80323	1.88762	1.83541	1.64812	.949	1.77116	5.780		
CHLOROFORM	2.47735	2.63792	2.67729	2.74731	2.54331	1.038	2.61663	4.098	*	
1,2-DICHLOROETHANE	1.76350	1.88126	1.91871	1.88769	1.70042	1.149	1.83032	5.113		
1,2-DICHLOROETHANE-D4	1.97305	1.63291	2.20025	1.47553	1.32562	1.132	1.72147	20.895		(Conc=20.0,50.0,100.0,
VINYL ACETATE	.99108	1.08141	1.20785	1.18348	1.01637	.686	1.09604	8.861		
2-BUTANONE	.02551	.02742	.03920	.03478	.02237	.788	.02986	23.236		
1,1,1-TRICHLOROETHANE	.52675	.60195	.63017	.66796	.62508	.843	.61038	8.587		
CARBON TETRACHLORIDE	.50822	.59924	.63168	.68062	.63782	.871	.61152	10.565		
BENZENE	.65736	.73895	.78440	.82672	.75158	.910	.75180	8.349		
TRICHLOROETHENE	.40868	.43664	.46635	.45833	.42817	1.032	.43964	5.287		
1,2-DICHLOROPROPANE	.28087	.28816	.32417	.34646	.29139	1.070	.30621	9.135	*	
BROMODICHLOROMETHANE	.57004	.59229	.67583	.74771	.59914	1.130	.63700	11.558		
2-CHLOROETHYLVINYLETHER	.19986	.20677	.25319	.19790	.18234	1.201	.20801	12.878		
TRANS-1,3-DICHLOROPROPENE	.47769	.53840	.59649	.58686	.55238	1.321	.55036	8.565		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: 2637A0 1713

Contractor: LAB RESOURCES Calibration Date: 02/24/93

Contract No: Soil

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30%

Laboratory ID:	>B8822	>B8820	>B8829	>B8828	>B8827					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CIS-1,3-DICHLOROPROPENE	.41230	.46953	.52589	.53511	.43662	1.212	.47589	11.333		
1,1,2-TRICHLOROETHANE	.36300	.34256	.38793	.37649	.32703	1.350	.35940	6.886		
DIBROMOCHLOROMETHANE	.66572	.70220	.80431	.79379	.68848	1.416	.73090	8.711		
BROMOFORM	.62918	.76558	.89072	.84726	.73978	1.684	.77450	13.104		**
4-METHYL-2-PENTANONE	.39493	.43610	.59093	.48238	.35869	.828	.45261	19.897		
TOLUENE-D8	1.16472	1.09604	1.39714	.89161	.88592	.825	1.08709	19.564		(Conc=20.0,50.0,100.0,1
TOLUENE	.57401	.64124	.68505	.64205	.62206	.832	.63288	6.349	*	
TETRACHLOROETHENE	.60261	.63163	.65073	.60602	.56255	.896	.61071	5.459		
2-HEXANONE	.29620	.31478	.43767	.34696	.23192	.931	.32551	23.181		
CHLOROBENZENE	.84320	.88761	.99460	.95022	.88143	1.003	.91141	6.616		**
ETHYLBENZENE	.38584	.40641	.46362	.42738	.41821	1.023	.42029	6.846	*	
M,P-XYLENE	.47483	.51915	.55892	.50450	.49168	1.040	.50982	6.264		(Conc=40.0,100.0,200.0,
O-XYLENE	.45505	.52309	.55137	.50266	.47717	1.088	.50187	7.524		
STYRENE	.79482	.94402	.97015	.89544	.84040	1.092	.88897	8.129		
4-BROMOFLUOROBENZENE	1.11969	.99986	1.19883	.76827	.72585	1.155	.96250	21.774		(Conc=20.0,50.0,100.0,1
1,1,2,2-TETRACHLOROETHANE	.69964	.72746	.84859	.74158	.59773	1.186	.72300	12.444		**
1,3-DICHLOROBENZENE	1.01271	1.05318	1.13857	1.10025	.99394	1.295	1.05973	5.669		
1,4-DICHLOROBENZENE	1.03228	1.08674	1.18576	1.10032	1.01691	1.308	1.08440	6.152		
1,2-DICHLOROBENZENE	1.02219	1.08332	1.11861	1.04007	.92713	1.355	1.03826	6.995		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/08/93

Contractor: LAB. RESOURCES | Time: 14:42

Contract No: Aqueous | Laboratory ID: >C8365

Instrument ID: 2824A11 191 | Initial Calibration Date: 02/15/93

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.45279	.32186	28.92		**	
VINYL CHLORIDE	.63419	.52770	16.79	*		
BROMOMETHANE	1.10083	.91300	17.06			
CHLOROETHANE	.41416	.35924	13.26			
ACROLEIN	.05771	.06665	15.48			(Conc=100.00)
TRICHLOROFLUOROMETHANE	2.99227	2.41686	19.23			
1,1-DICHLOROETHENE	1.09127	.90814	16.78	*		
CARBON DISULFIDE	2.46711	2.00350	18.79			
ACETONE	.16004	.15369	3.96			
ACRYLONITRILE	.11444	.12732	11.25			
METHYLENE CHLORIDE	1.16665	.99490	14.72			
METHYL-TERT-BUTYL-ETHER	2.81207	2.62876	6.52			
TERT-BUTYL-ALCOHOL	.07647	.07808	2.12			(Conc=100.00)
TRANS-1,2-DICHLOROETHENE	1.31889	1.13688	13.80			
DI-ISOPROPYL-ETHER	3.65500	3.63993	.41			
1,1-DICHLOROETHANE	2.02647	1.94773	3.89		**	
CIS-1,2-DICHLOROETHENE	1.39615	1.23946	11.22			
CHLOROFORM	3.39692	3.08183	9.28	*		
1,2-DICHLOROETHANE	2.19658	1.95694	10.91			
1,2-DICHLOROETHANE-D4	1.91799	1.77462	7.48			
VINYL ACETATE	.77506	.80705	4.13			
2-BUTANONE	.04586	.05535	20.69			
1,1,1-TRICHLOROETHANE	.77996	.72859	6.59			
CARBON TETRACHLORIDE	.79283	.72981	7.95			
BENZENE	.73083	.67847	7.16			
TRICHLOROETHENE	.47409	.45678	3.65			
1,2-DICHLOROPROPANE	.28681	.25856	9.85	*		
BROMODICHLOROMETHANE	.80076	.74762	6.64			
2-CHLOROETHYLVINYLETHER	.10891	.12494	14.72			
TRANS-1,3-DICHLOROPROPENE	.53347	.51156	4.11			
CIS-1,3-DICHLOROPROPENE	.48369	.46235	4.41			
1,1,2-TRICHLOROETHANE	.29747	.28117	5.48			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/08/93

Contractor: LAB. RESOURCES | Time: 14:42

Contract No: Aqueous | Laboratory ID: >CB365

Instrument ID: 2824A11 191 | Initial Calibration Date: 02/15/93

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
DIBROMOCHLOROMETHANE	.75716	.72250	4.58			
BROMOFORM	.58685	.56963	2.93		**	
4-METHYL-2-PENTANONE	.21177	.21223	.21			
TOLUENE-D8	1.11727	1.06847	4.37			
TOLUENE	.67924	.63807	6.06	*		
TETRACHLOROETHENE	.60777	.56892	6.39			
2-HEXANONE	.12051	.12581	4.40			
CHLOROBENZENE	1.04107	.92413	11.23		**	
ETHYLBENZENE	.46761	.41757	10.70	*		
M,P-XYLENE	.58436	.52818	9.61			(Conc=100.00)
O-XYLENE	.56688	.50489	10.94			
STYRENE	.99180	.89419	9.84			
4-BROMOFLUOROBENZENE	.94900	.87580	7.71			
1,1,2,2-TETRACHLOROETHANE	.48374	.47851	1.08		**	
1,3-DICHLOROBENZENE	1.20778	1.11292	7.85			
1,4-DICHLOROBENZENE	1.24572	1.13124	9.19			
1,2-DICHLOROBENZENE	1.13820	1.06019	6.85			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/10/93

Contractor: LAB RESOURCES | Time: 09:17

Contract No: Soil | Laboratory ID: >B8957

Instrument ID: 2637A0 1713 | Initial Calibration Date: 02/24/93

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.88354	.68405	22.58		**	
VINYL CHLORIDE	.99943	.93816	6.13	*		
BROMOMETHANE	1.12336	1.22554	9.10			
CHLOROETHANE	.56632	.61421	8.45			
ACROLEIN	.11556	.02506	78.32			(Conc=100.00)
TRICHLOROFLUOROMETHANE	1.70215	2.03886	19.78			
1,1-DICHLOROETHENE	.91287	.87549	4.10	*		
CARBON DISULFIDE	1.91754	1.67412	12.69			
ACETONE	.39875	.22113	44.55			
ACRYLONITRILE	.27597	.21693	21.39			
METHYLENE CHLORIDE	1.06744	1.03745	2.81			
TRANS-1,2-DICHLOROETHENE	1.18422	1.15164	2.75			
METHYL-TERT-BUTYL-ETHER	3.21560	3.68494	14.60			
TERT-BUTYL-ALCOHOL	.20377	.26158	28.37			(Conc=100.00)
1,1-DICHLOROETHANE	2.09843	2.10188	.16		**	
DI-ISOPROPYL-ETHER	4.29101	3.99661	6.86			
CIS-1,2-DICHLOROETHENE	1.77116	1.86685	5.40			
CHLOROFORM	2.61663	3.14331	20.13	*		
1,2-DICHLOROETHANE	1.83032	2.43069	32.80			
1,2-DICHLOROETHANE-D4	1.72147	1.80241	4.70			(Conc=50.00)
VINYL ACETATE	1.09604	.94988	13.34			
2-BUTANONE	.02986	.02559	14.29			
1,1,1-TRICHLOROETHANE	.61038	.71355	16.90			
CARBON TETRACHLORIDE	.61152	.72059	17.84			
BENZENE	.75180	.69062	8.14			
TRICHLOROETHENE	.43964	.46153	4.98			
1,2-DICHLOROPROPANE	.30621	.27578	9.94	*		
BROMODICHLOROMETHANE	.63700	.78941	23.93			
2-CHLOROETHYLVINYLETHER	.20801	.18317	11.94			
TRANS-1,3-DICHLOROPROPENE	.55036	.55914	1.59			
CIS-1,3-DICHLOROPROPENE	.47589	.47616	.06			
1,1,2-TRICHLOROETHANE	.35940	.33193	7.64			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/10/93

Contractor: LAB RESOURCES | Time: 09:17

Contract No: Soil | Laboratory ID: >B8957

Instrument ID: 2637A0 1713 | Initial Calibration Date: 02/24/93

Minimum $\overline{RF}$ for SPCC is 0.3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
DIBROMOCHLOROMETHANE	.73090	.81234	11.14			
BROMOFORM	.77450	.81988	5.86		**	
4-METHYL-2-PENTANONE	.45261	.43046	4.89			
TOLUENE-D8	1.08709	.91400	15.92			(Conc=50.00)
TOLUENE	.63288	.63999	1.12	*		
TETRACHLOROETHENE	.61071	.65364	7.03			
2-HEXANONE	.32551	.30996	4.78			
CHLOROBENZENE	.91141	.97252	6.71		**	
ETHYLBENZENE	.42029	.43903	4.46	*		
M,P-XYLENE	.50982	.56287	10.41			(Conc=100.00)
O-XYLENE	.50187	.53008	5.62			
STYRENE	.88897	.91447	2.87			
4-BROMOFLUOROBENZENE	.96250	.85056	11.63			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.72300	.72509	.29		**	
1,3-DICHLOROBENZENE	1.05973	1.19008	12.30			
1,4-DICHLOROBENZENE	1.08440	1.22559	13.02			
1,2-DICHLOROBENZENE	1.03826	1.14961	10.72			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/10/93

LAB SAMP NO. ($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	OTHER	TOT OUT
METHOD BLA S	99	100	98		0
T302359-03 S	97	99	97		0
T303095-02 S	103	98	95		0
T303095-03 S	96	98	97		0
T303095-04 S	98	98	95		0
T303087-01 S	100	103	88		0
T303087-02 S	100	97	96		0
095-04 MS S	98	100	97		0
095-04 MSD S	98	96	95		0
T303106-03 S	98	92	107		0
T303134-02 S	100	83	120		0

EPA CLP QC Limits For:	Soil	Water
S1 (DCE) = 1,2-DICHLOROETHANE-D4	70-121	76-114
S2 (TOL) = TOLUENE-D8	81-117	88-110
S3 (BFB) = 4-BROMOFLUOROBENZENE	74-121	86-115

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/08/93

LAB SAMP NO.	($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	OTHER	TOT OUT
METHOD BLA	W	98	99	99		0
T303018-04	W	100	98	97		0
T302358-07	W	98	99	98		0
T303056-02	W	98	99	98		0
T303062-01	W	102	97	100		0
T303071-05	W	99	100	98		0
T303085-02	W	100	97	99		0
T303087-03	W	99	97	102		0
T303092-01	W	99	97	98		0
T303068-08	W	99	98	98		0

EPA CLP QC Limits For:	Soil	Water
S1 (DCE) = 1,2-DICHLOROETHANE-D4	70-121	76-114
S2 (TOL) = TOLUENE-D8	81-117	88-110
S3 (BFB) = 4-BROMOFLUOROBENZENE	74-121	86-115

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

LABORATORY RESOURCES INC.

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laboratory Resources Contract:

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

Matrix Spike - Sample No.: T303095-04 Level: LOW

Date : 03/10/93

COMPOUNDS	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	0.00	57.34	115	59-172
BENZENE	50.00	0.00	54.44	109	66-142
TRICHLOROETHENE	50.00	0.00	53.26	107	62-137
TOLUENE	50.00	0.00	50.87	102	59-139
CHLOROBENZENE	50.00	0.00	51.11	102	60-133

COMPOUNDS	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	64.34	129	11	22	59-172
BENZENE	50.00	59.05	118	8	21	66-142
TRICHLOROETHENE	50.00	57.40	115	7	24	62-137
TOLUENE	50.00	54.02	108	6	21	59-139
CHLOROBENZENE	50.00	55.37	111	8	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* values outside of advisory EPA contract Lab QC limits.

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

_____

FORM III VOA-2 Rev. 7/89

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >88957 Lab Sample ID: 50 PPB VOA

Date Analyzed: 03/10/93 Time Analyzed: 09:17

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	36237	8.87	151666	11.08	126581	16.78
UPPER LIMIT	72474		303332		253162	
LOWER LIMIT	18118		75833		63290	
LAB SAMPLE #						
METHOD BLA	34541	8.88	145530	11.08	122891	16.78
T302359-03	31868	8.87	127621	11.09	98782	16.79
T303095-02	29703	8.93	122186	11.11	107137	16.81
T303095-03	29892	8.90	120938	11.11	104494	16.81
T303095-04	34526	8.90	142410	11.11	122204	16.81
T303087-01	29650	8.93	113032	11.13	87527	16.81
T303087-02	30061	8.92	123097	11.12	105826	16.82
095-04 MS	35354	8.91	142144	11.11	122403	16.81
095-04 MSD	34948	8.94	142759	11.13	122234	16.82
T303106-03	29008	8.92	109384	11.11	84603	16.80
T303134-02	36575	8.98	148529	11.19	106519	16.89

IS1 (BCM) = Bromochlormethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard are values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >C8365 Lab Sample ID: 50 PPB STD

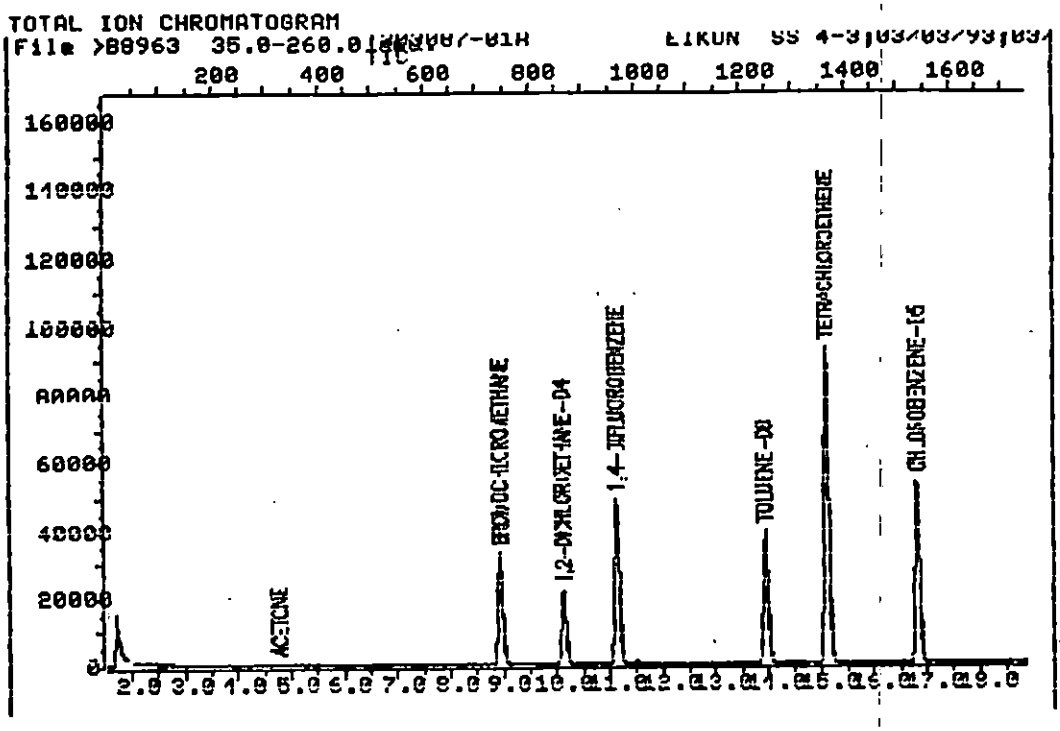
Date Analyzed: 03/08/93 Time Analyzed: 14:42

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	47999	7.48	195260	9.79	163590	15.47
UPPER LIMIT	95998		390520		327180	
LOWER LIMIT	23999		97630		81795	
LAB SAMPLE #						
METHOD BLA	39340	7.40	163904	9.75	137974	15.46
T303018-04	37508	7.44	161519	9.76	138082	15.46
T302358-07	37907	7.47	160347	9.79	138292	15.48
T303056-02	36095	7.48	156911	9.80	134281	15.48
T303062-01	35526	7.46	150370	9.78	130909	15.48
T303071-05	36486	7.39	157521	9.75	132662	15.47
T303085-02	32155	7.45	74937*	9.78	120202	15.50
T303087-03	35564	7.48	152313	9.87	131827	15.61
T303092-01	34212	7.45	146669	9.78	127606	15.47
T303068-08	35093	7.27	151278	9.73	131291	15.56

IS1 (BCM) = Bromochlormethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

olumn used to flag internal standard are values with an asterisk



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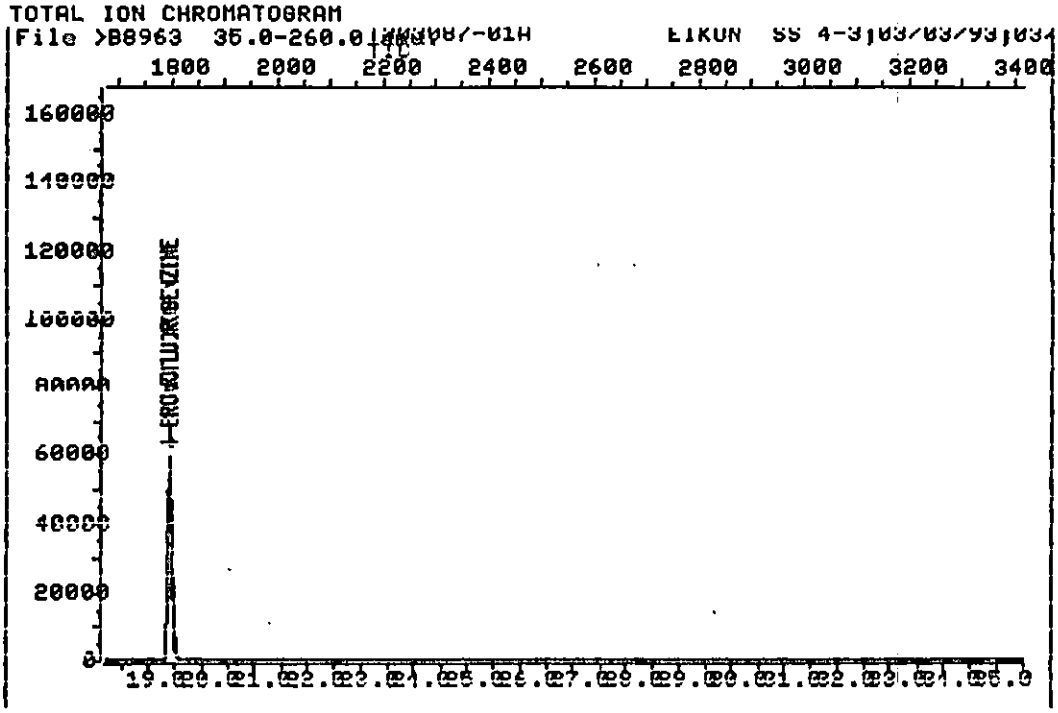
Name: T303087-01A Instrument ID: B
Misc: EIKON SS 4-3;03/03/93;03/04/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 14:43
Injected at: 930310 13:59



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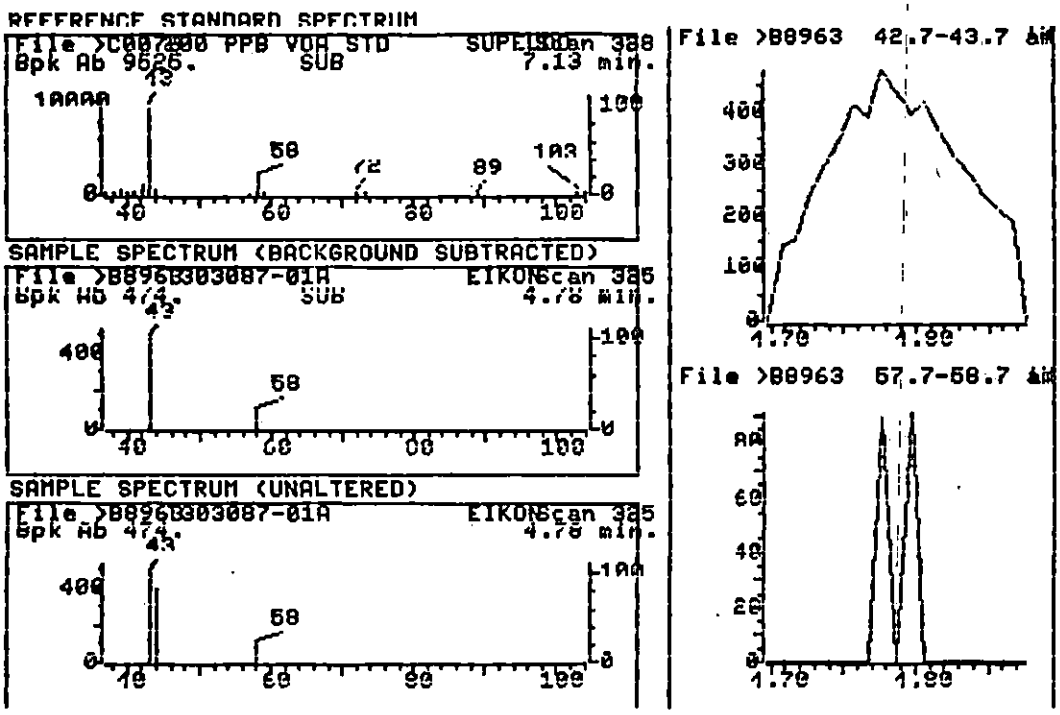
Misc: EIKON SS 4-3;03/03/93;03/04/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 14:43
Injected at: 930310 13:59



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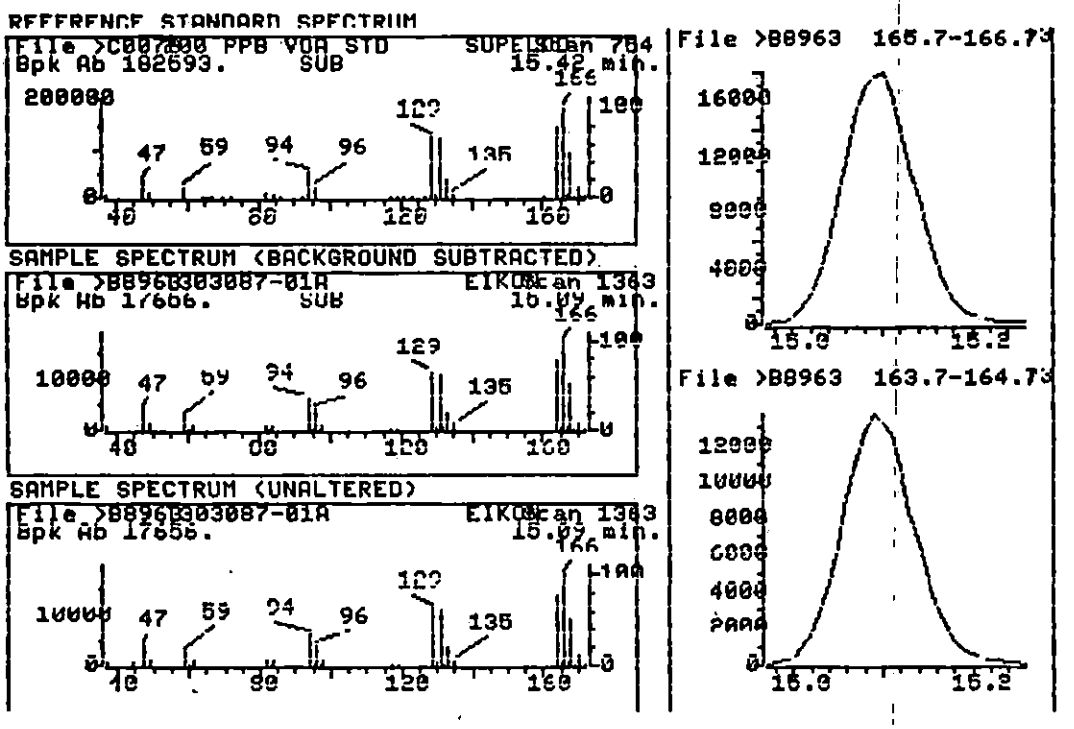
Misc: EIKON SS 4-3;03/03/93;03/04/93
Quant Time: 930310 14:43 Quant ID File: IDDSVO::C4
Injected at: 930310 13:59 Last Calibration: 930224 17:25
Last Qcal Time: 930310 09:17

Compound No : 10
Compound Name : ACETONE
Scan Number : 325
Retention Time: 4.78 min.
Quant Ion : 43.0
Area : 3157
Concentration : 24.08 UG/L
q-value : 98



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Misc: EIKON SS 4-3;03/03/93;03/04/93
Quant Time: 930310 14:43 Quant ID File: IDDSVO::C4
Injected at: 930310 13:59 Last Calibration: 930224 17:25
Last Qcal Time: 930310 09:17

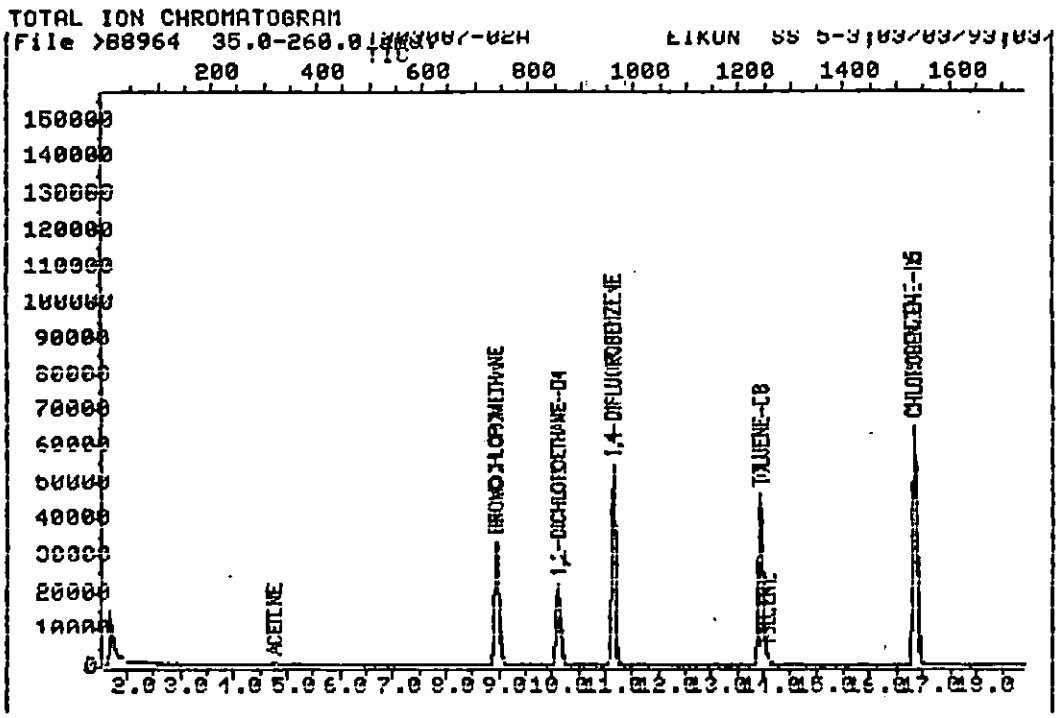
Compound No : 41
Compound Name : TETRACHLOROETHENE
Scan Number : 1363
Retention Time: 15.09 min.
Quant Ion : 164.0
Area : 77665
Concentration : 67.88 UG/L
q-value : 98

Operator ID: ED Quant Rev: 7 Quant Time: 930310 14:43
Output File: ^B8963::QT Injected at: 930310 13:59
Data File: >B8963::B2 Dilution Factor: 1.00000
Name: T303087-01A Instrument ID: B
Misc: EIKON SS 4-3;03/03/93;03/04/93

ID File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.93	127.9	29650	50.00	UG/L	94
10)	ACETONE	4.78	43.0	3157	24.08	UG/L	98
21)	1,2-DICHLOROETHANE-D4	10.11	65.0	53207	49.78	UG/L	97
22)	*1,4-DIFLUOROBENZENE	11.13	114.0	113032	50.00	UG/L	97
37)	*CHLOROBENZENE-D5	16.81	117.0	87527	50.00	UG/L	95
39)	TOLUENE-D8	13.93	98.0	82405	51.50	UG/L	99
41)	TETRACHLOROETHENE	15.09	164.0	77665	67.88	UG/L	98
48)	4-BROMOFLUOROBENZENE	19.37	95.0	65157	43.76	UG/L	94

* Compound is ISTD



Data File: >B8964::B2 Quant Output File: ^B8964::QT
Name: T303087-02A Instrument ID: B
Misc: EIKON SS 5-3;03/03/93;03/04/93

Id File: IDDSVO::C4
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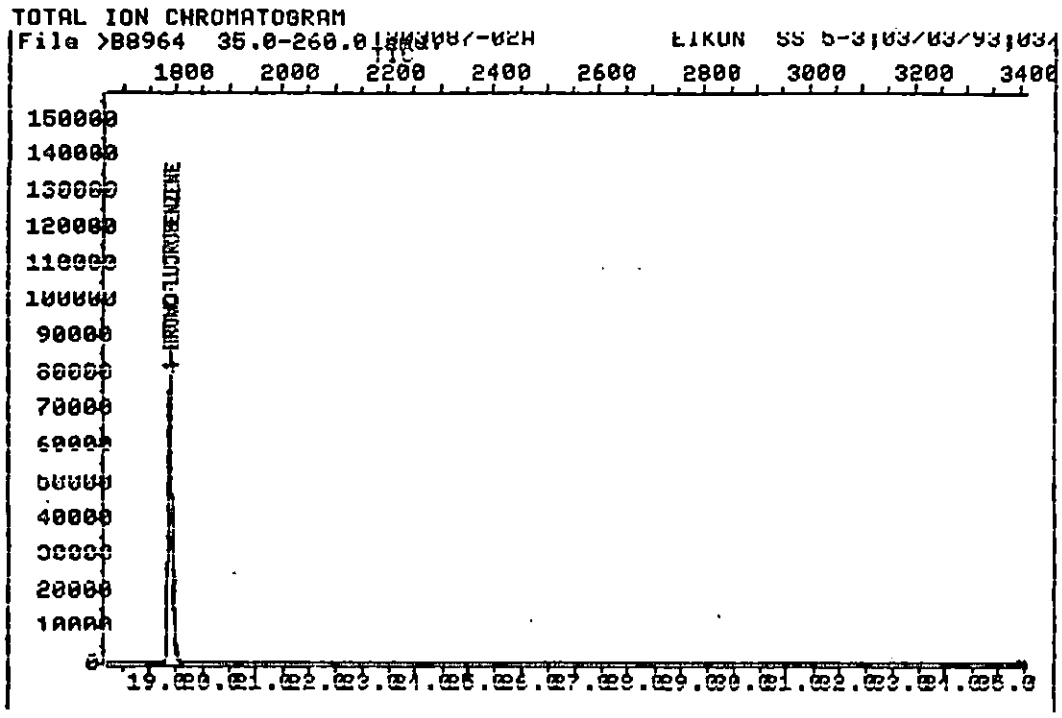
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 15:28
Injected at: 930310 14:45

Page 1 of 2



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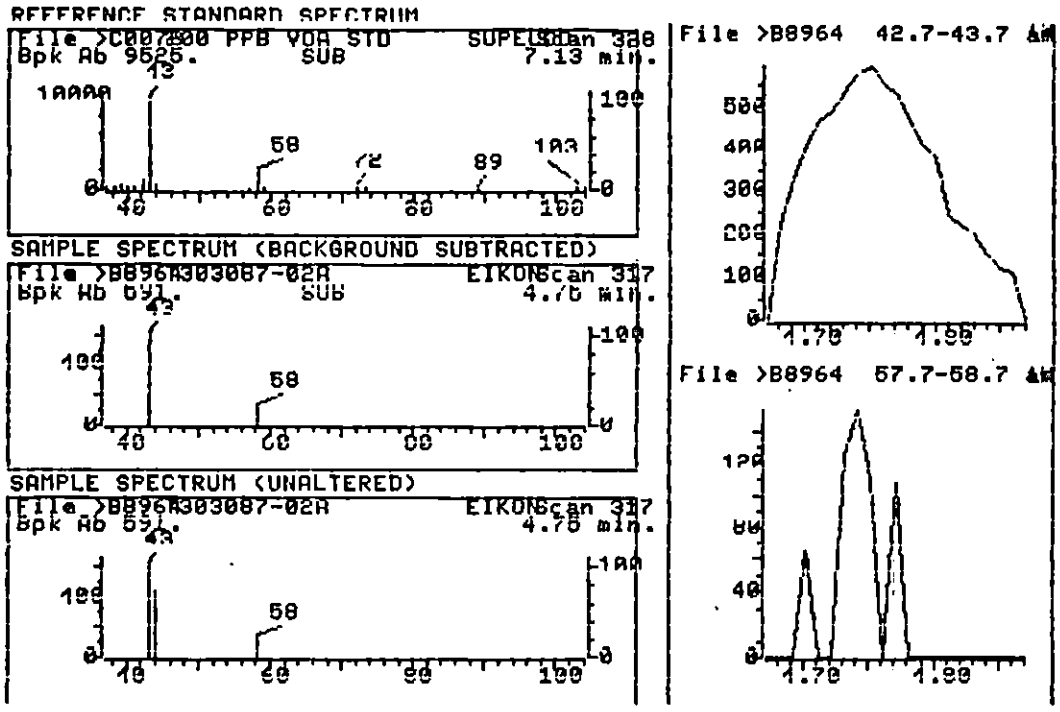
Misc: EIKON SS 5-3;03/03/93;03/04/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 15:28
Injected at: 930310 14:45



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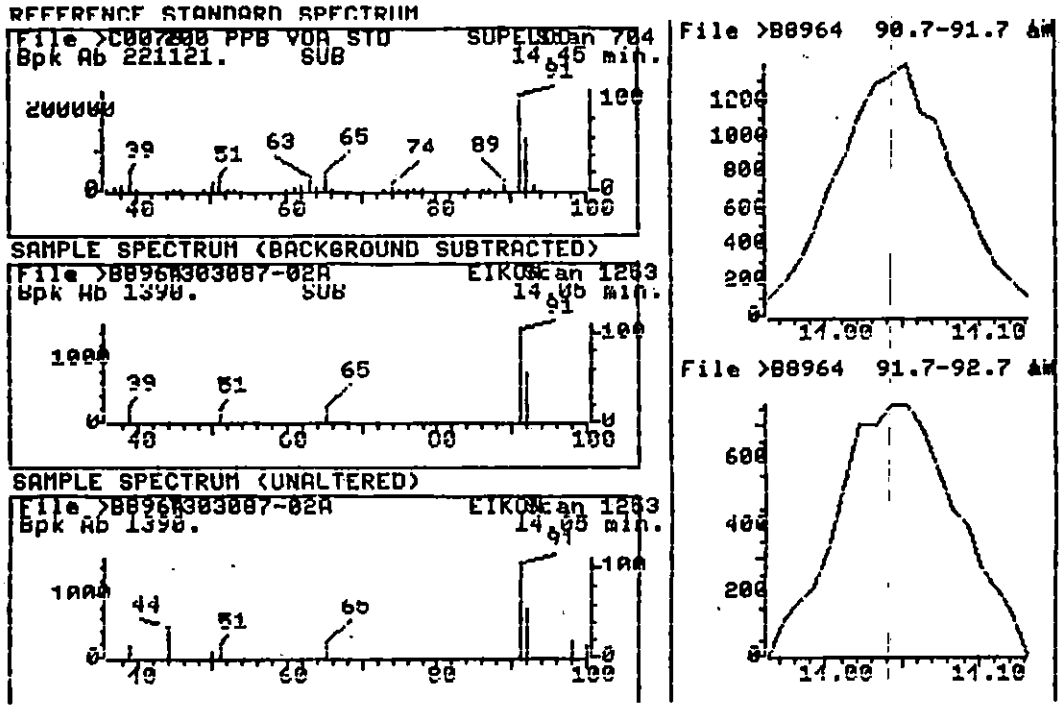
Name: T303087-02A Instrument ID: B
Misc: EIKON SS 5-3;03/03/93;03/04/93
Quant Time: 930310 15:28 Quant ID File: IDDSVO::C4
Injected at: 930310 14:45 Last Calibration: 930224 17:25
Last Qcal Time: 930310 09:17

Compound No : 10
Compound Name : ACETONE
Scan Number : 317
Retention Time: 4.75 min.
Quant Ion : 43.0
Area : 4170
Concentration : 31.37 UG/L
q-value : 98



Data File: >B8964::B2 Quant Output File: ^B8964::QT
Name: T303087-02A Instrument ID: B
Misc: EIKON SS 5-3;03/03/93;03/04/93
Quant Time: 930310 15:28 Quant ID File: IDDSV0::C4
Injected at: 930310 14:45 Last Calibration: 930224 17:25
Last Qcal Time: 930310 09:17

Compound No : 40
Compound Name : TOLUENE
Scan Number : 1253
Retention Time: 14.05 min.
Quant Ion : 92.0
Area : 4188
Concentration : 3.09 UG/L
q-value : 96

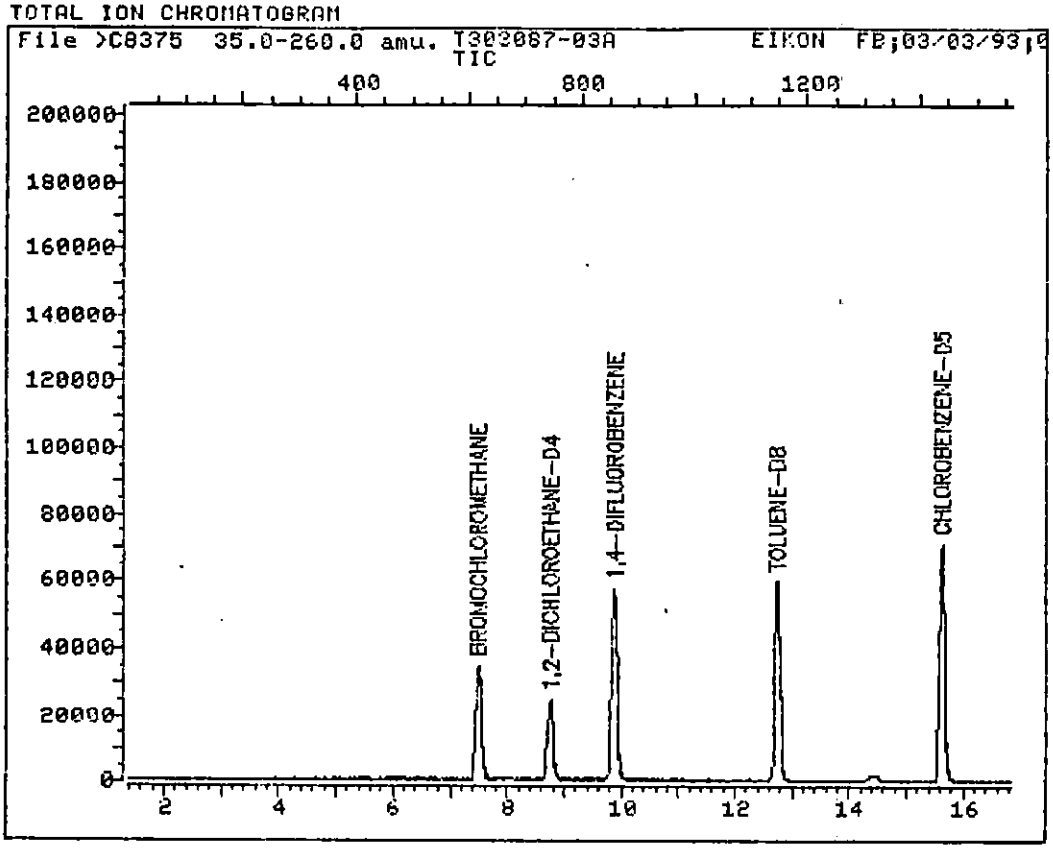
Operator ID: ED Quant Rev: 7 Quant Time: 930310 15:28
Output File: ^B8964::QT Injected at: 930310 14:45
Data File: >B8964::B2 Dilution Factor: 1.00000
Name: T303087-02A Instrument ID: B
Misc: EIKON SS 5-3;03/03/93;03/04/93

ID File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.92	127.9	30061	50.00	UG/L	99
10)	ACETONE	4.75	43.0	4170	31.37	UG/L	98
21)	1,2-DICHLOROETHANE-D4	10.10	65.0	53984	49.82	UG/L	95
22)	*1,4-DIFLUOROBENZENE	11.12	114.0	123097	50.00	UG/L	98
37)	*CHLOROBENZENE-D5	16.82	117.0	105826	50.00	UG/L	94
39)	TOLUENE-D8	13.92	98.0	93534	48.35	UG/L	99
40)	TOLUENE	14.05	92.0	4188	3.09	UG/L	96
48)	4-BROMOFLUOROBENZENE	19.39	95.0	86732	48.18	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM

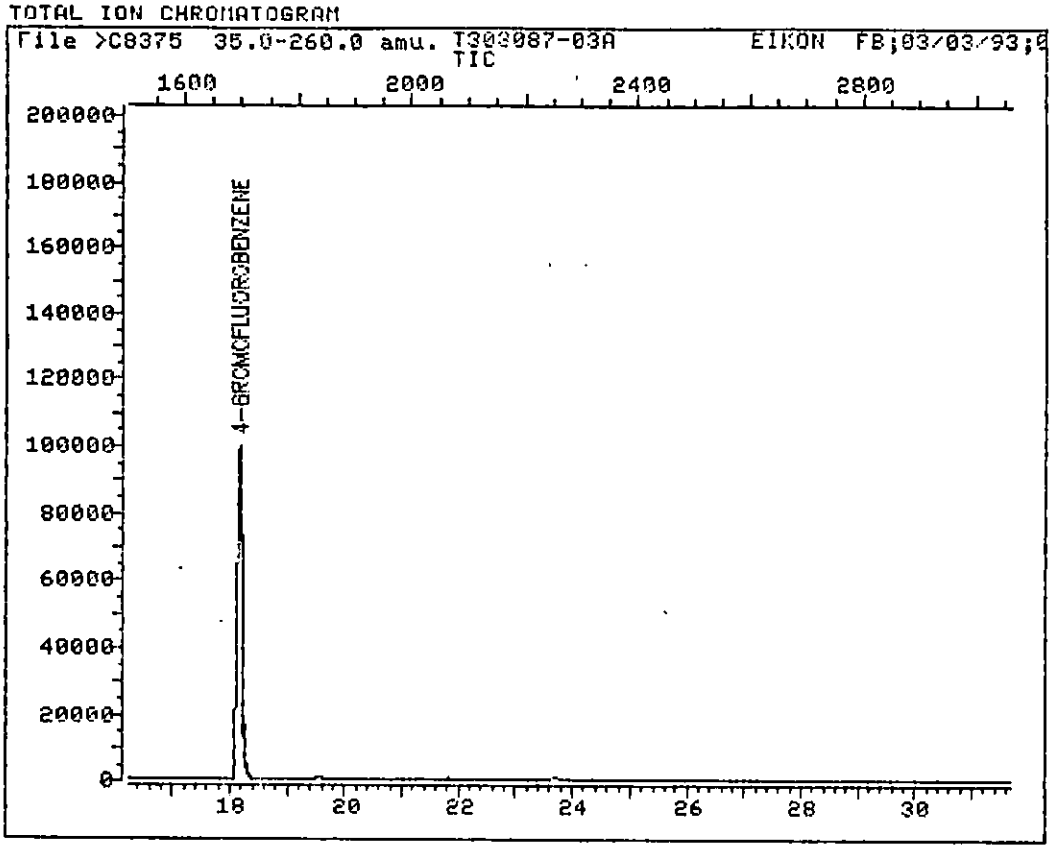


Data File: >C8375::C3 Quant Output File: ^C8375::QT
Name: T303087-03A Instrument ID: C
Misc: EIKON FB;03/03/93;03/04/93

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930215 15:35 Last Qcal Time: 930308 14:42

Operator ID: ANDY
Quant Time : 930308 21:38
Injected at: 930308 21:05

TOTAL ION CHROMATOGRAM



Data File: >C8375::C3 Quant Output File: ^C8375::QT
Name: T303087-03A Instrument ID: C
Misc: EIKON FB;03/03/93;03/04/93

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930215 15:35 Last Qcal Time: 930308 14:42

Operator ID: ANDY
Quant Time : 930308 21:38
Injected at: 930308 21:05

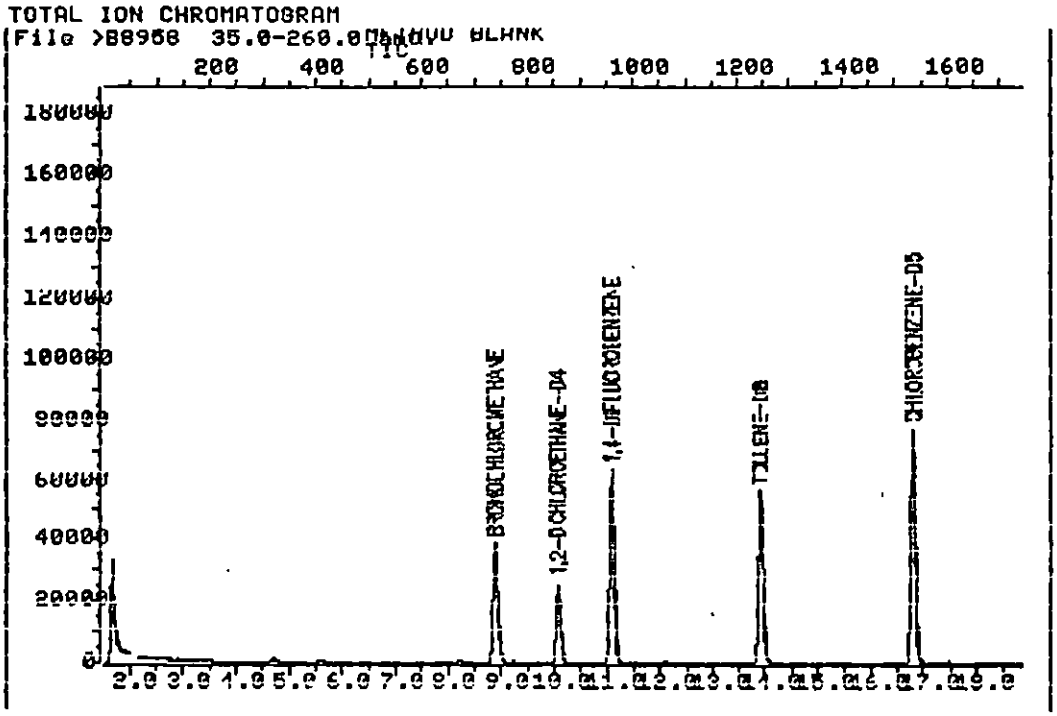
Page 2 of 2

Operator ID: ANDY Quant Rev: 7 Quant Time: 930308 21:38
Output File: ^C8375::QT Injected at: 930308 21:05
Data File: >C8375::C3 Dilution Factor: 1.00000
Name: T303087-03A Instrument ID: C
Misc: EIKON FB;03/03/93;03/04/93

ID File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930215 15:35 Last Qcal Time: 930308 14:42

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	7.48	128.0	35564	50.00	UG/L	9
21)	1,2-DICHLOROETHANE-D4	8.75	65.0	62666	49.65	UG/L	9
22)	*1,4-DIFLUOROBENZENE	9.87	114.0	152313	50.00	UG/L	9
37)	*CHLOROBENZENE-D5	15.61	117.0	131827	50.00	UG/L	9
39)	TOLUENE-D8	12.72	98.0	136882	48.59	UG/L	9
48)	4-BROMOFLUOROBENZENE	18.16	95.0	117717	50.98	UG/L	9

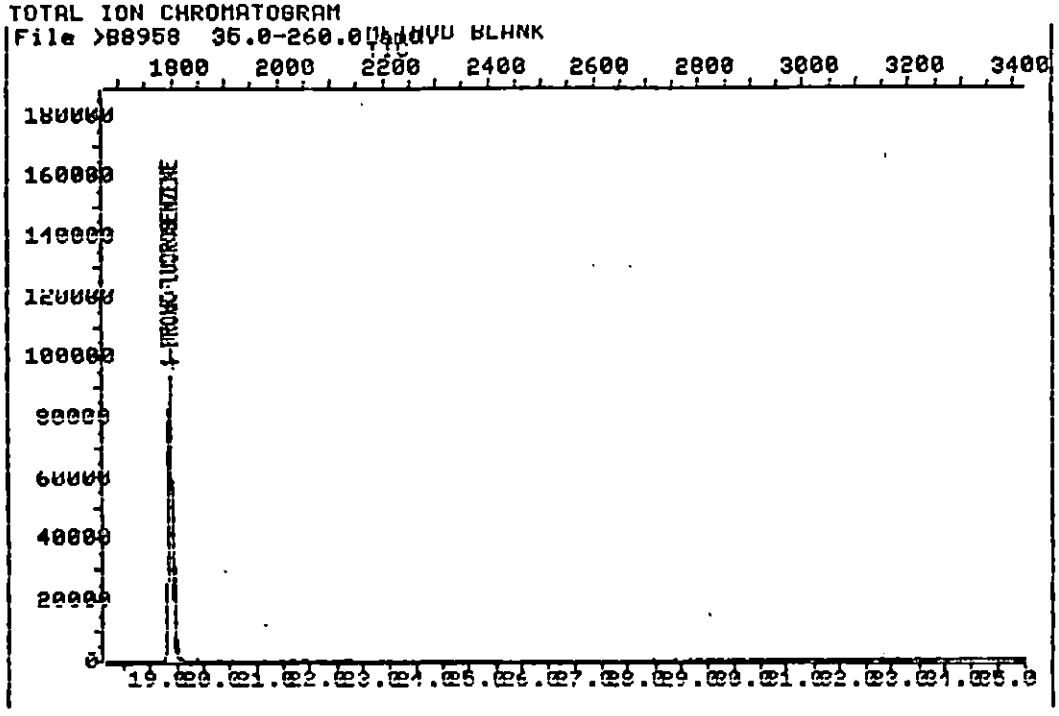
* Compound is ISTD



Data File: >B8958::B2 Quant Output File: ^B8958::QT
Name: METHOD BLANK Instrument ID: B
Misc:

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 10:47
Injected at: 930310 10:04



Data File: >B8958::B2 Quant Output File: ^B8958::QT
Name: METHOD BLANK Instrument ID: B
Misc:

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

Operator ID: ED
Quant Time : 930310 10:47
Injected at: 930310 10:04

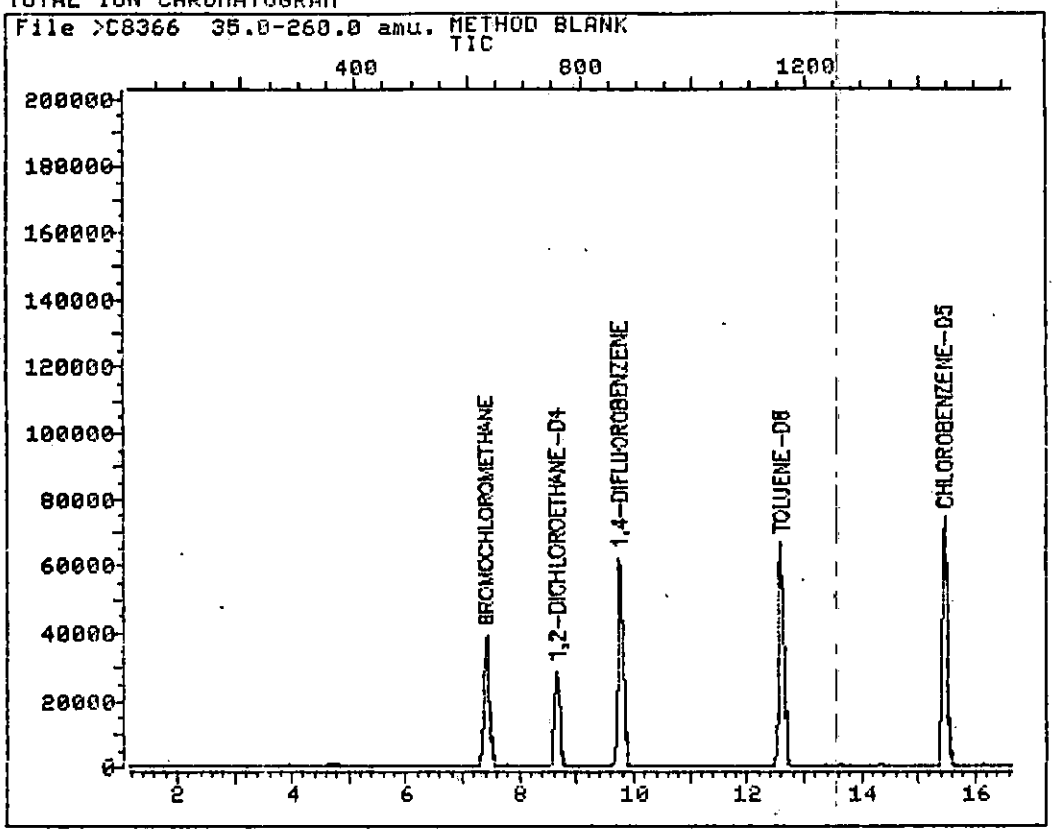
Operator ID: ED Quant Rev: 7 Quant Time: 930310 10:47
Output File: ^B8958::QT Injected at: 930310 10:04
Data File: >B8958::B2 Dilution Factor: 1.00000
Name: METHOD BLANK Instrument ID: B
Misc:

ID File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930310 09:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.88	127.9	34541	50.00	UG/L	96
21)	1,2-DICHLOROETHANE-D4	10.05	65.0	61944	49.75	UG/L	94
22)	*1,4-DIFLUOROBENZENE	11.08	114.0	145530	50.00	UG/L	98
37)	*CHLOROBENZENE-D5	16.78	117.0	122891	50.00	UG/L	93
39)	TOLUENE-D8	13.89	98.0	112589	50.12	UG/L	98
48)	4-BROMOFLUOROBENZENE	19.35	95.0	102023	48.80	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Name: METHOD BLANK Instrument ID: C
Misc:

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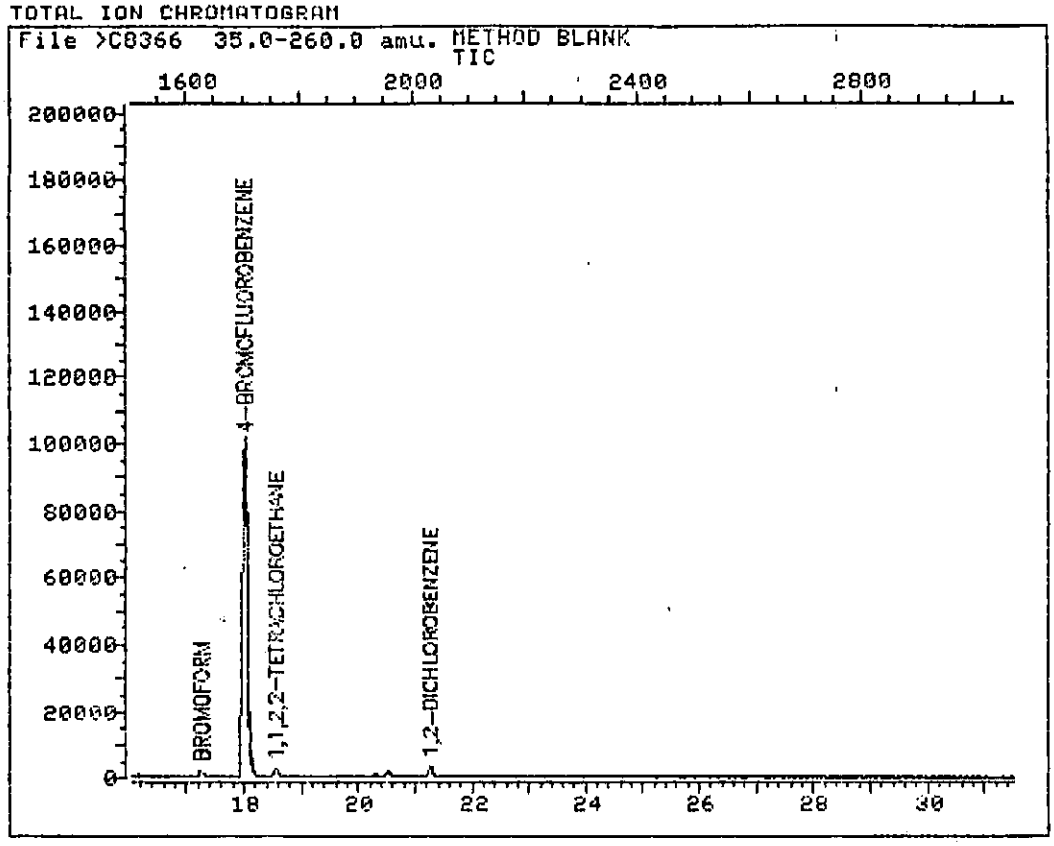
Last Calibration: 930215 15:35 Last Qcal Time: 930308 14:42

Operator ID: ED
Quant Time : 930308 16:07
Injected at: 930308 15:34

Page 1 of 2

TOTAL ION CHROMATOGRAM



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Name: METHOD BLANK Instrument ID: C
Misc:

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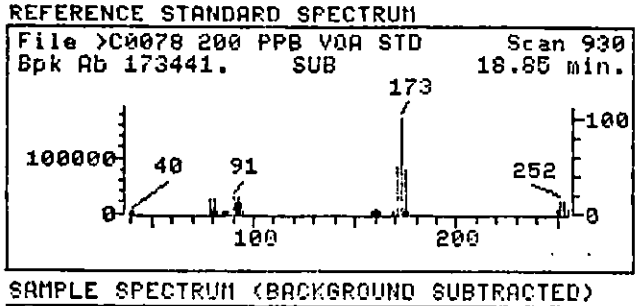
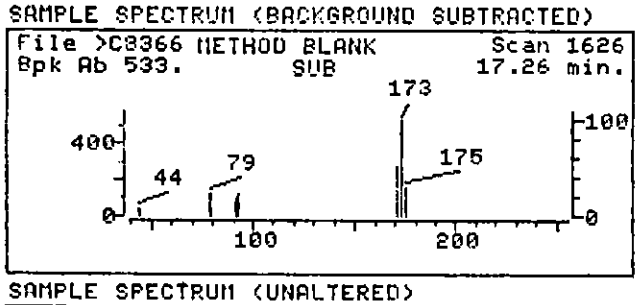
Last Calibration: 930215 15:35 Last Qcal Time: 930308 14:42

Operator ID: ED
Quant Time : 930308 16:07
Injected at: 930308 15:34

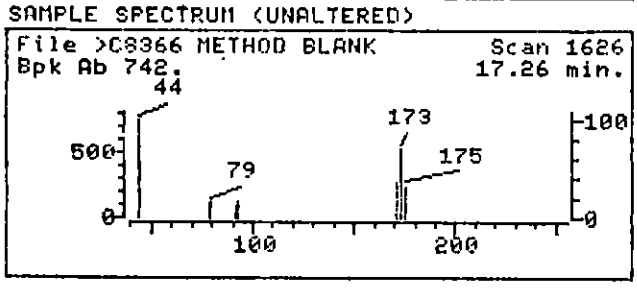
REFERENCE STANDARD SPECTRUM

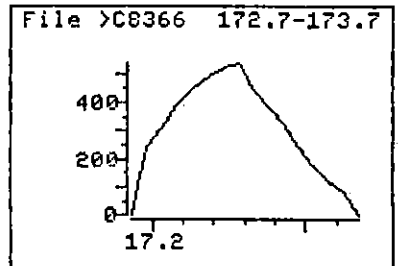


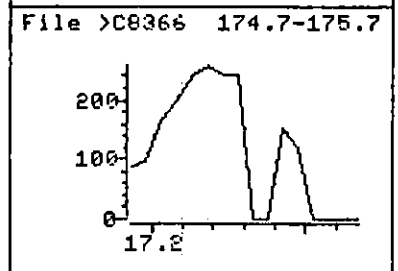
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

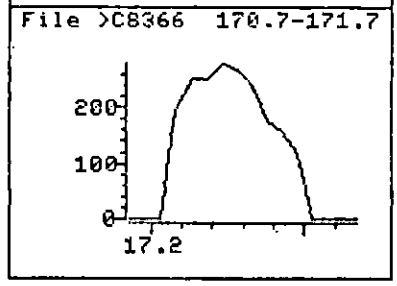


SAMPLE SPECTRUM (UNALTERED)









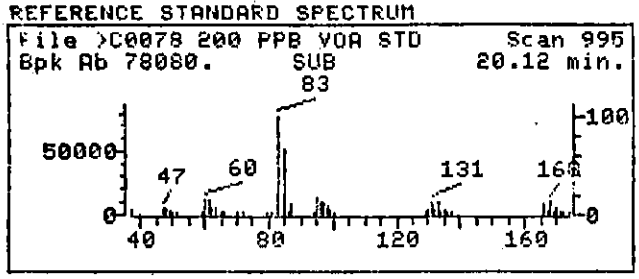
Data File: >C8366::C3
Name: METHOD BLANK
Misc:
Quant Time: 930308 16:07
Injected at: 930308 15:34
Last Qcal Time: 930308 14:42

Quant Output File: ^C8366::QT
Instrument ID: C

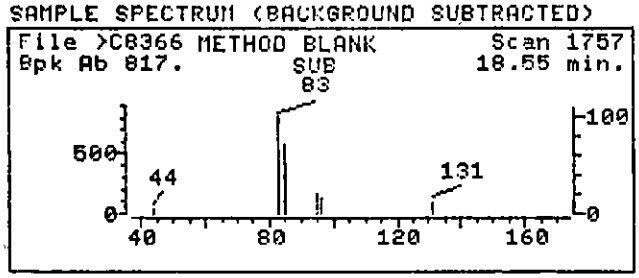
Quant ID File: IDDVOC::SC
Last Calibration: 930215 15:35

Compound No : 36
Compound Name : BROMOFORM
Scan Number : 1626
Retention Time: 17.26 min.
Quant Ion : 173.0
Area : 2805
Concentration : 1.50 UG/L
q-value : 90

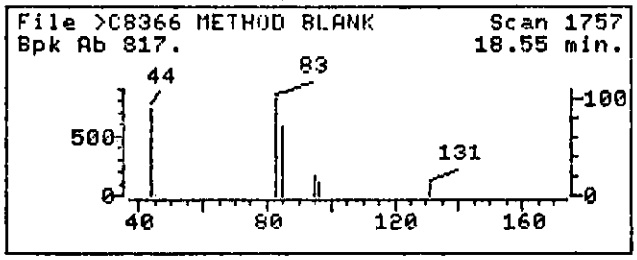
REFERENCE STANDARD SPECTRUM

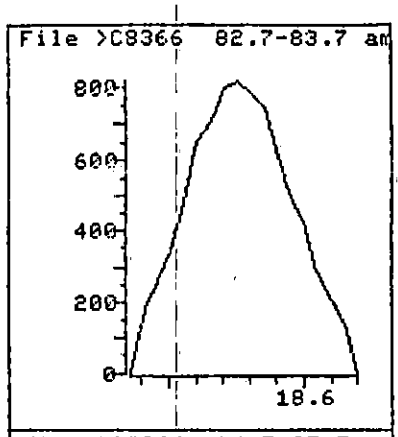


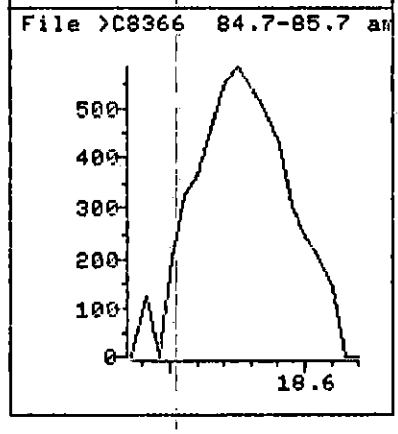
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





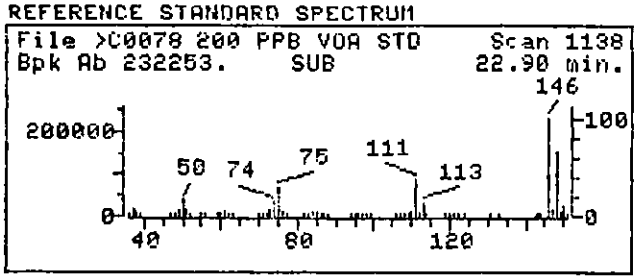


Data File: >C8366::C3
Name: METHOD BLANK
Misc:
Quant Time: 930308 16:07
Injected at: 930308 15:34
Last Qcal Time: 930308 14:42

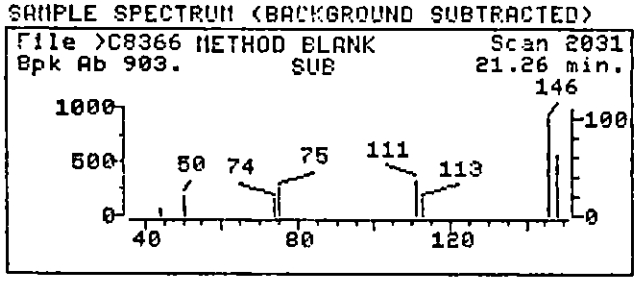
Quant Output File: ^C8366::QT
Instrument ID: C
Quant ID File: IDDVOC::SC
Last Calibration: 930215 15:35

Compound No : 49
Compound Name : 1,1,2,2-TETRACHLOROETHANE
Scan Number : 1757
Retention Time: 18.55 min.
Quant Ion : 83.0
Area : 4707
Concentration : 3.56 UG/L
q-value : 95

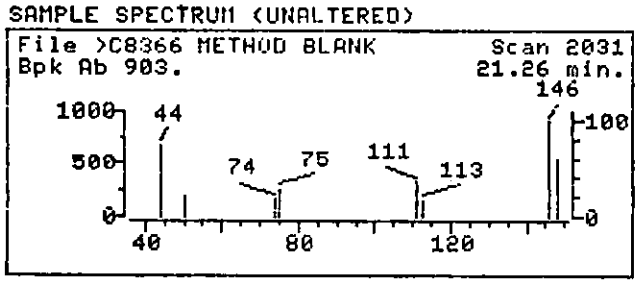
REFERENCE STANDARD SPECTRUM

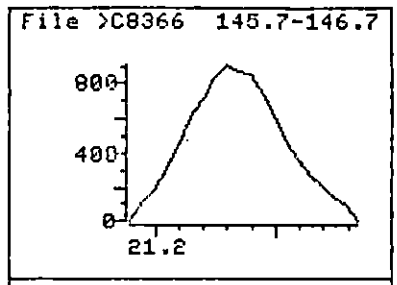


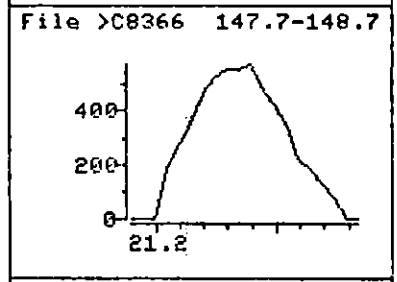
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

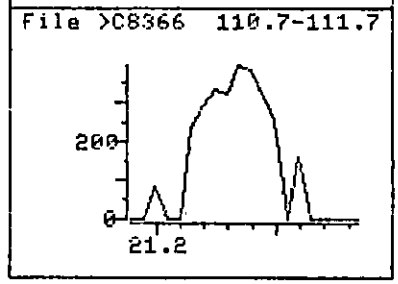


SAMPLE SPECTRUM (UNALTERED)









Data File: >C8366::C3
Name: METHOD BLANK
Misc:
Quant Time: 930308 16:07
Injected at: 930308 15:34
Last Qcal Time: 930308 14:42

Quant Output File: ^C8366::QT
Instrument ID: C

Quant ID File: IDDVOC::SC
Last Calibration: 930215 15:35

Compound No : 52
Compound Name : 1,2-DICHLOROBENZENE
Scan Number : 2031
Retention Time: 21.26 min.
Quant Ion : 146.0
Area : 5233
Concentration : 1.79 UG/L
q-value : 90

Operator ID: ED
Output File: ^C8366::QT
Data File: >C8366::C3
Name: METHOD BLANK
Misc:

Quant Rev: 7
Quant Time: 930308 16:07
Injected at: 930308 15:34
Dilution Factor: 1.00000
Instrument ID: C

ID File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930215 15:35
Last Qcal Time: 930308 14:42

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	7.40	128.0	39340	50.00	UG/L	9
21)	1,2-DICHLOROETHANE-D4	8.65	65.0	68682	49.19	UG/L	9
22)	*1,4-DIFLUOROBENZENE	9.75	114.0	163904	50.00	UG/L	9
36)	BROMOFORM	17.26	173.0	2805	1.50	UG/L	9
37)	*CHLOROBENZENE-D5	15.46	117.0	137974	50.00	UG/L	9
39)	TOLUENE-D8	12.59	98.0	146587	49.72	UG/L	9
48)	4-BROMOFLUOROBENZENE	18.02	95.0	119709	49.53	UG/L	9
49)	1,1,2,2-TETRACHLOROETHANE	18.55	83.0	4707	3.56	UG/L	9
52)	1,2-DICHLOROBENZENE	21.26	146.0	5233	1.79	UG/L	9

* Compound is ISTD

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/04/93
DATE EXTRACTED: 03/17/93
DATE ANALYZED : 03/19/93
DILUTION FACT.: 1.0

CLIENT : EIKON SS 4-3
LAB SAMPLE : T303087-01
ANALYST : GREG
FILE NAME : >D4755

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	359	3-NITROANILINE	ND	1793
PHENOL	ND	359	ACENAPHTHENE	ND	359
2-CHLOROPHENOL	ND	359	2,4-DINITROPHENOL	ND	1793
BIS(2-CHLOROETHYL)ETHER	ND	359	DIBENZOFURAN	ND	359
1,3-DICHLOROBENZENE	ND	359	4-NITROPHENOL	ND	1793
1,4-DICHLOROBENZENE	ND	359	2,4-DINITROTOLUENE	ND	359
BENZYL ALCOHOL	ND	359	FLUORENE	ND	359
1,2-DICHLOROBENZENE	ND	359	4-NITROANILINE	ND	1793
2-METHYLPHENOL	ND	359	DIETHYLPHTHALATE	ND	359
BIS(2-CHLOROISOPROPYL)ETHER	ND	359	4-CHLOROPHENYL-PHENYLETHER	ND	359
N-NITROSO-DI-N-PROPYLAMINE	ND	359	4,6-DINITRO-2-METHYLPHENOL	ND	1793
HEXACHLOROETHANE	ND	359	N-NITROSODIPHENYLAMINE	ND	359
3- and 4-METHYLPHENOL	ND	717	4-BROMOPHENYL-PHENYLETHER	ND	359
NITROBENZENE	ND	359	HEXACHLOROBENZENE	ND	359
ISOPHORONE	ND	359	PENTACHLOROPHENOL	ND	1793
2-NITROPHENOL	ND	359	PHENANTHRENE	ND	359
2,4-DIMETHYLPHENOL	ND	359	ANTHRACENE	ND	359
BIS(2-CHLOROETHOXY)METHANE	ND	359	DI-N-BUTYLPHTHALATE	ND	359
2,4-DICHLOROPHENOL	ND	359	FLUORANTHENE	77 J	359
BENZOIC ACID	ND	1793	BENZIDINE	ND	359
1,2,4-TRICHLOROBENZENE	ND	359	PYRENE	75 J	359
NAPHTHALENE	ND	359	BUTYLBENZYLPHTHALATE	ND	359
4-CHLOROANILINE	ND	359	BENZO(A)ANTHRACENE	45 J	359
HEXACHLOROBUTADIENE	ND	359	3,3'-DICHLOROBENZIDINE	ND	717
2-METHYLNAPHTHALENE	ND	359	CHRYSENE	76 J	359
4-CHLORO-3-METHYLPHENOL	ND	359	BIS(2-ETHYLHEXYL)PHTHALATE	158 J	359
HEXACHLOROCYCLOPENTADIENE	ND	359	DI-N-OCTYLPHTHALATE	ND	359
2,4,5-TRICHLOROPHENOL	ND	1793	BENZO(B)FLUORANTHENE	70 J	359
2,4,6-TRICHLOROPHENOL	ND	359	BENZO(K)FLUORANTHENE	42 J	359
2-CHLORONAPHTHALENE	ND	359	BENZO(A)PYRENE	52 J	359
2-NITROANILINE	ND	1793	INDENO(1,2,3-CD)PYRENE	52 J	359
ACENAPHTHYLENE	ND	359	DIBENZO(A,H)ANTHRACENE	ND	359
DIMETHYLPHTHALATE	ND	359	BENZO(G,H,I)PERYLENE	46 J	359
2,6-DINITROTOLUENE	ND	359			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	66 %	23 - 120	OK
2-FLUOROBIPHENYL	62 %	30 - 115	OK
4-TERPHENYL-D14	65 %	18 - 137	OK
PHENOL-D6	60 %	24 - 113	OK
2-FLUOROPHENOL	62 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	62 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 92.0 is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 4-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303087-01

Sample wt/vol: 30 (g/ml) g Lab File ID: >D4755

Level: (low/med) LOW Date Received: 03/04/93

% Solid: 92.0 Date Extracted: 03/17/93

Extraction: (Sepf/Cont/Sonc) Sonc Date Analyzed: 03/19/93

GPC Cleanup: (Y/N) N Dilution Factor: 1

Number of TICs found: 10

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Condensation product (B)	4.84	14347	
2		Unknown carboxylic acid	21.16	430	
3		Unknown PCB	22.40	251	
4		Unknown carboxylic acid	23.08	215	
5		Unknown	28.18	932	
6		Unknown	30.25	322	
7		Unknown	30.37	1255	
8		Unknown	30.66	538	
9		Unknown	30.82	394	
10		Unknown	32.07	322	

(B) Compound present in blank
PCB Polychlorinated biphenyl

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/04/93
DATE EXTRACTED: 03/17/93
DATE ANALYZED : 03/19/93
DILUTION FACT.: 1.0

CLIENT : EIKON SS 5-3
LAB SAMPLE : T303087-02
ANALYST : GREG
FILE NAME : >D4756

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	350	3-NITROANILINE	ND	1750
PHENOL	ND	350	ACENAPHTHENE	ND	350
2-CHLOROPHENOL	ND	350	2,4-DINITROPHENOL	ND	1750
BIS(2-CHLOROETHYL)ETHER	ND	350	DIBENZOFURAN	ND	350
1,3-DICHLOROBENZENE	ND	350	4-NITROPHENOL	ND	1750
1,4-DICHLOROBENZENE	ND	350	2,4-DINITROTOLUENE	ND	350
BENZYL ALCOHOL	ND	350	FLUORENE	ND	350
1,2-DICHLOROBENZENE	ND	350	4-NITROANILINE	ND	1750
2-METHYLPHENOL	ND	350	DIETHYLPHTHALATE	ND	350
BIS(2-CHLOROISOPROPYL)ETHER	ND	350	4-CHLOROPHENYL-PHENYLETHER	ND	350
N-NITROSO-DI-N-PROPYLAMINE	ND	350	4,6-DINITRO-2-METHYLPHENOL	ND	1750
HEXACHLOROETHANE	ND	350	N-NITROSODIPHENYLAMINE	ND	350
3- and 4-METHYLPHENOL	ND	700	4-BROMOPHENYL-PHENYLETHER	ND	350
NITROBENZENE	ND	350	HEXACHLOROBENZENE	ND	350
ISOPHORONE	ND	350	PENTACHLOROPHENOL	ND	1750
2-NITROPHENOL	ND	350	PHENANTHRENE	ND	350
2,4-DIMETHYLPHENOL	ND	350	ANTHRACENE	ND	350
BIS(2-CHLOROETHOXY)METHANE	ND	350	DI-N-BUTYLPHTHALATE	ND	350
2,4-DICHLOROPHENOL	ND	350	FLUORANTHENE	ND	350
BENZOIC ACID	ND	1750	BENZIDINE	ND	350
1,2,4-TRICHLOROBENZENE	ND	350	PYRENE	ND	350
NAPHTHALENE	ND	350	BUTYLBENZYLPHTHALATE	ND	350
4-CHLOROANILINE	ND	350	BENZO(A)ANTHRACENE	ND	350
HEXACHLOROBUTADIENE	ND	350	3,3'-DICHLOROBENZIDINE	ND	700
2-METHYLNAPHTHALENE	ND	350	CHRYSENE	ND	350
4-CHLORO-3-METHYLPHENOL	ND	350	BIS(2-ETHYLHEXYL)PHTHALATE	ND	350
HEXACHLOROCYCLOPENTADIENE	ND	350	DI-N-OCTYLPHTHALATE	ND	350
2,4,5-TRICHLOROPHENOL	ND	1750	BENZO(B)FLUORANTHENE	ND	350
2,4,6-TRICHLOROPHENOL	ND	350	BENZO(K)FLUORANTHENE	ND	350
2-CHLORONAPHTHALENE	ND	350	BENZO(A)PYRENE	ND	350
2-NITROANILINE	ND	1750	INDENO(1,2,3-CD)PYRENE	ND	350
ACENAPHTHYLENE	ND	350	DIBENZO(A,H)ANTHRACENE	ND	350
DIMETHYLPHTHALATE	ND	350	BENZO(G,H,I)PERYLENE	ND	350
2,6-DINITROTOLUENE	ND	350			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	52 %	23 - 120	OK
2-FLUOROBIPHENYL	55 %	30 - 115	OK
4-TERPHENYL-D14	57 %	18 - 137	OK
PHENOL-D6	54 %	24 - 113	OK
2-FLUOROPHENOL	53 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	55 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 94.3 is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 5-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303087-02

Sample wt/vol: 30 (g/ml) g Lab File ID: >D4756

Level: (low/med) LOW Date Received: 03/04/93

% Solid: 94.3 Date Extracted: 03/17/93

Extraction: (Sepf/Cont/Sonc) Sonc Date Analyzed: 03/19/93

GPC Cleanup: (Y/N) N Dilution Factor: 1

Number of TICs found: 3

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Condensatipon product (B)	4.67	25546	
2		Unknown	6.52	139	
3		Unknown	28.17	559	

(B) Compound present in blank

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE EXTRACTED: 03/17/93
DATE ANALYZED : 03/19/93
DILUTION FACT.: 1.0

CLIENT :
LAB SAMPLE : METHOD BLANK
ANALYST : GREG
FILE NAME : >D4754

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	330	3-NITROANILINE	ND	1650
PHENOL	ND	330	ACENAPHTHENE	ND	330
2-CHLOROPHENOL	ND	330	2,4-DINITROPHENOL	ND	1650
BIS(2-CHLOROETHYL)ETHER	ND	330	DIBENZOFURAN	ND	330
1,3-DICHLOROBENZENE	ND	330	4-NITROPHENOL	ND	1650
1,4-DICHLOROBENZENE	ND	330	2,4-DINITROTOLUENE	ND	330
BENZYL ALCOHOL	ND	330	FLUORENE	ND	330
1,2-DICHLOROBENZENE	ND	330	4-NITROANILINE	ND	1650
2-METHYLPHENOL	ND	330	DIETHYLPHTHALATE	ND	330
BIS(2-CHLOROISOPROPYL)ETHER	ND	330	4-CHLOROPHENYL-PHENYLETHER	ND	330
N-NITROSO-DI-N-PROPYLAMINE	ND	330	4,6-DINITRO-2-METHYLPHENOL	ND	1650
HEXACHLOROETHANE	ND	330	N-NITROSODIPHENYLAMINE	ND	330
3- and 4-METHYLPHENOL	ND	660	4-BROMOPHENYL-PHENYLETHER	ND	330
NITROBENZENE	ND	330	HEXACHLOROBENZENE	ND	330
ISOPHORONE	ND	330	PENTACHLOROPHENOL	ND	1650
2-NITROPHENOL	ND	330	PHENANTHRENE	ND	330
2,4-DIMETHYLPHENOL	ND	330	ANTHRACENE	ND	330
BIS(2-CHLOROETHOXY)METHANE	ND	330	DI-N-BUTYLPHTHALATE	ND	330
2,4-DICHLOROPHENOL	ND	330	FLUORANTHENE	ND	330
BENZOIC ACID	ND	1650	BENZIDINE	ND	330
1,2,4-TRICHLOROBENZENE	ND	330	PYRENE	ND	330
NAPHTHALENE	ND	330	BUTYLBENZYLPHTHALATE	ND	330
4-CHLOROANILINE	ND	330	BENZO(A)ANTHRACENE	ND	330
HEXACHLOROBUTADIENE	ND	330	3,3'-DICHLOROBENZIDINE	ND	660
2-METHYLNAPHTHALENE	ND	330	CHRYSENE	ND	330
4-CHLORO-3-METHYLPHENOL	ND	330	BIS(2-ETHYLHEXYL)PHTHALATE	ND	330
HEXACHLOROCYCLOPENTADIENE	ND	330	DI-N-OCTYLPHTHALATE	ND	330
2,4,5-TRICHLOROPHENOL	ND	1650	BENZO(B)FLUORANTHENE	ND	330
2,4,6-TRICHLOROPHENOL	ND	330	BENZO(K)FLUORANTHENE	ND	330
2-CHLORONAPHTHALENE	ND	330	BENZO(A)PYRENE	ND	330
2-NITROANILINE	ND	1650	INDENO(1,2,3-CD)PYRENE	ND	330
ACENAPHTHYLENE	ND	330	DIBENZO(A,H)ANTHRACENE	ND	330
DIMETHYLPHTHALATE	ND	330	BENZO(G,H,I)PERYLENE	ND	330
2,6-DINITROTOLUENE	ND	330			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	48 %	23 - 120	OK
2-FLUOROBIPHENYL	50 %	30 - 115	OK
4-TERPHENYL-D14	53 %	18 - 137	OK
PHENOL-D6	59 %	24 - 113	OK
2-FLUOROPHENOL	57 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	55 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 100. is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.
METHOD BLANK

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: METHOD BLANK

Sample wt/vol: 30 (g/ml) g Lab File ID: >D4754

Level: (low/med) LOW Date Received:

% Solid: 100 Date Extracted: 03/17/93

Extraction: (Sepf/Cont/Sonc) Sonc Date Analyzed: 03/19/93

GPC Cleanup: (Y/N) N Dilution Factor: 1

Number of TICs found: 1

CONCENTRATION UNITS:
ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	Condensation product	4.66	20460	

FORM I SV-TIC 1/87 Rev

5B

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

Name: Laboratory Resources Inc., Contract: -----

File ID: >TA934 DFTPP Injection date: 2/16/93

nstrument ID: 0881 DFTPP Injection time: 11:01

/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.9
8	Less than 2.0% of mass 69	0.0(0.0)1
9	Mass 69 relative abundance	64.8
70	Less than 2.0% of mass 69	.2(.4)1
127	40.0 - 60.0% of mass 198	40.8
97	Less than 1.0% of mass 198	.3
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
75	10.0 - 30.0% of mass 198	20.3
65	Greater than 1.00% of mass 198	2.72
441	Present, but less than mass 443	11.7
42	Greater than 40.0% of mass 198	78.2
43	17.0 - 23.0% of mass 442	13.4(17.2)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNA S	>A5285	2/16/93	11:15
2	----------	20 ppm bna	>A5286	2/16/93	12:09
3	----------	80 ppm bna	>A5287	2/16/93	13:03
4	----------	120 ppm bna	>A5288	2/16/93	13:54
5	----------	160 ppm bna	>A5289	2/16/93	14:49
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SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TA949 DFTPP Injection date: 3/02/93

Instrument ID: 0881 DFTPP Injection time: 11:11

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.6
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	65.0
70	Less than 2.0% of mass 69	.3(.4)1
127	40.0 - 60.0% of mass 198	40.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	23.1
365	Greater than 1.00% of mass 198	3.26
441	Present, but less than mass 443	9.9
442	Greater than 40.0% of mass 198	70.3
443	17.0 - 23.0% of mass 442	13.1(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:

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNA S	>A5362	3/02/93	11:33
2	----------	METHOD BLANK	>A5363	3/02/93	12:25
3	----------	T302232-02	>A5364	3/02/93	13:17
4	----------	METHOD BLANK	>A5366	3/02/93	15:01
5	----------	S93068 MS	>A5367	3/02/93	15:54
6	----------	S93069 MSD	>A5368	3/02/93	16:46
7	----------	METHOD BLANK	>A5369	3/02/93	17:38
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SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Name: Laboratory Resources Inc., Contract: -----

File ID: >TD570 DFTPP Injection date: 3/04/93

nstrument ID: 0881 DFTPP Injection time: 9:35

/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.8
8	Less than 2.0% of mass 69	0.0(0.0)1
9	Mass 69 relative abundance	79.1
70	Less than 2.0% of mass 69	.4(.5)1
227	40.0 - 60.0% of mass 198	40.8
97	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
75	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.64
441	Present, but less than mass 443	8.9
42	Greater than 40.0% of mass 198	64.6
43	17.0 - 23.0% of mass 442	11.9(18.5)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNAE	>D4647	3/04/93	10:00
2	----------	20 PPM BNA	>D4648	3/04/93	10:47
3	----------	80 PPM BNA	>D4649	3/04/93	11:34
4	----------	120 PPM BNA	>D4650	3/04/93	12:20
5	----------	160 PPM BNA	>D4651	3/04/93	13:07
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SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TD580 DFTPP Injection date: 3/19/93

Instrument ID: 0881 DFTPP Injection time: 9:08

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.8
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	75.1
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	40.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	22.2
365	Greater than 1.00% of mass 198	2.30
441	Present, but less than mass 443	9.4
442	Greater than 40.0% of mass 198	67.0
443	17.0 - 23.0% of mass 442	13.8(20.5)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNAE	>D4749	3/19/93	9:25
2	----------	T303147-02	>D4750	3/19/93	10:20
3	----------	T303042-03	>D4752	3/19/93	11:50
4	----------	T303042-03	>D4753	3/19/93	12:35
5	----------	METHOD BLANK	>D4754	3/19/93	13:20
6	----------	T303087-01	>D4755	3/19/93	14:05
7	----------	T303087-02	>D4756	3/19/93	14:50
8	----------	METHOD BLANK	>D4759	3/19/93	17:06
9	----------	T303071-03	>D4760	3/19/93	17:51
10	----------	T303071-04	>D4761	3/19/93	18:36
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4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >A5366 Lab Sample ID: METHOD BLANK

Date Extracted: 02/22/93 Extraction: Sonc

Date Analyzed: 03/02/93 Time Analyzed: 15:01

Matrix: SOIL

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

LAB FILE NO.	LAB SAMPLE ID	DATE ANALYZED
>A5367	S93068 MS	03/02/93
>A5368	S93069 MSD	03/02/93

Comments:

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >D4754 Lab Sample ID: METHOD BLANK

Date Extracted: 03/17/93 Extraction: Sonc

Date Analyzed: 03/19/93 Time Analyzed: 13:20

Matrix: SOIL

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

LAB FILE NO.	LAB SAMPLE ID	DATE ANALYZED
>D4755	T303087-01	03/19/93
>D4756	T303087-02	03/19/93

Comments:

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 02/16/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>A5286	>A5285	>A5287	>A5288	>A5289						
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
RIDINE	.68092	.66030	.66338	.73324	.61964	.389	.67150	6.132			
N-NITROSODIMETHYLAMINE	.96525	.87981	.98812	1.01281	1.12868	.399	.99493	9.044			
FLUOROPHENOL	1.14665	.95868	.87549	.90351	.96520	.738	.96991	10.900			
ENOL-D6	1.66772	1.45070	1.33152	1.30926	1.41430	.948	1.43470	9.940			
PHENOL	1.76871	1.64715	1.59184	1.53477	1.53166	.951	1.61483	6.082	*		
CHLOROPHENOL	1.44030	1.24462	1.09622	1.04028	1.02829	.962	1.16994	14.865			
S(2-CHLOROETHYL)ETHER	1.52761	1.31024	1.23829	1.10924	1.19301	.960	1.27568	12.432			
1,3-DICHLOROBENZENE	1.58477	1.33534	1.33769	1.22549	1.24202	.991	1.34506	10.679			
4-DICHLOROBENZENE	1.55304	1.36966	1.33910	1.21357	1.26047	1.004	1.34717	9.701			
NZYL ALCOHOL	.92347	.75922	.65337	.69179	.79604	1.044	.76478	13.703			
2-DICHLOROBENZENE	1.56043	1.19994	1.10075	.99440	1.04886	1.043	1.18088	19.079			
2-METHYLPHENOL	1.34294	1.12089	1.06076	1.68843	1.00282	1.085	1.24317	22.545			
S(2-CHLORUISOPROPYL)ETHER	4.84258	3.48887	4.53682	4.47541	4.84643	1.081	4.43802	12.558			
NITROSO-DI-N-PROPYLAMINE	1.52361	1.06733	1.16303	1.36634	1.55947	1.114	1.33596	16.235		**	
HEXACHLOROETHANE	.75490	.59740	.60444	.60921	.65972	1.111	.64514	10.249			
and 4-METHYLPHENOL	1.31303	1.02798	.87790	.84422	.90080	1.114	.99278	19.344			(Conc=40.0,100.0,160.0,24
TROBENZENE-D5	.46775	.45695	.42456	.42576	.43664	.879	.44233	4.352			
TROBENZENE	.47789	.45568	.43845	.44393	.44413	.882	.45202	3.488			
SOPHORONE	.89297	.83160	.87478	.87145	.98880	.926	.89192	6.571			
NITROPHENOL	.22677	.23631	.21419	.20744	.20405	.938	.21775	6.214	*		
4-DIMETHYLPHENOL	.37050	.38150	.33439	.30537	.31587	.954	.34153	9.770			
BIS(2-CHLOROETHOXY)METHANE	.50854	.48558	.43957	.44023	.45813	.972	.46641	6.447			
4-DICHLOROPHENOL	.36280	.34172	.30200	.26062	.27746	.981	.30892	13.875	*		
NZOIC ACID	.21834	.24198	.28967	.29011	.30281	.984	.26858	13.568			
1,2,4-TRICHLOROBENZENE	.41612	.37021	.35550	.32270	.30665	.995	.35424	12.097			
PHTHALENE	1.13544	1.04638	.85097	.80234	.83101	1.004	.93323	15.897			
CHLOROANILINE	.54805	.51228	.44454	.39292	.41644	1.022	.46285	14.119			
XACHLOROBUTADIENE	.31601	.25131	.24061	.20766	.21838	1.040	.24679	17.177	*		
METHYLNAPHTHALENE	.90870	.74388	.65665	.54346	.53708	1.129	.67796	22.848			
CHLORO-3-METHYLPHENOL	.43297	.41999	.38026	.33916	.34787	1.115	.38405	10.910	*		

- Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

RSD - Percent Relative Standard Deviation

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Lase No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 02/16/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>A5286	>A5285	>A5287	>A5288	>A5289					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
XACHLOROCYCLOPENTADIENE	.59783	.48011	.54516	.49819	.49520	.887	.52330	9.223		**
2,4,5-TRICHLOROPHENOL	.59701	.52034	.49152	.45526	.42584	.904	.49799	13.236		
4,6-TRICHLOROPHENOL	.52317	.50596	.47492	.43581	.42987	.899	.47395	8.729	*	
FLUOROBIPHENYL	1.51334	1.34609	1.22544	.98520	.98544	.911	1.21110	18.997		
2-CHLORONAPHTHALENE	1.31769	1.14437	1.14261	.97908	.95613	.921	1.10798	13.247		
NITROANILINE	.75351	.64887	.76219	.75745	.75034	.943	.73447	6.543		
ENAPHTHYLENE	2.15582	1.92968	1.62585	1.33573	1.23969	.978	1.65735	23.398		
.METHYLPHTHALATE	1.87983	1.55151	1.49383	1.23287	1.23325	.977	1.47826	18.124		
6-DINITROTOLUENE	.43748	.38902	.45111	.41340	.44563	.984	.42733	6.041		
NITROANILINE	.45251	.40648	.45713	.45678	.44122	1.001	.44282	4.813		
ENAPHTHENE	1.47108	1.22802	1.15925	1.03111	.97875	1.005	1.17364	16.496	*	
2,4-DINITROPHENOL	.19933	.27756	.30398	.33641	.33947	1.015	.29135	19.691		**
BENZOFURAN	2.36093	1.79686	1.75452	1.56712	1.47711	1.027	1.79131	19.234		
NITROPHENOL	1.28068	1.08948	1.09557	1.01059	.95895	1.027	1.08705	11.250		**
4-DINITROTOLUENE	.70265	.59210	.67399	.65796	.67644	1.037	.66063	6.286		
UORENE	1.71017	1.39796	1.32620	1.08827	1.05759	1.074	1.31604	20.134		
NITROANILINE	.63948	.53878	.66300	.62896	.60244	1.087	.61453	7.747		
ETHYLPHTHALATE	2.14936	1.81186	1.71690	1.40539	1.21573	1.077	1.65985	21.888		
4-CHLOROPHENYL-PHENYLETHER	1.00269	.78823	.76684	.59961	.52375	1.079	.73622	25.271		
4,6-TRIBROMOPHENOL	.66022	.39376	.59927	.54949	.57132	1.111	.55481	17.872		
6-DINITRO-2-METHYLPHENOL	.16870	.18447	.20088	.16996	.18486	.909	.18177	7.237		
N-NITROSODIPHENYLAMINE	.45770	.36946	.37559	.29904	.27197	.912	.35475	20.524	*	
UPENZENE	1.13098	1.06390	1.09115	.84674	.74675	.914	.97588	17.317		
BROMOPHENYL-PHENYLETHER	.29706	.22437	.24229	.19816	.19395	.952	.23117	18.079		
EXACHLOROBENZENE	.39108	.27476	.34279	.30622	.31977	.966	.32692	13.306		
NTACHLOROPHENOL	.25845	.22435	.24237	.21741	.22848	.988	.23421	6.971	*	
ENANTHRENE	1.24708	1.06461	.92901	.69800	.69802	1.003	.92734	25.647		
NTHRACENE	1.18587	1.06055	.90387	.77147	.75308	1.008	.93497	19.974		
-N-BUTYLPHTHALATE	1.76329	1.58887	1.49245	1.20264	1.11247	1.084	1.43195	18.892		
UORANTHENE	1.49556	1.32398	1.21403	1.02099	1.00638	1.142	1.21219	17.092	*	

- Response Factor (Subscript is amount in UG/L)

$\overline{RT}$ - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

RSD - Percent Relative Standard Deviation

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

ase No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 02/16/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>A5286	>A5285	>A5287	>A5288	>A5289					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	RRT	$\overline{RF}$	% RSD	CCC	SPCC
NZIDINE	.39965	.33668	.25875	.23612	.29232	.886	.30471	21.398		
PYRENE	1.22323	1.07298	.95706	.82538	.83283	.891	.98229	17.177		
TERPHENYL-D14	1.00756	.80659	.74958	.59289	.64446	.909	.76021	21.296		
TYLBENZYLPHTHALATE	.71669	.60828	.56544	.48932	.46953	.959	.56985	17.462		
BENZO(A)ANTHRACENE	1.25740	1.03215	1.04093	.87560	.90116	.999	1.02145	14.840		
3,3'-DICHLOROBENZIDINE	.33924	.29151	.31992	.29676	.29453	.986	.30839	6.679		
RYSENE	1.14808	.94905	.89146	.73816	.76507	1.002	.89836	18.325		
BIS(2-ETHYLHEXYL)PHTHALATE	1.01898	.90760	.77242	.61124	.57772	1.014	.77759	24.300		
DI-N-OCTYLPHTHALATE	2.12842	1.81247	1.64297	1.23585	1.17402	.949	1.59874	25.025	*	
NZO(B)FLUORANTHENE	1.46017	1.25421	1.22483	1.20605	1.24891	.971	1.27883	8.070		
NZO(K)FLUORANTHENE	1.14263	1.09629	.94674	.66896	.61789	.973	.89450	26.947		
BENZO(A)PYRENE	1.16486	.98950	.99713	.94386	.91505	.995	1.00208	9.681	*	
DENO(1,2,3-CD)PYRENE	.44750	.52849	.44566	.42240	.45451	1.105	.45971	8.766		
BENZO(A,H)ANTHRACENE	.42140	.40480	.42765	.39701	.45080	1.108	.42033	5.001		
BENZO(G,H,I)PERYLENE	.37700	.35530	.36468	.33826	.37698	1.135	.36244	4.501		

- Response Factor (Subscript is amount in UG/L)

RT - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

RSD - Percent Relative Standard Deviation

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Lase No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	RRT	RF	% RSD	CCC	SPCC
RIDINE	.65964	.87720	.90026	1.04735	.87576	.274	.87204	15.878		
N-NITROSODIMETHYLAMINE	.98950	.98772	.94180	.99111	1.04680	.286	.99139	3.756		
FLUOROPHENOL	1.17061	1.05395	1.04893	1.02311	1.08324	.691	1.07597	5.303		
ENOL-D6	1.76750	1.48348	1.23531	1.22015	1.21095	.960	1.38348	17.552		
PHENOL	1.83989	1.88167	1.49387	1.35475	1.29828	.964	1.57369	17.282	*	
CHLOROPHENOL	1.33890	1.36742	1.11348	1.11900	1.09786	.959	1.20733	11.076		
S(2-CHLOROETHYL)ETHER	1.46337	1.33905	1.13685	1.20461	1.22103	.964	1.27298	10.130		
,3-DICHLOROBENZENE	1.47749	1.43188	1.35226	1.37139	1.45458	.988	1.41752	3.793		
1,4-DICHLOROBENZENE	1.46389	1.43088	1.32197	1.32212	1.39622	1.004	1.38702	4.611		
NZYL ALCOHOL	1.61066	1.46565	1.59236	1.55634	1.66530	1.065	1.57806	4.698		
2-DICHLOROBENZENE	1.48317	1.41163	1.30428	1.30906	1.41665	1.052	1.38496	5.550		
2-METHYLPHENOL	1.35526	1.28791	1.21415	1.24682	1.24157	1.112	1.26914	4.325		
S(2-CHLOROISOPROPYL)ETHER	3.39477	3.07243	3.50586	3.42325	3.83588	1.104	3.44644	7.924		
NITROSO-DI-N-PROPYLAMINE	1.48928	1.34162	1.50620	1.45275	1.54786	1.146	1.46754	5.332		**
EXACHLOROETHANE	.83825	.80735	.78820	.79575	.81772	1.128	.80946	2.425		
and 4-METHYLPHENOL	1.67483	1.51694	1.42077	1.42957	1.38905	1.156	1.48623	7.778		(Conc=40.0,100.0,160.0,24
TROBENZENE-D5	.48874	.46972	.46532	.46042	.49464	.869	.47577	3.163		
TROBENZENE	.49528	.47900	.44450	.48838	.53894	.872	.48922	6.942		
OPHORONE	.99207	.95697	1.01135	.97151	1.11966	.921	1.01031	6.384		
NITROPHENOL	.25347	.28066	.24389	.25392	.26876	.935	.26014	5.579	*	
4-DIMETHYLPHENOL	.44698	.48368	.42041	.40298	.42186	.961	.43518	7.197		
BIS(2-CHLOROETHOXY)METHANE	.55465	.50549	.52686	.48835	.53348	.978	.52177	4.911		
4-DICHLOROPHENOL	.36478	.37524	.32118	.32491	.32707	.986	.34264	7.399	*	
NZOIC ACID	.33482	.34438	.41961	.40998	.32005	1.011	.36577	12.498		
,2,4-TRICHLOROBENZENE	.42189	.39036	.37312	.36836	.38984	.995	.38871	5.399		
PHTHALENE	1.13034	1.00413	.86916	.92598	.99169	1.005	.98426	9.959		
CHLOROANILINE	.53819	.52873	.43915	.42163	.44298	1.034	.47414	11.569		
XACHLOROBUTADIENE	.29115	.26988	.24416	.24961	.26764	1.046	.26449	7.035	*	
METHYLNAPHTHALENE	1.13295	1.03876	.75247	.78056	.79788	1.146	.90052	19.232		
CHLORO-3-METHYLPHENOL	.44793	.45332	.33342	.34819	.34596	1.144	.38577	15.425	*	

- Response Factor (Subscript is amount in UG/L)

$\overline{RT}$ - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

SD - Percent Relative Standard Deviation

C - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

ase No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
XACHLOROCYCLOPENTADIENE	.40177	.43273	.45012	.44293	.47227	.876	.43996	5.869		**
2,4,5-TRICHLOROPHENOL	.58899	.52610	.48214	.48479	.49962	.900	.51633	8.563		
4,6-TRICHLOROPHENOL	.53292	.51299	.45466	.44870	.44223	.894	.47830	8.698	*	
FLUOROBIPHENYL	1.46571	1.24673	1.05204	1.06060	1.12465	.906	1.18995	14.512		
2-CHLORONAPHTHALENE	1.31524	1.13698	1.07108	1.06999	1.07216	.913	1.13309	9.333		
NITROANILINE	.75150	.68219	.75645	.70375	.71695	.945	.72217	4.379		
ENAPHTHYLENE	2.06961	1.74069	1.67966	1.70168	1.65826	.976	1.76998	9.619		
METHYLPHTHALATE	1.91818	1.55348	1.67297	1.57249	1.68799	.981	1.68102	8.641		
6-DINITROTOLUENE	.46214	.42778	.42854	.44153	.49233	.991	.45047	6.043		
NITROANILINE	.50801	.38962	.45708	.40556	.42772	1.009	.43760	10.696		
ENAPHTHENE	1.32325	1.07793	1.00513	1.02284	1.09211	1.005	1.10425	11.566	*	
2,4-DINITROPHENOL	.09890	.15986	.29547	.26854	.30689	1.024	.22593	40.631		**
BENZOFURAN	2.24750	1.83895	1.73861	1.72280	1.60905	1.029	1.83138	13.460		
NITROPHENOL	.43886	.46790	.43769	.40906	.43662	1.047	.43803	4.753		**
4-DINITROTOLUENE	.66871	.61536	.65529	.60972	.68196	1.048	.64621	4.985		
ORENE	1.60644	1.31420	1.21195	1.20751	1.28122	1.081	1.32426	12.398		
NITROANILINE	.54633	.45207	.48452	.42479	.46092	1.105	.47373	9.683		
ETHYLPHTHALATE	2.20524	1.82761	1.84286	1.83439	1.96070	1.090	1.93416	8.330		
4-CHLOROPHENYL-PHENYLETHER	.87455	.71494	.68300	.69770	.67190	1.088	.72842	11.432		
4,6-TRIBROMOPHENOL	.57572	.47044	.46552	.44619	.48443	1.122	.48846	10.372		
6-DINITRO-2-METHYLPHENOL	.15408	.18258	.18649	.19585	.18101	.908	.18000	8.665		
N-NITROSODIPHENYLAMINE	.44731	.33545	.24251	.27424	.28860	.910	.31762	25.139	*	
OBENZENE	1.29010	1.09906	.99923	1.01299	.82711	.911	1.04570	16.115		
BROMOPHENYL-PHENYLETHER	.29211	.24623	.24223	.23963	.24709	.950	.25346	8.608		
XACHLOROBENZENE	.41803	.37318	.33969	.32925	.37454	.963	.36694	9.509		
NTACHLOROPHENOL	.25142	.28233	.26593	.24263	.25539	.990	.25954	5.872	*	
ENANTHRENE	1.20402	1.01398	.95872	.90447	.95811	1.003	1.00786	11.539		
ITHRACENE	1.15199	1.00247	.92017	.92788	.96795	1.009	.99409	9.481		
-N-BUTYLPHTHALATE	2.17470	1.79487	1.78026	1.76571	1.75259	1.095	1.85363	9.720		
UORANTHENE	1.44839	1.23127	1.20005	1.16860	1.21770	1.151	1.25320	8.906	*	

- Response Factor (Subscript is amount in UG/L)

RT - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

%RSD - Percent Relative Standard Deviation

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

080

Initial Calibration Data
HSL Compounds

ase No: Instrument ID: #2637A01697

ntractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$		$\overline{RF}$	% RSD	CCC SPCC
NZIDINE	.14190	.13485	.09584	.07360	.10657	.884	1	.11055	25.470	
PYRENE	1.25062	1.00998	.96437	.99198	1.10233	.884	1	1.06386	10.955	
TERPHENYL-D14	.95184	.83787	.79944	.73393	.85394	.906		.83540	9.557	
TYLBENZYLPHTHALATE	.88769	.73808	.79886	.75448	.87414	.961		.81065	8.396	
ENZO(A)ANTHRACENE	1.20284	1.02664	1.12954	1.03051	1.19266	.998	1	1.11644	7.613	
3'-DICHLOROBENZIDINE	.19957	.22054	.16234	.15033	.22262	.990		.19108	17.398	
RYSENE	1.09287	.95481	1.01418	.92846	1.11098	1.002	1	1.02026	7.940	
S(2-ETHYLHEXYL)PHTHALATE	1.26107	1.04278	1.05573	1.02080	1.11851	1.019	1	1.09978	8.838	
DI-N-OCTYLPHTHALATE	2.24394	1.92807	1.75368	1.88138	1.88097	.954	1	1.93761	9.451	*
NZO(B)FLUORANTHENE	1.53395	1.28091	1.60364	1.46285	1.58026	.973	1	1.49232	8.700	
NZO(K)FLUORANTHENE	.71233	.78988	.36983	.50001	.53714	.974		.58184	29.008	
BENZO(A)PYRENE	1.10251	.96446	1.00067	.98225	1.08664	.996	1	1.02731	6.131	*
ENO(1,2,3-CD)PYRENE	.81942	.89395	.98767	.97087	1.09551	1.073		.95348	10.894	
ENZO(A,H)ANTHRACENE	.84382	.73060	.80926	.80800	.91336	1.076		.82101	8.063	
ENZO(G,H,I)PERYLENE	.80273	.70191	.77700	.76092	.86793	1.094		.78210	7.750	

- Response Factor (Subscript is amount in UG/L)

RT - Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

RSD - Percent Relative Standard Deviation

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/02/93

ontractor: LABORATORY RESOURCES Time: 11:33

Contract No: Laboratory ID: >A5362

nstrument ID: $2637A01697 Initial Calibration Date: 02/16/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
YRIDINE	.67150	.51290	23.62			
N-NITROSODIMETHYLAMINE	.99493	.96599	2.91			
-FLUOROPHENOL	.96991	.95694	1.34			
HENOL-D6	1.43470	1.54732	7.85			
PHENOL	1.61483	1.64437	1.83	*		
-CHLOROPHENOL	1.16994	1.25169	6.99			
IS(2-CHLOROETHYL)ETHER	1.27568	1.28597	.81			
,3-DICHLOROBENZENE	1.34506	1.36058	1.15			
,4-DICHLOROBENZENE	1.34717	1.28303	4.76			
NZYL ALCOHOL	.76478	.78219	2.28			
,2-DICHLOROBENZENE	1.18088	1.16678	1.19			
-METHYLPHENOL	1.24317	1.13463	8.73			
IS(2-CHLOROISOPROPYL)ETHER	4.43802	4.16098	6.24			
-NITROSO-DI-N-PROPYLAMINE	1.33596	1.26611	5.23		**	
HEXACHLOROETHANE	.64514	.70310	8.98			
and 4-METHYLPHENOL	.99278	1.08905	9.70			(Conc=100.00)
ITROBENZENE-D5	.44233	.46646	5.45			
NITROBENZENE	.45202	.44478	1.60			
OPHORONE	.89192	.88040	1.29			
-NITROPHENOL	.21775	.25283	16.11	*		
,4-DIMETHYLPHENOL	.34153	.38456	12.60			
IS(2-CHLOROETHOXY)METHANE	.46641	.49311	5.72			
,4-DICHLOROPHENOL	.30892	.34002	10.07	*		
NZOIC ACID	.26858	.30591	13.90			
1,2,4-TRICHLOROBENZENE	.35424	.36803	3.89			
PHTHALENE	.93323	1.03242	10.63			
-CHLOROANILINE	.46285	.51853	12.03			
EXACHLOROBUTADIENE	.24679	.24061	2.51	*		
-METHYLNAPHTHALENE	.67796	.74923	10.51			
-CHLORO-3-METHYLPHENOL	.38405	.42183	9.84	*		
EXACHLOROCYCLOPENTADIENE	.52330	.45591	12.88		**	
4,5-TRICHLOROPHENOL	.49799	.46620	6.38			

RF - Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

)iff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/02/93

ntractor: LABORATORY RESOURCES Time: 11:33

Contract No: Laboratory ID: >A5362

strument ID: #2637A01697 Initial Calibration Date: 02/16/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
,4,6-TRICHLOROPHENOL	.47395	.48949	3.28	*	
2-FLUOROBIPHENYL	1.21110	1.20778	.27		
CHLORONAPHTHALENE	1.10798	1.08940	1.68		
NITROANILINE	.73447	.66420	9.57		
ACENAPHTHYLENE	1.65735	1.58317	4.48		
METHYLPHTHALATE	1.47826	1.34315	9.14		
6-DINITROTOLUENE	.42733	.42457	.64		
>-NITROANILINE	.44282	.41459	6.38		
ENAPHTHENE	1.17364	1.18949	1.35	*	
4-DINITROPHENOL	.29135	.28827	1.06		**
BENZOFURAN	1.79131	1.86498	4.11		
4-NITROPHENOL	1.08705	.33009	69.63		**
4-DINITROTOLUENE	.66063	.60698	8.12		
UORENE	1.31604	1.47093	11.77		
4-NITROANILINE	.61453	.58604	4.64		
ETHYLPHTHALATE	1.65985	1.75805	5.92		
CHLOROPHENYL-PHENYLETHER	.73622	.69950	4.99		
,4,6-TRIBROMOPHENOL	.55481	.39570	28.68		
6-DINITRO-2-METHYLPHENOL	.18177	.20017	10.12		
NITROSODIPHENYLAMINE	.35475	.37381	5.37	*	
OBENZENE	.97588	1.03824	6.39		
-BROMOPHENYL-PHENYLETHER	.23117	.22548	2.46		
XACHLOROBENZENE	.32692	.26428	19.16		
NTACHLOROPHENOL	.23421	.23559	.59	*	
PHENANTHRENE	.92734	.98296	6.00		
THRACENE	.93497	1.03600	10.81		
-N-BUTYLPHTHALATE	1.43195	1.62534	13.51		
LUORANTHENE	1.21219	1.34431	10.90	*	
NZIDINE	.30471	.37835	24.17		
RENE	.98229	1.04271	6.15		
-TERPHENYL-D14	.76021	.80579	6.00		
UTYLBENZYLPHTHALATE	.56985	.68669	20.50		

RF - Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

iff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/02/93

ontractor: LABORATORY RESOURCES | Time: 11:33

Contract No: | Laboratory ID: >A5362

nstrument ID: #2637A01697 | Initial Calibration Date: 02/16/93

Minimum $\overline{RF}$ for SPCC is .050 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
ENZO(A)ANTHRACENE	1.02145	1.11562	9.22		
3,3'-DICHLOROBENZIDINE	.30839	.35327	14.55		
HRYSENE	.89836	.99785	11.07		
IS(2-ETHYLHEXYL)PHTHALATE	.77759	.94890	22.03		
DI-N-OCTYLPHTHALATE	1.59874	1.51123	5.47	*	
ENZO(B)FLUORANTHENE	1.27883	1.10025	13.96		
ENZO(K)FLUORANTHENE	.89450	.88631	.92		
ENZO(A)PYRENE	1.00208	.98628	1.58	*	
NDENO(1,2,3-CD)PYRENE	.45971	.94144	104.79		
IBENZO(A,H)ANTHRACENE	.42033	.88619	110.83		
ENZO(G,H,I)PERYLENE	.36244	.96301	165.70		

RF - Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

)iff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/19/93

ontractor: LABORATORY RESOURCES Time: 09:25

Contract No: Laboratory ID: >D4749

istrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
YRIDINE	.87204	.19438	77.71			
N-NITROSODIMETHYLAMINE	.99139	.93879	5.31			
-FLUOROPHENOL	1.07597	.92170	14.34			
HENOL-D6	1.38348	1.34921	2.48			
PHENOL	1.57369	1.79481	14.05	*		
-CHLOROPHENOL	1.20733	1.42507	18.03			
IS(2-CHLOROETHYL)ETHER	1.27298	1.19102	6.44			
,3-DICHLOROBENZENE	1.41752	1.41233	.37			
,4-DICHLOROBENZENE	1.38702	1.38284	.30			
NZYL ALCOHOL	1.57806	1.47077	6.80			
,2-DICHLOROBENZENE	1.38496	1.37416	.78			
2-METHYLPHENOL	1.26914	1.27036	.10			
IS(2-CHLORDISOPROPYL)ETHER	3.44644	3.30119	4.21			
-NITROSO-DI-N-PROPYLAMINE	1.46754	1.28894	12.17		**	
HEXACHLOROETHANE	.80946	.76994	4.88			
and 4-METHYLPHENOL	1.48623	1.48430	.13			(Conc=100.00)
ITROBENZENE-D5	.47577	.42429	10.82			
ITROBENZENE	.48922	.45185	7.64			
OPHORONE	1.01031	.88134	12.77			
-NITROPHENOL	.26014	.27167	4.43	*		
,4-DIMETHYLPHENOL	.43518	.44819	2.99			
IS(2-CHLOROETHOXY)METHANE	.52177	.47354	9.24			
,4-DICHLOROPHENOL	.34264	.39010	13.85	*		
NZOIC ACID	.36577	.38168	4.35			
1,2,4-TRICHLOROBENZENE	.38871	.41195	5.98			
PHTHALENE	.98426	.97193	1.25			
-CHLOROANILINE	.47414	.52087	9.86			
EXACHLOROBUTADIENE	.26449	.30900	16.83	*		
-METHYLNAPHTHALENE	.90052	1.09564	21.67			
-CHLORO-3-METHYLPHENOL	.38577	.48902	26.77	*		
EXACHLOROCYCLOPENTADIENE	.43996	.51921	18.01		**	
,4,5-TRICHLOROPHENOL	.51633	.54491	5.54			

RF - Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/19/93

ntractor: LABORATORY RESOURCES Time: 09:25

Contract No: Laboratory ID: >D4749

strument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-TRICHLOROPHENOL	.47830	.53908	12.71	*	
2-FLUOROBIPHENYL	1.18995	1.21936	2.47		
-CHLORONAPHTHALENE	1.13309	1.13624	.28		
-NITROANILINE	.72217	.64698	10.41		
ACENAPHTHYLENE	1.76998	1.68462	4.82		
METHYLPHTHALATE	1.68102	1.54831	7.89		
6-DINITROTOLUENE	.45047	.41754	7.31		
-NITROANILINE	.43760	.42708	2.40		
ENAPHTHENE	1.10425	1.08272	1.95	*	
4-DINITROPHENOL	.22593	.30820	36.41		**
BENZOFURAN	1.83138	1.91534	4.58		
4-NITROPHENOL	.43803	.47954	9.48		**
4-DINITROTOLUENE	.64621	.63949	1.04		
ORENE	1.32426	1.32873	.34		
4-NITROANILINE	.47373	.47722	.74		
ETHYLPHTHALATE	1.93416	1.90106	1.71		
CHLOROPHENYL-PHENYLETHER	.72842	.79983	9.80		
2,4,6-TRIBROMOPHENOL	.48846	.60056	22.95		
6-DINITRO-2-METHYLPHENOL	.18000	.23306	29.48		
NITROSODIPHENYLAMINE	.31762	.30691	3.37	*	
OBENZENE	1.04570	.99348	4.99		
4-BROMOPHENYL-PHENYLETHER	.25346	.26362	4.01		
XACHLOROBENZENE	.36694	.41599	13.37		
NTACHLOROPHENOL	.25954	.31133	19.95	*	
PHENANTHRENE	1.00786	.97783	2.98		
THRACENE	.99409	1.01053	1.65		
-N-BUTYLPHTHALATE	1.85363	1.72664	6.85		
LUORANTHENE	1.25320	1.31031	4.56	*	
NZIDINE	.11055	.15962	44.39		
RENE	1.06386	.94435	11.23		
-TERPHENYL-D14	.83540	.81999	1.84		
UTYLBENZYLPHTHALATE	.81065	.67498	16.74		

RF - Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

iff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/19/93

ontractor: LABORATORY RESOURCES Time: 09:25

Contract No: Laboratory ID: >D4749

nstrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
ENZO(A)ANTHRACENE	1.11644	1.02137	8.52		
3,3'-DICHLOROBENZIDINE	.19108	.20119	5.29		
HRYSENE	1.02026	.93056	8.79		
IS(2-ETHYLHEXYL)PHTHALATE	1.09978	.94650	13.94		
DI-N-OCTYLPHTHALATE	1.93761	1.60477	17.18	*	
ENZO(B)FLUORANTHENE	1.49232	1.10777	25.77		
ENZO(K)FLUORANTHENE	.58184	.89171	53.26		
ENZO(A)PYRENE	1.02731	.95346	7.19	*	
NDENO(1,2,3-CD)PYRENE	.95348	.80867	15.19		
IBENZO(A,H)ANTHRACENE	.82101	.71399	13.04		
ENZO(G,H,I)PERYLENE	.78210	.73671	5.80		

RF - Response Factor from daily standard file at 50.00 UG/L

F - Average Response Factor from Initial Calibration Form VI

)iff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

2B
SEMIVOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/02/93

LAB SAMP NO. ($)	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	DF	TOT OUT
ETHOD BLA S	73	73	78	N/A	N/A	N/A	1	0
302232-02 S	45	52	62	N/A	N/A	N/A	1	0
METHOD BLA S	67	62	71	N/A	N/A	N/A	1	0
03068 MS S	71	65	69	N/A	N/A	N/A	1	0
03069 MSD S	71	68	67	N/A	N/A	N/A	1	0
METHOD BLA S	40	42	52	N/A	N/A	N/A	1	0

EPA CLP QC Limits For:	Soil	Water
S1 (NBZ) = NITROBENZENE-D5	23-120	35-114
S2 (FBP) = 2-FLUOROBIPHENYL	30-115	43-116
S3 (TPH) = 4-TERPHENYL-D14	18-137	33-141
S4 (PHL) = PHENOL-D6	24-113	10- 94
S5 (2FP) = 2-FLUOROPHENOL	25-121	21-100
S6 (TBP) = 2,4,6-TRIBROMOPHENOL	19-122	10-123

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits
N/A Not applicable
DF Column indicating dilution factor of final extract
DO Surrogates diluted out, no recovery data available

2B
SEMIVOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/19/93

LAB SAMP NO. ($)	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	DF	TOT OUT
303147-02 W	72	68	73	N/A	N/A	N/A	1	0
303042-03 W	71	49	48	37	28	36	20	0
T303042-03 W	65	58	59	55	53	53	20	0
ETHOD BLA S	48	50	53	59	57	55	1	0
303087-01 S	66	62	65	60	62	62	1	0
303087-02 S	52	55	57	54	53	55	1	0
METHOD BLA S	56	58	57	51	50	48	1	0
303071-03 S	71	71	74	73	70	69	1	0
303071-04 S	58	54	54	59	56	43	1	0

EPA CLP QC Limits For:	Soil	Water
S1 (NBZ) = NITROBENZENE-D5	23-120	35-114
S2 (FBP) = 2-FLUOROBIPHENYL	30-115	43-116
S3 (TPH) = 4-TERPHENYL-D14	18-137	33-141
S4 (PHL) = PHENOL-D6	24-113	10- 94
S5 (2FP) = 2-FLUOROPHENOL	25-121	21-100
S6 (TBP) = 2,4,6-TRIBROMOPHENOL	19-122	10-123

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits
N/A Not applicable
DF Column indicating dilution factor of final extract
DO Surrogates diluted out, no recovery data available

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laboratory Resources Inc.,

Matrix Spike - Lab Sample No. S93068, S93069
171-01SPK, SPKDUP

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC#	QC LIMITS REC
Phenol	6600	0	4053	61	26- 90
2-Chlorophenol	6600	0	4466	68	25-102
1,4-Dichlorobenzene	3300	0	2262	69	28-104
N-Nitroso-di-n-prop.(1)	3300	0	3422	104	41-126
1,2,4-Trichlorobenzene	3300	0	2336	71	38-107
4-Chloro-3-methylphenol	6600	0	4601	70	26-103
Acenaphthene	3300	0	2230	68	31-137
4-Nitrophenol	6600	0	5856	89	11-114
2,4-Dinitrotoluene	3300	0	2519	76	28- 89
Pentachlorophenol	6600	0	4195	64	17-109
Pyrene	3300	0	2157	65	35-142

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC#	% RPD#	QC LIMITS RPD	QC LIMITS REC
Phenol	6600	4420	67	9	35	26- 90
2-Chlorophenol	6600	4464	68	0	50	25-102
1,4-Dichlorobenzene	3300	2314	70	2	27	28-104
N-Nitroso-di-n-prop.(1)	3300	3764	114	10	38	41-126
1,2,4-Trichlorobenzene	3300	2357	71	1	23	38-107
4-Chloro-3-methylphenol	6600	4563	69	1	33	26-103
Acenaphthene	3300	2253	68	1	19	31-137
4-Nitrophenol	6600	6150	93	5	50	11-114
2,4-Dinitrotoluene	3300	2763	84	9	47	28- 89
Pentachlorophenol	6600	4596	70	9	47	17-109
Pyrene	3300	2207	67	2	36	35-142

(1) N-Nitroso-di-n-propylamine

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 of 22 outside limits

COMMENTS:_____

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >A5362 Lab Sample ID: 50 PPM BNA

Date Analyzed: 03/02/93 Time Analyzed: 11:33

	IS1(DCB)		IS2(NPT)		IS3(ANT)		IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	10873	10.47	48687	13.55	36688	18.00	88560	21.69	116431	28.47	139342	31.92
UPPER LIMIT	21746		97374		73376		177120		232862		278684	
LOWER LIMIT	5437		24344		18344		44280		58215		69671	
LAB SAMPLE #												
METHOD BLA	7089	10.47	34276	13.55	27153	17.97	70479	21.69	98843	28.45	112946	31.90
T302232-02	6867	10.47	34075	13.56	27219	17.98	69564	21.67	90939	28.45	111631	31.91
METHOD BLA	6483	10.47	30579	13.56	24551	17.98	64815	21.69	96516	28.46	122165	31.91
S93068 MS	6273	10.47	29561	13.55	25846	18.00	68109	21.69	113448	28.46	136998	31.91
S93069 MSD	6687	10.48	31364	13.57	27065	17.99	69060	21.69	119697	28.46	141333	31.91
METHOD BLA	5530	10.48	27694	13.55	23555	17.98	63859	21.67	110439	28.45	134842	31.91

IS1 (DCB) = 1,4-Dichlorobenzene-d4 IS4 (PHN) = Phenanthrene-d10

IS2 (NPT) = Napthalene-d8 IS5 (CRY) = Chrysene-d12

IS3 (ANT) = Acenapthene-d10 IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >D4749 Lab Sample ID: 50 PPM BNAE

Date Analyzed: 03/19/93 Time Analyzed: 09:25

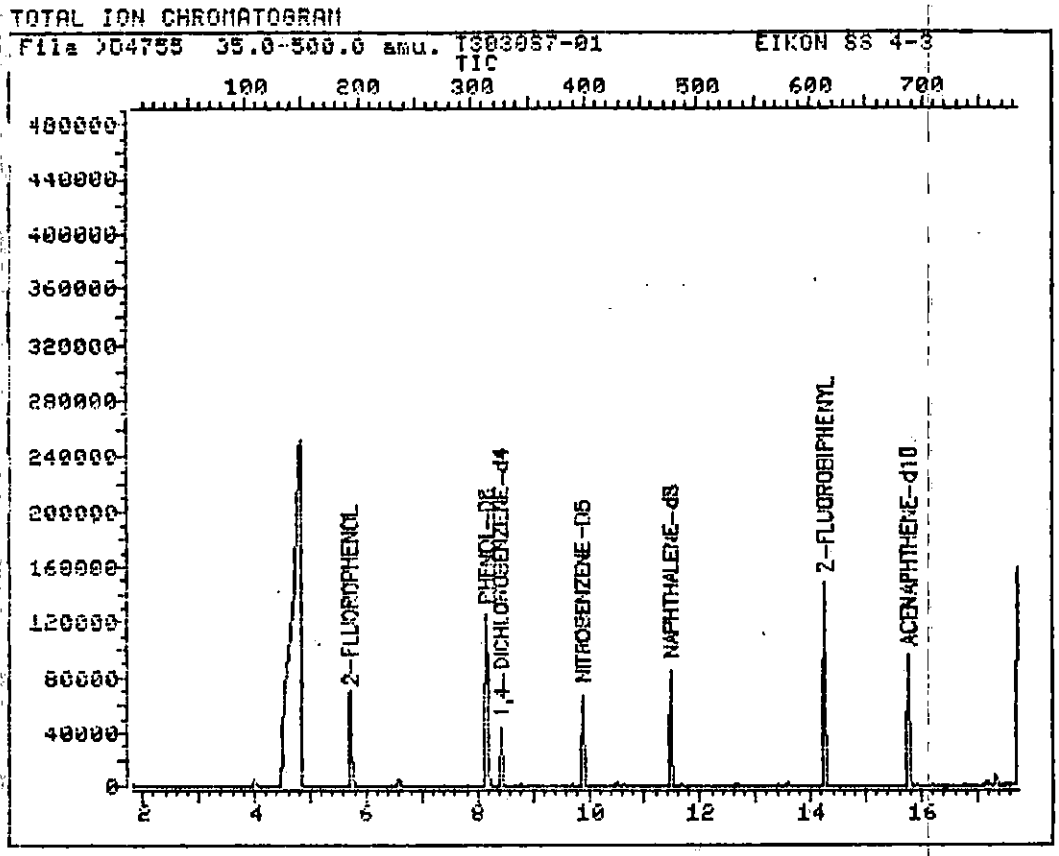
	IS1(DCB)		IS2(NPT)		IS3(ANT)		IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	16578	8.45	68150	11.48	50645	15.78	115574	19.32	162233	25.86	186115	29.12
UPPER LIMIT	33156		136300		101290		231148		324466		372230	
LOWER LIMIT	8289		34075		25323		57787		81116		93058	
LAB SAMPLE #												
T303147-02	14787	8.45	61878	11.47	45091	15.78	103387	19.33	144525	25.85	161023	29.10
T303042-03	13760	8.44	56198	11.47	38777	15.77	73401	19.36	126622	25.87	144270	29.13
T303042-03	11311	8.45	59347	11.49	44254	15.79	98771	19.34	144513	25.87	140609	29.12
METHOD BLA	16546	8.43	67464	11.48	47772	15.77	107799	19.32	151291	25.84	170473	29.12
T303087-01	15725	8.43	64057	11.48	47372	15.77	108173	19.32	142235	25.86	161849	29.12
T303087-02	16749	8.43	69188	11.48	49196	15.77	111365	19.32	159472	25.85	180956	29.11
METHOD BLA	31648	8.46	131083	11.49	92576	15.80	208861	19.36	284277	25.88	311732	29.14
T303071-03	16211	8.46	65662	11.49	48765	15.78	107285	19.35	138408	25.88	150112	29.15
T303071-04	17765	8.44	73632	11.47	53338	15.79	116953	19.33	153370	25.84	135131	29.12

IS1 (DCB) = 1,4-Dichlorobenzene-d4 IS4 (PHN) = Phenanthrene-d10
IS2 (NPT) = Napthalene-d8 IS5 (CRY) = Chrysene-d12
IS3 (ANT) = Acenapthene-d10 IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

TOTAL ION CHROMATOGRAM



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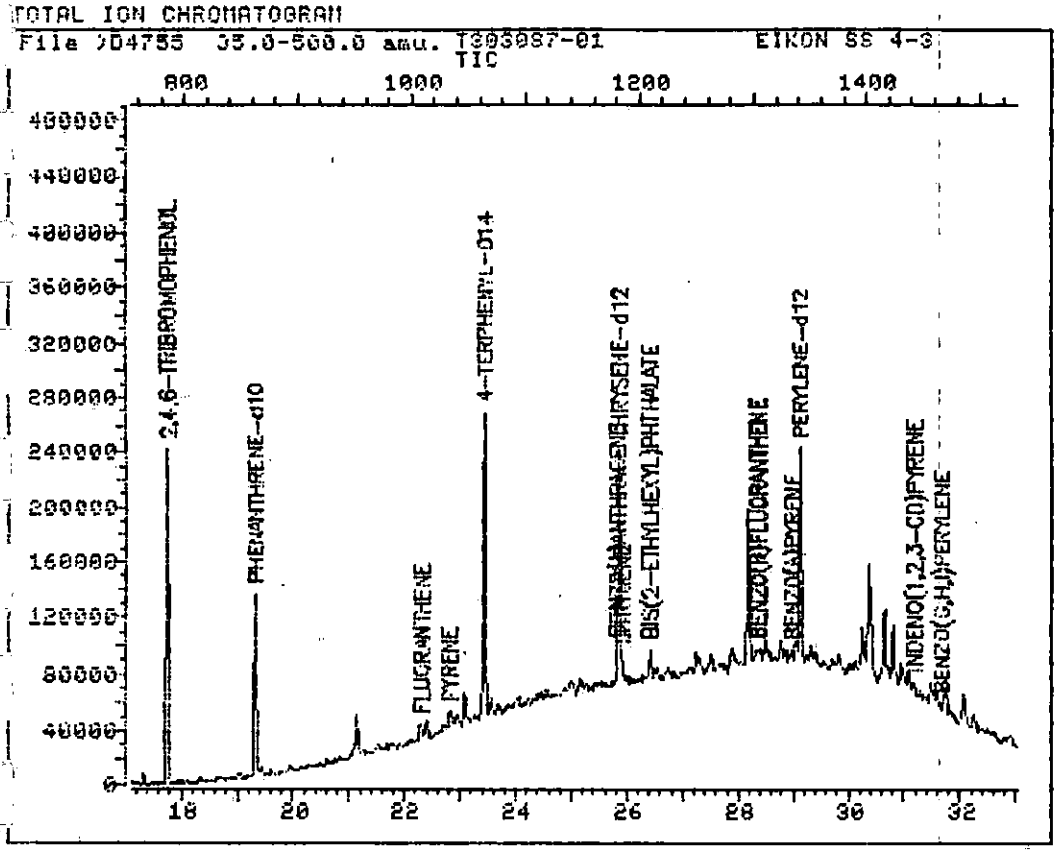
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

Operator ID: GREG
Quant Time : 930319 14:39
Injected at: 930319 14:05

TOTAL ION CHROMATOGRAM



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Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6

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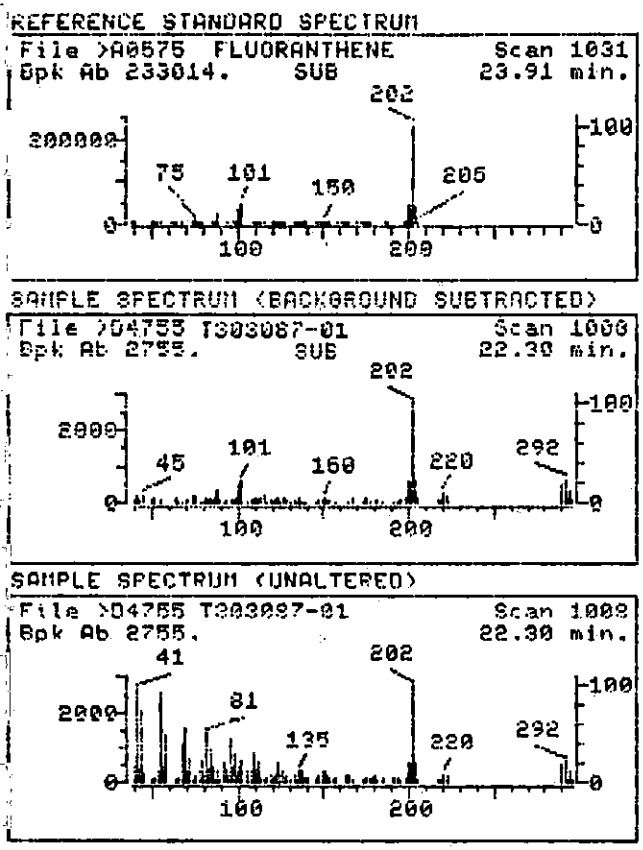
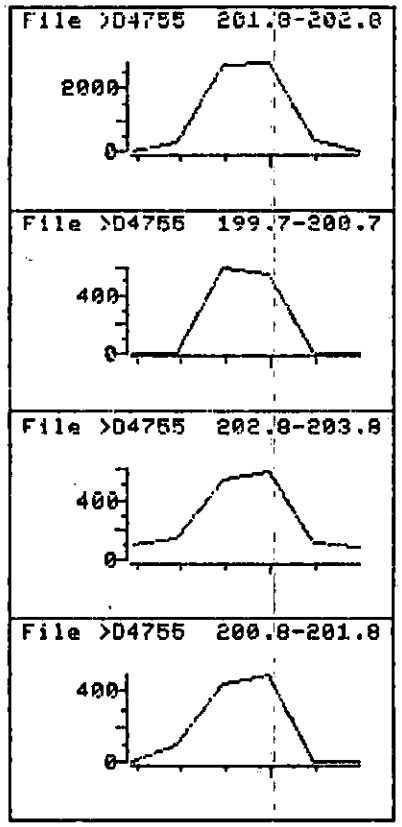
Injected at: 930319 14:05





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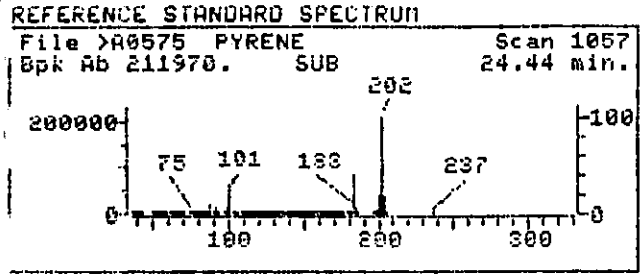
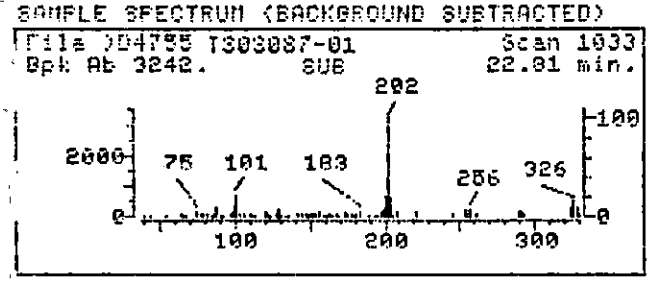
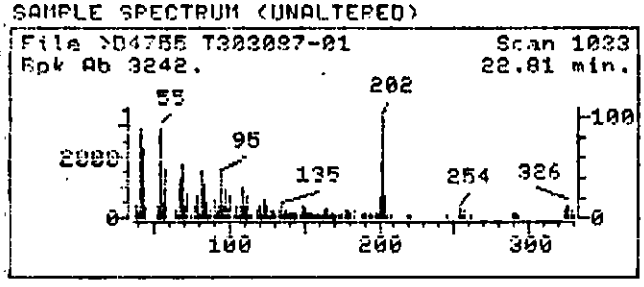
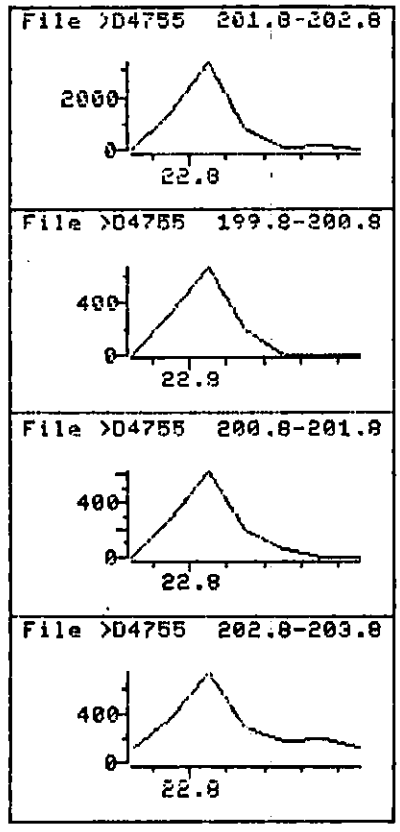
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Ucal Time: 930319 09:25

Compound No : 64
Compound Name : FLUORANTHENE
Scan Number : 1008
Retention Time: 22.30 min.
Quant Ion : 202.1
Area : 7566
Concentration : 2.14 UG/L
q-value : 96









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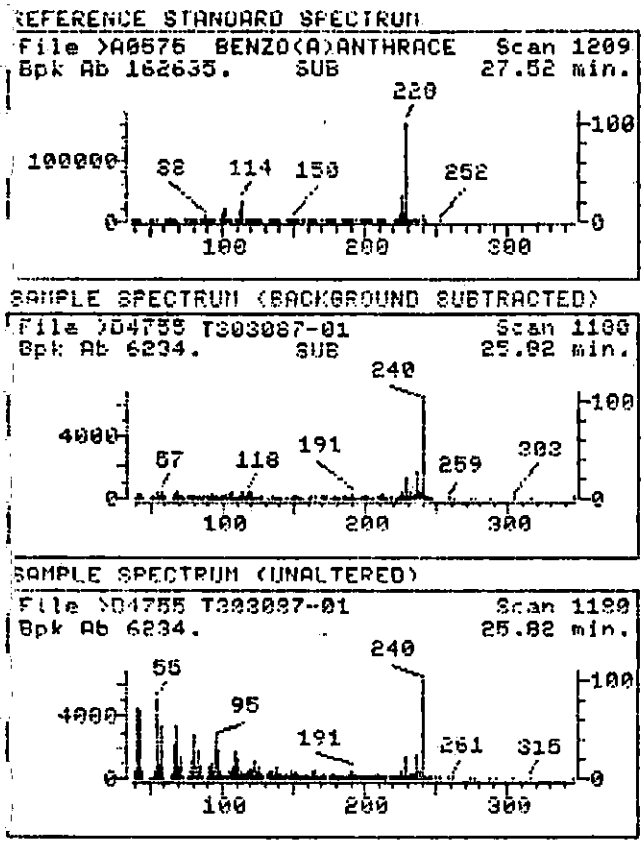
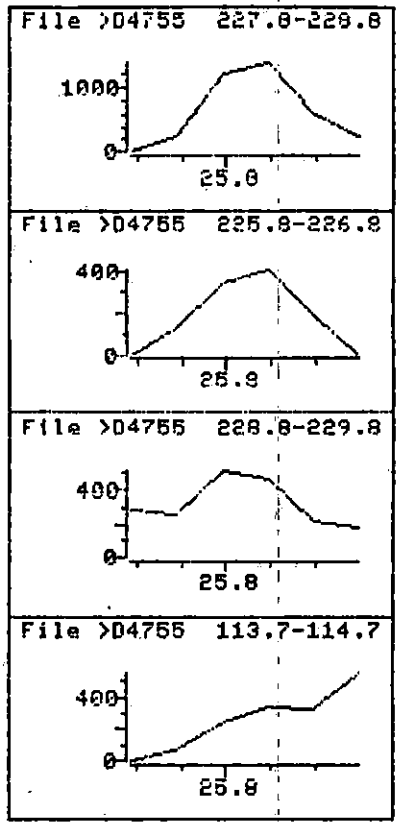
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 67
Compound Name : PYRENE
Scan Number : 1033
Retention Time: 22.81 min.
Quant Ion : 202.1
Area : 7005
Concentration : 2.09 UG/L
q-value : 98





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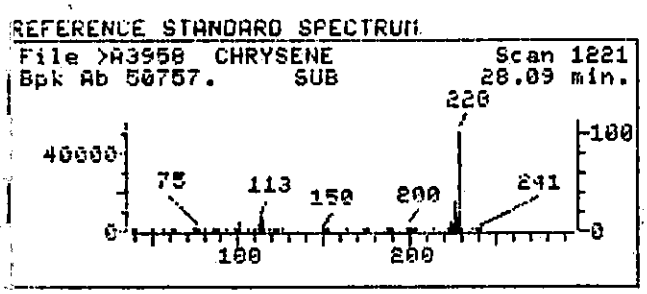
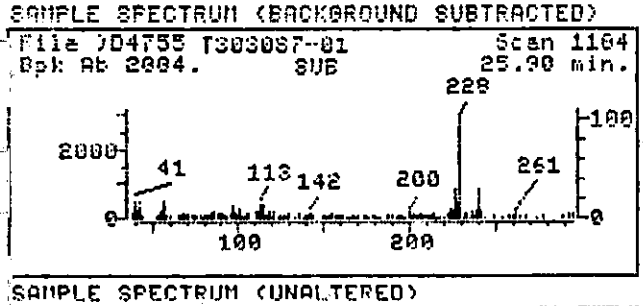
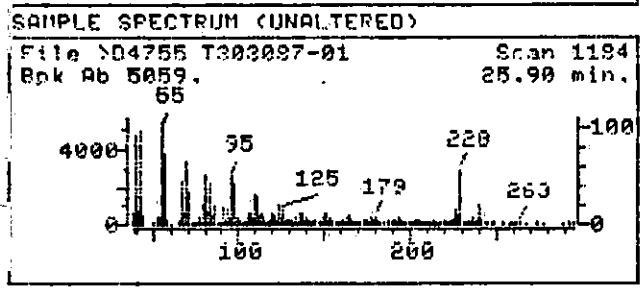
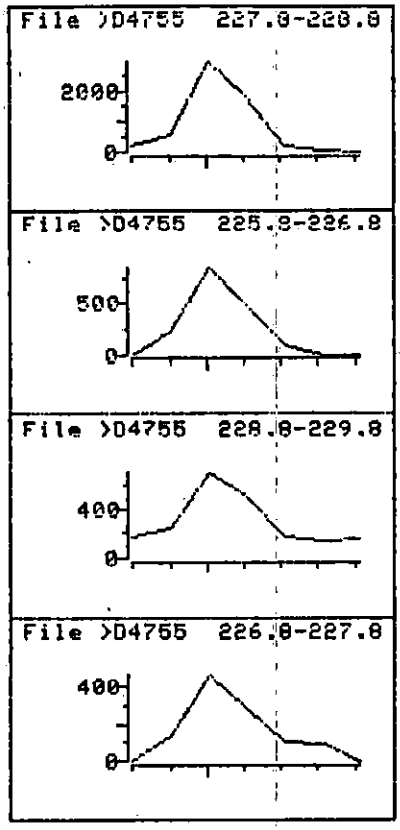
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 70
Compound Name : BENZO(A)ANTHRACENE
Scan Number : 1180
Retention Time: 25.82 min.
Quant Ion : 228.1
Area : 4535
Concentration : 1.25 UG/L
q-value : 90









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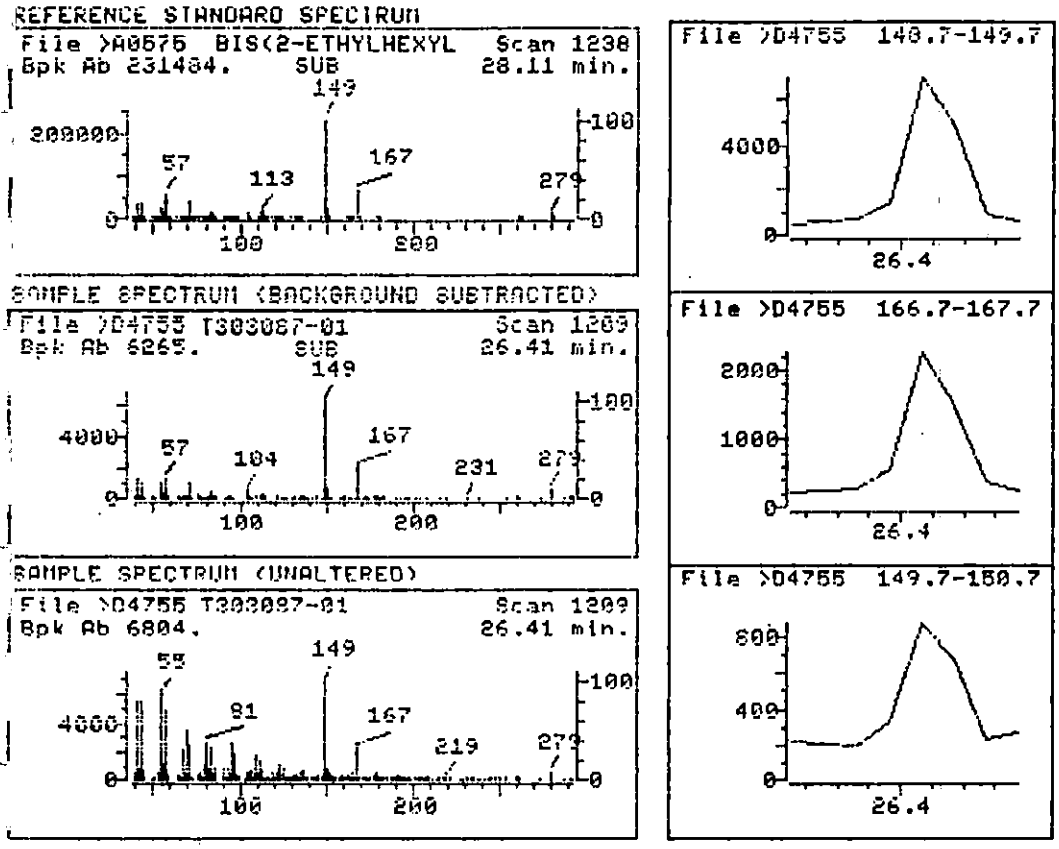
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 72
Compound Name : CHRYSENE
Scan Number : 1184
Retention Time: 25.90 min.
Quant Ion : 228.1
Area : 6984
Concentration : 2.11 UG/L
q-value : 93



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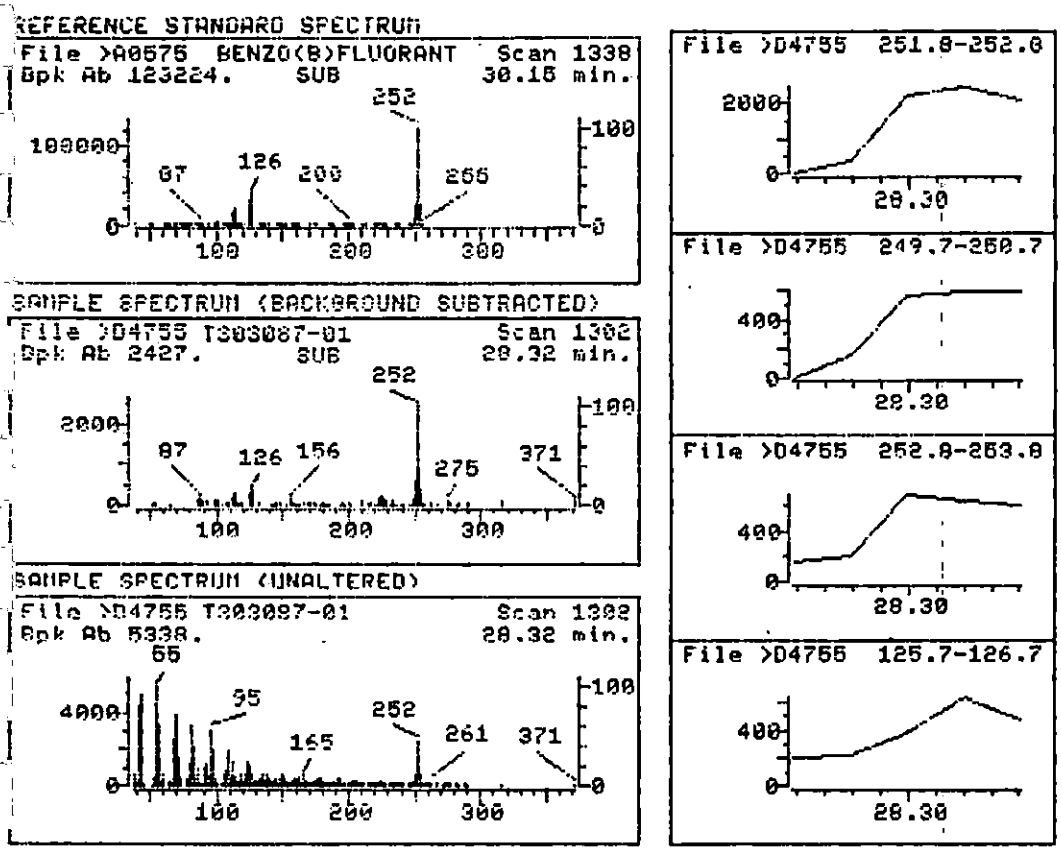
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

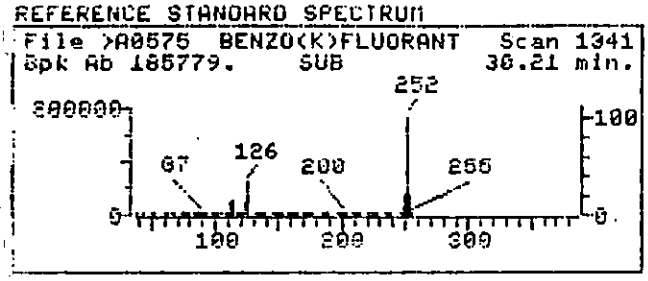
Compound No : 73
Compound Name : BIS(2-ETHYLHEXYL)PHTHALATE
Scan Number : 1209
Retention Time: 26.41 min.
Quant Ion : 149.0
Area : 14864
Concentration : 4.42 UG/L
q-value : 98



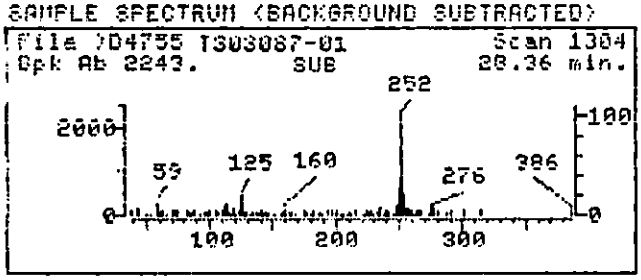
Data File: >D4755::D1 Quant Output File: ^D4755::QT
Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 76
Compound Name : BENZO(B)FLUORANTHENE
Scan Number : 1302
Retention Time: 28.32 min.
Quant Ion : 252.1
Area : 8688
Concentration : 1.94 UG/L
q-value : 91

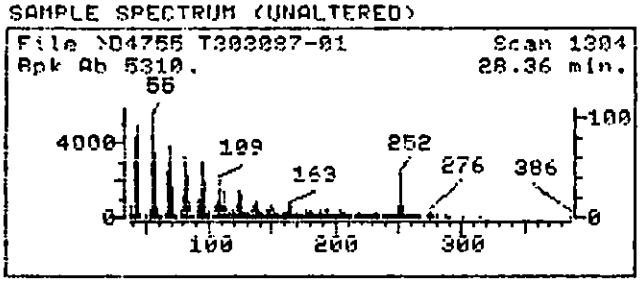
REFERENCE STANDARD SPECTRUM

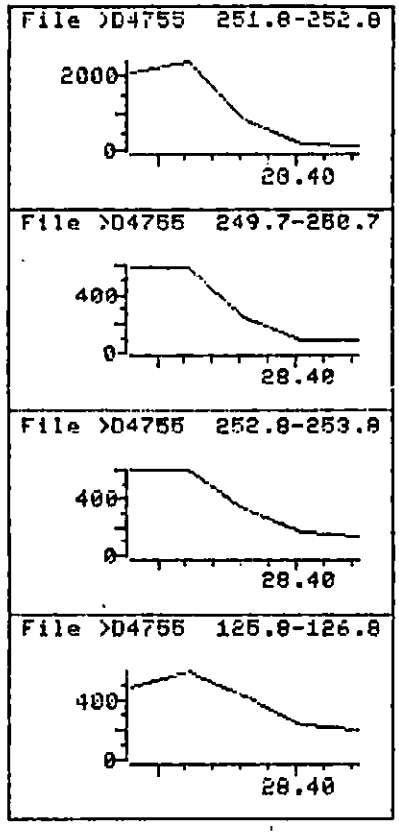


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

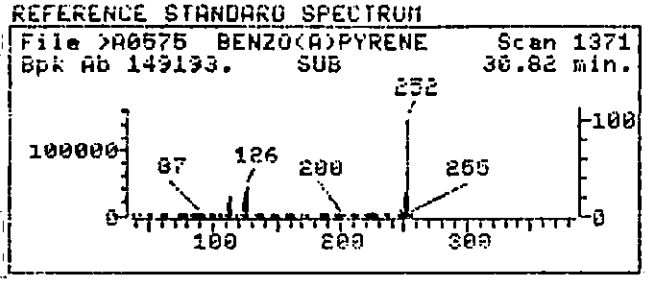




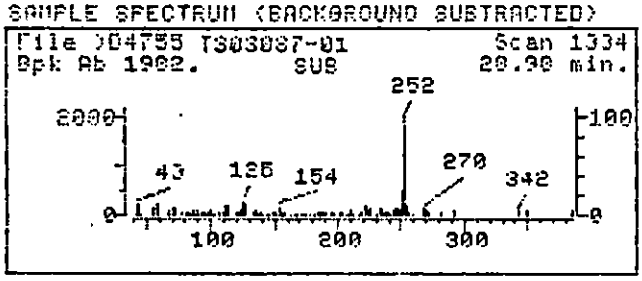
Data File: >D4755::D1 Quant Output File: ^D4755::QT
Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 77
Compound Name : BENZO(K)FLUORANTHENE
Scan Number : 1304
Retention Time: 28.36 min.
Quant Ion : 252.1
Area : 4272M
Concentration : 1.18 UG/L
q-value : 91

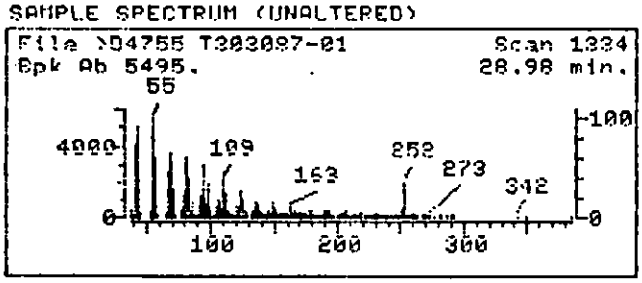
REFERENCE STANDARD SPECTRUM

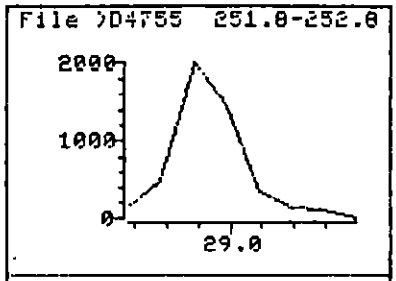


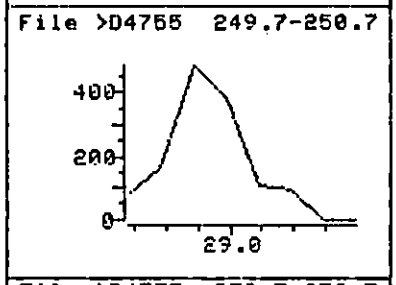
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

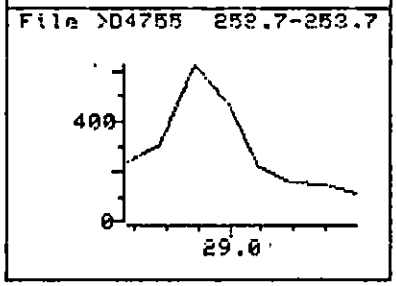


SAMPLE SPECTRUM (UNALTERED)





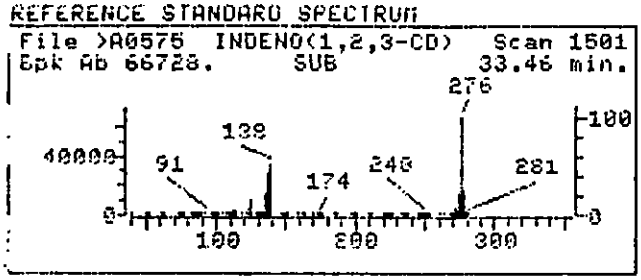




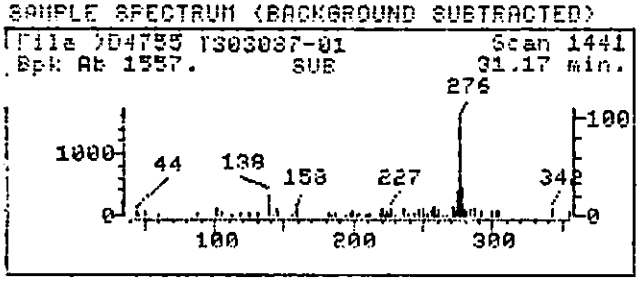
Data File: >D4755::D1 Quant Output File: ^D4755::QT
Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 78
Compound Name : BENZO(A)PYRENE
Scan Number : 1334
Retention Time: 28.98 min.
Quant Ion : 252.1
Area : 5554
Concentration : 1.44 UG/L
q-value : 97

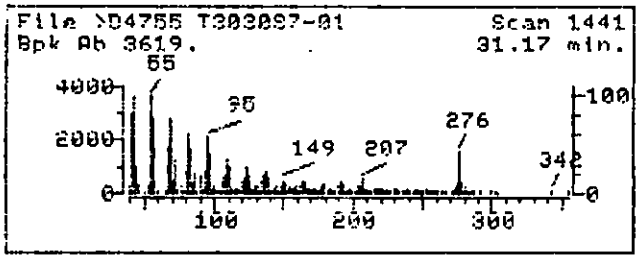
REFERENCE STANDARD SPECTRUM

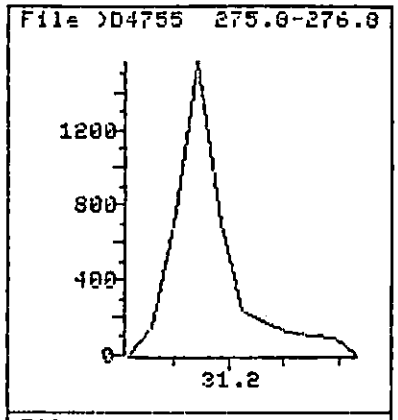


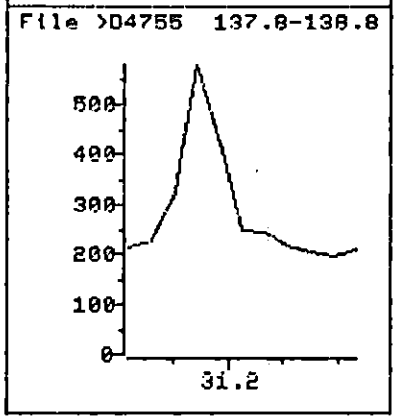
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



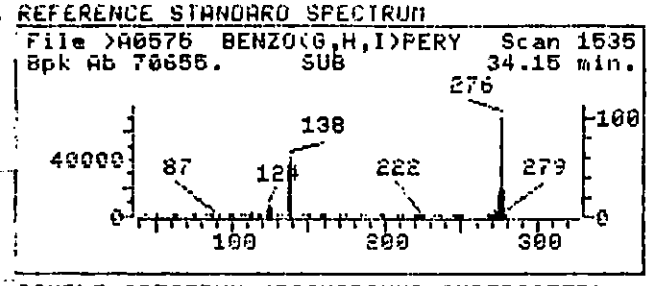




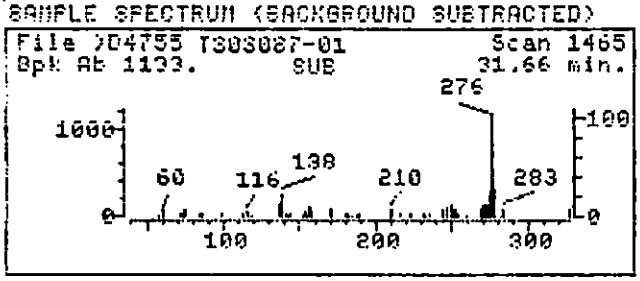
Data File: >D4755::D1 Quant Output File: ^D4755::QT
Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File: IDD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 79
Compound Name : INDENO(1,2,3-CD)PYRENE
Scan Number : 1441
Retention Time: 31.17 min.
Quant Ion : 276.1
Area : 4757
Concentration : 1.45 UG/L
q-value : 79

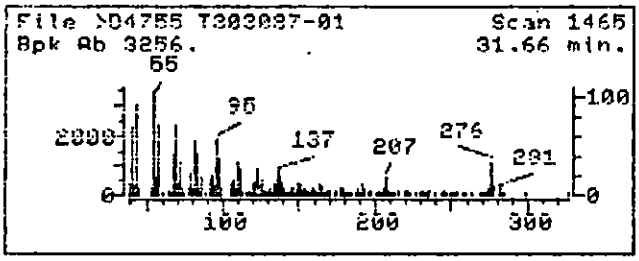
REFERENCE STANDARD SPECTRUM

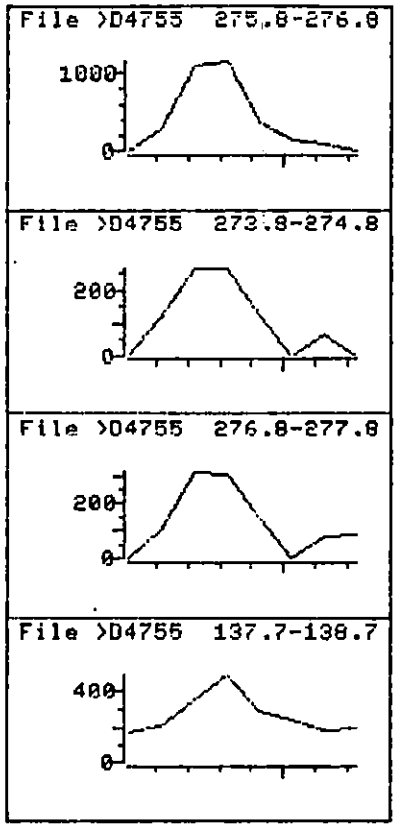


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





Data File: >D4755::D1 Quant Output File: ^D4755::QT
Name: T303087-01 Instrument ID: D
Misc: EIKON SS 4-3 ;03/04/93;03/17/93 BTL# 6
Quant Time: 930319 14:39 Quant ID File:)DD625::FB
Injected at: 930319 14:05 Last Calibration: 930304 14:20
Last Qcal Time: 930319 09:25

Compound No : 81
Compound Name : BENZO(G,H,I)PERYLENE
Scan Number : 1465
Retention Time: 31.66 min.
Quant Ion : 276.1
Area : 3853
Concentration : 1.29 UG/L
q-value : 97

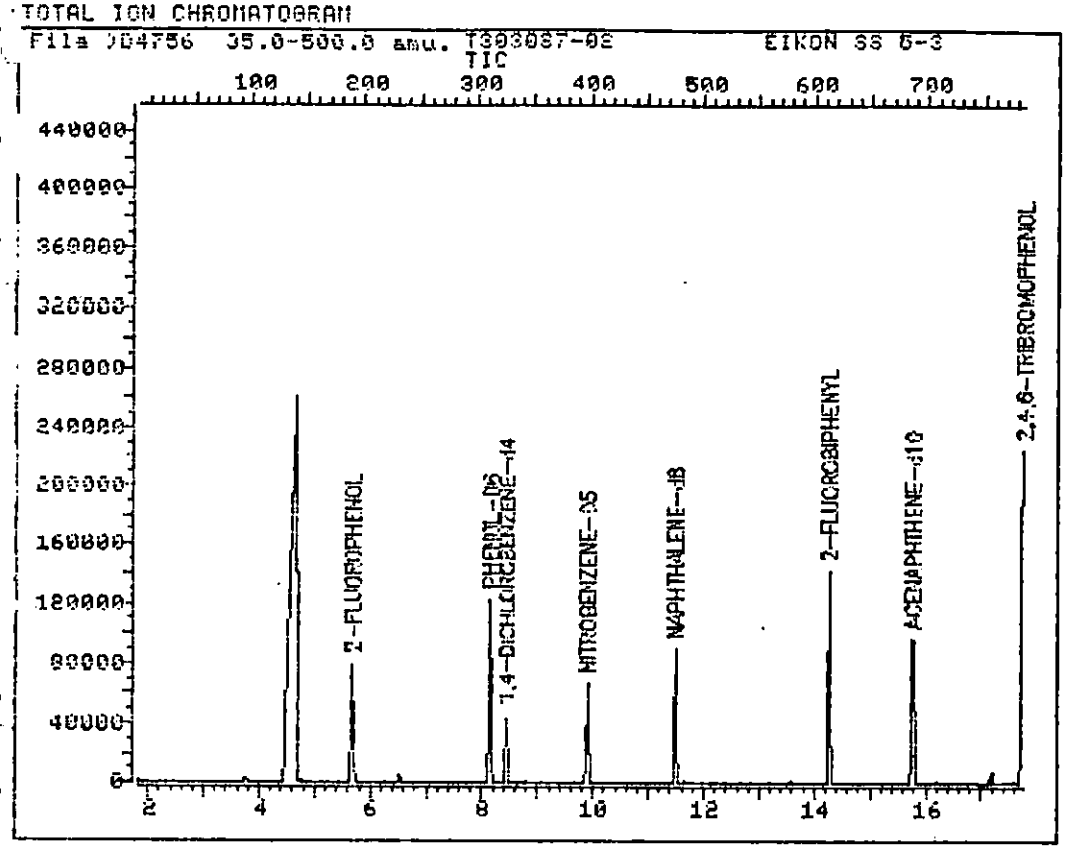
Operator ID: GREG Quant Rev: 7 Quant Time: 930319 14:39
tput File: ^D4755::QT Injected at: 930319 14:05
te File: >D4755::D1 Dilution Factor: 1.00000
Name: T303087-01 Instrument ID: D
sc: EIKON SS 4-3 :03/04/93:03/17/93 BTL# 6

ID File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
st Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.43	152.0	15725	40.00	UG/L	96
4)	2-FLUOROPHENOL	5.71	112.0	45256	124.90	UG/L	88
5)	PHENOL-D6	8.17	99.1	63592	119.89	UG/L	96
18)	*NAPHTHALENE-d8	11.48	136.1	64057	40.00	UG/L	99
9)	NITROBENZENE-D5	9.89	82.1	44592	65.63	UG/L	94
3)	*ACENAPHTHENE-d10	15.77	164.1	47372	40.00	UG/L	95
37)	2-FLUOROBIPHENYL	14.26	172.0	89986	62.31	UG/L	96
3)	2,4,6-TRIBROMOPHENOL	17.76	329.7	87587	123.15	UG/L	96
4)	*PHENANTHRENE-d10	19.32	188.1	108173	40.00	UG/L	97
64)	FLUORANTHENE	22.30	202.1	7566	2.14	UG/L	96
5)	*CHRYSENE-d12	25.86	240.1	142235	40.00	UG/L	97
7)	PYRENE	22.81	202.1	7005	2.09	UG/L	98
68)	4-TERPHENYL-D14	23.44	244.1	190638	65.38	UG/L	97
70)	BENZO(A)ANTHRACENE	25.82	228.1	4535	1.25	UG/L	90
2)	CHRYSENE	25.90	228.1	6984	2.11	UG/L	93
3)	BIS(2-ETHYLHEXYL)PHTHALATE	26.41	149.0	14864	4.42	UG/L	98
74)	*PERYLENE-d12	29.12	264.1	161849	40.00	UG/L	98
6)	BENZO(B)FLUORANTHENE	28.32	252.1	8688	1.94	UG/L	91
7)	BENZO(K)FLUORANTHENE	28.36	252.1	4272M	1.18	UG/L	91
78)	BENZO(A)PYRENE	28.98	252.1	5554	1.44	UG/L	97
9)	INDENO(1,2,3-CD)PYRENE	31.17	276.1	4757	1.45	UG/L	79
1)	BENZO(G,H,I)PERYLENE	31.66	276.1	3853	1.29	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM

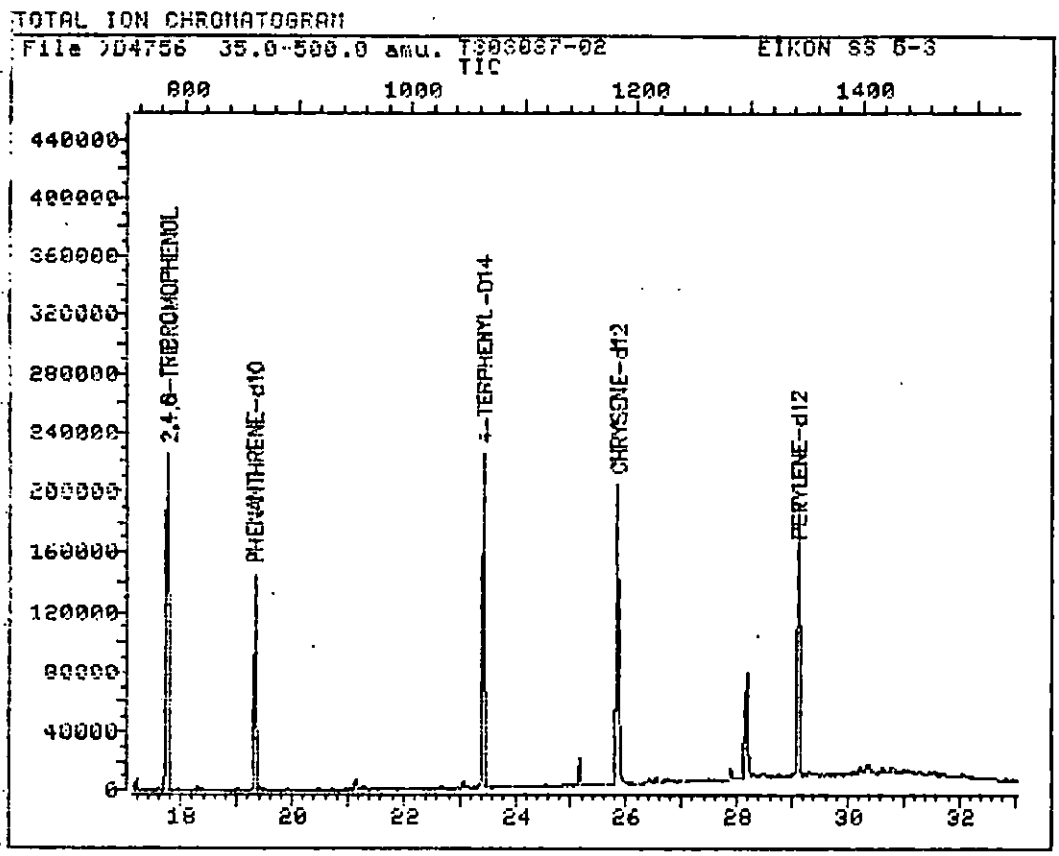


Data File: >D4756::D1 Quant Output File: ^D4756::QT
Name: T303087-02 Instrument ID: D
Misc: EIKON SS 5-3 ;03/04/93;03/17/93 BTL# 7

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

Operator ID: GREG
Quant Time : 930319 15:24
Injected at: 930319 14:50

Page 1 of 2



Data File: >D4756::D1 Quant Output File: ^D4756::QT
Name: T303087-02 Instrument ID: D
Misc: EIKON SS 5-3 ;03/04/93;03/17/93 BTL# 7

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

Operator ID: GREG
Quant Time : 930319 15:24
Injected at: 930319 14:50

QUANT REPORT Page 1

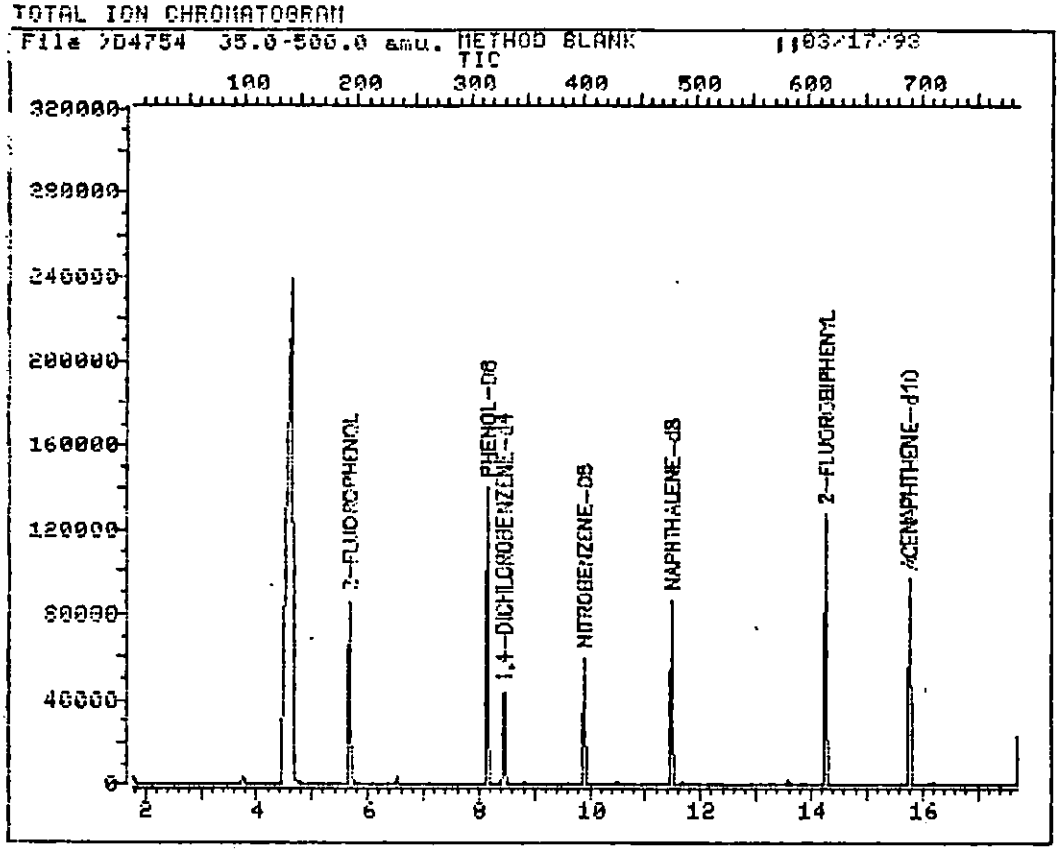
Operator ID: GREG Quant Rev: 7 Quant Time: 930319 15:24
tput File: ^D4756::QT Injected at: 930319 14:50
ta File: >D4756::D1 Dilution Factor: 1.00000
Name: T303087-02 Instrument ID: D
sc: EIKON SS 5-3 ;03/04/93;03/17/93 BTL# 7

ID File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
st Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.43	152.0	16749	40.00	UG/L	96
4)	2-FLUOROPHENOL	5.67	112.0	41076	106.43	UG/L	97
5)	PHENOL-D6	8.15	99.1	61235	108.39	UG/L	97
18)	*NAPHTHALENE-d8	11.48	136.1	69188	40.00	UG/L	99
9)	NITROBENZENE-D5	9.90	82.1	38132	51.96	UG/L	95
33)	*ACENAPHTHENE-d10	15.77	164.1	49196	40.00	UG/L	94
37)	2-FLUOROBIPHENYL	14.26	172.0	83054	55.38	UG/L	97
3)	2,4,6-TRIBROMOPHENOL	17.76	329.7	81874	110.85	UG/L	97
4)	*PHENANTHRENE-d10	19.32	188.1	111365	40.00	UG/L	93
65)	*CHRYSENE-d12	25.85	240.1	159472	40.00	UG/L	97
8)	4-TERPHENYL-D14	23.43	244.1	186138	56.94	UG/L	99
4)	*PERYLENE-d12	29.11	264.1	180956	40.00	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



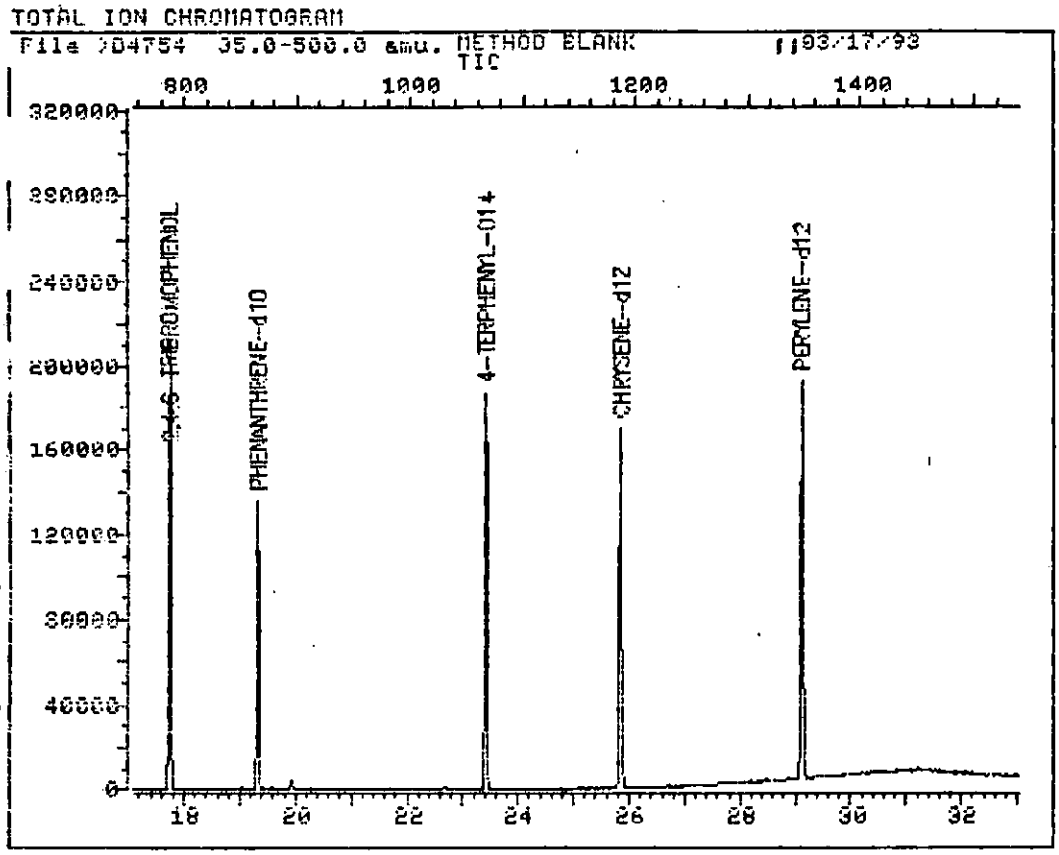
Data File: >D4754::D1 Quant Output File: ^D4754::QT
Name: METHOD BLANK Instrument ID: D
Misc: ;;03/17/93 BTL# 5

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

Operator ID: GREG
Quant Time : 930319 13:54
Injected at: 930319 13:20

Page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >D4754::D1 Quant Output File: ^D4754::QT
Name: METHOD BLANK Instrument ID: D
Misc: ::03/17/93 BTL# 5

Id File: IDD625::AB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

Operator ID: GREG
Quant Time : 930319 13:54
Injected at: 930319 13:20

QUANT REPORT Page 1

Operator ID: GREG Quant Rev: 7 Quant Time: 930319 13:54
tput File: ^D4754::QT Injected at: 930319 13:20
ta File: >D4754::D1 Dilution Factor: 1.00000
Name: METHOD BLANK Instrument ID: D
sc: ;;03/17/93 BTL# 5

ID File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930319 09:25

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.43	152.0	16546	40.00	UG/L	93
4)	2-FLUOROPHENOL	5.67	112.0	43309	113.59	UG/L	98
5)	PHENOL-D6	8.15	99.1	65876	118.04	UG/L	96
18)	*NAPHTHALENE-d8	11.48	136.1	67464	40.00	UG/L	98
9)	NITROBENZENE-D5	9.90	82.1	34216	47.81	UG/L	94
3)	*ACENAPHTHENE-d10	15.77	164.1	47772	40.00	UG/L	95
37)	2-FLUOROBIPHENYL	14.26	172.0	72769	49.97	UG/L	97
3)	2,4,6-TRIBROMOPHENOL	17.74	329.7	79108	110.29	UG/L	96
4)	*PHENANTHRENE-d10	19.32	188.1	107799	40.00	UG/L	96
65)	*CHRYSENE-d12	25.84	240.1	151291	40.00	UG/L	97
8)	4-TERPHENYL-D14	23.43	244.1	163475	52.71	UG/L	99
4)	*PERYLENE-d12	29.12	264.1	170473	40.00	UG/L	97

* Compound is ISTD

METALS ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

		No	Yes
1.	Calibration Summaries Meet Criteria		✓
2.	ICP Interference Check Sample (ICS) Results Summary ~~Submitted~~ Meets Criteria (If applicable)		✓
3.	Serial Dilution Summary ~~Submitted~~ Meets Criteria (If applicable)		✓
4.	Laboratory Control Sample (LCS) Summary ~~Submitted~~ Meets Criteria (If applicable)		✓
5.	Blank Contamination If yes, list compounds and concentrations in each blank:	✓	
6.	Matrix Spike Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range: Arsenic = 126%; Silver = 51, 50%		✓
7.	Sample Duplicate Analyses Meet QC Criteria If not met, list those compounds and their criteria which fall outside the acceptable range: Arsenic = 27%		✓
10.	Digestion and Analysis Holding Time Met If not met, list compounds and number of days exceeded for each sample:		✓

Laboratory Supervisor: Mark Gillespie/SCM Date: 4-7-93

Laboratory Resources INC.

100 Hollister Road
Teterboro, New Jersey 07608-1111
(201) 288-3700 • FAX: (201) 288-5311

NJ Certification # 02046
NY Certification # 10588

Eikon Planning & Design
221 High St
Hackettstown, NJ 07840

Attn: Raul Dequina

Date of Report: 04/07/93
Work Order #: T3-03-071
Date Received: 03/03/93
Client #: 090112
P.O./Project #: 880789

PARAMETER	SB 3-3	SB 4-3	SS 2-3
ANTIMONY			<1.3*
ARSENIC			<1.1*
BERYLLIUM			<0.11*
CADMIUM			<0.27*
CHROMIUM			2.3*
COPPER			1.2*
LEAD			<1.6*
MERCURY			<0.27*
NICKEL			1.5*
SELENIUM			<0.53*
SILVER			<0.27*
THALLIUM			<0.53*
ZINC			8.6*
SOLIDS, TOTAL %	88.2	96.6	94.1

All results expressed as mg/L unless otherwise stated

Laboratory Resources INC.

100 Hollister Road
Teterboro, New Jersey 07608-1111
(201) 288-3700 • FAX: (201) 288-5311

NJ Certification # 02046
NY Certification # 10588

Page 2

Work Order # T3-03-071

PARAMETER	SS 3-3
ANTIMONY	<1.4*
ARSENIC	1.5*
BERYLLIUM	0.15*
CADMIUM	<0.28*
CHROMIUM	4.5*
COPPER	180*
LEAD	7.5*
MERCURY	<0.28*
NICKEL	4.3*
SELENIUM	<0.57*
SILVER	<0.28*
THALLIUM	<0.57*
ZINC	36*
SOLIDS, TOTAL %	88.5

Stephanie Majeski
Laboratory Manager
for Kenneth Vara

All results expressed as mg/L unless otherwise stated

LABORATORY RESOURCES, INC. - TETERBORO 1993

QUALITY CONTROL REPORT FOR WORK ORDER: T3-03-087

PARAMETER	Q	BLANK mg/L	BLANK SPK % REC	MS TV CONC. (*)	MS %REC	MS DUP %REC	SAMPLE CONC. (*)	MS CONC. (*)	MS DUP CONC. (*)	RPD %
TRACE METALS										
Aluminum (Al)										
Antimony (Sb)		<1.25		32.9	48	49	<1.6	15.9	16.2	1
Arsenic (As)	*,N	<1.00		2.63	126	96	<1.3	3.32	2.53	27
Barium (Ba)										
Beryllium (Be)		<0.100		3.29	84	83	0.71	3.49	3.43	1
Boron (B)										
Cadmium (Cd)		<0.250		3.29	103	98	<0.33	3.39	3.21	5
Calcium (Ca)										
Chromium (Cr)		<0.500		13.2	91	90	14	27.1	27.0	1
Chromium Hex										
Cobalt (Co)										
Copper (Cu)		<0.500		16.4	95	94	14	30.7	30.4	1
Iron (Fe)										
Lead (Pb)		<1.50		32.9	84	82	18	46.2	45.7	2
Magnesium (Mg)										
Manganese (Mn)										
Mercury (Hg)		<0.250		1.97	93	93	<0.33	1.84	1.84	0
Molybdenum (Mo)										
Nickel (Ni)		<1.00		32.9	86	84	10	38.8	38.0	2
Potassium (K)										
Selenium (Se)		<0.50		2.63	116	106	<0.66	3.07	2.78	10
Silicon (Si)										
Silver (Ag)	N	<0.250		3.29	51	50	<0.66	1.67	1.66	1
Sodium (Na)										
Thallium (Tl)		<0.50		2.63	108	114	<0.66	2.83	3.01	6
Tin (Sn)										
Titanium (Ti)										
Vanadium (V)										
Zinc (Zn)		<1.00		32.9	95	92	55	87.5	86.4	3

COMMENTS: The QC is based on a batch system in which a sample is chosen at random for MS and MS/Dup analyses for a given matrix and represents all of the samples included in that batch.

(*) = Results in mg/kg dry weight
MS = Matrix spike
MS DUP = Matrix spike duplicate
TV = True value
Q = Qualifier
RPD = RELATIVE PERCENT DEVIATION SHOULD BE <35%
QUALITY CONTROL LIMITS FOR PERCENT RECOVERY ARE (75-125).
LABORATORY SAMPLE IDENTIFICATION:T302358-04

LABORATORY RESOURCES, INC. - TETERBORO 1993

QUALITY CONTROL REPORT FOR WORK ORDER: T3-03-087

PARAMETER	Q	BLANK MG/KG	BLANK SPK % REC	SAMPLE CONC. (W)	MS TV CONC. MG/L	MS CONC. (W)	MS % REC	SAMPLE CONC.	SAMPLE DUP CONC.	RPD %	LAB SAMPLE I.D.	Q.C. LIMITS %
WET CHEMISTRY												
AMMONIA-NH3												
CYANIDE												
NITRATE												
OIL & GREASE												
pH (CORROSIVITY)												
PET HYDROCARBONS												50-140
PHENOLICS												
TKN												
TOTAL SOLIDS %								88.5	87.8	1	T303071-01	

NOTE: The QC is based on a batch system in which a sample is chosen at random for MS and/or DUP analyses for a given matrix and represents all of the samples included in that batch.

(W) = Results in mg/kg wet weight.
ISV = Insufficient volume.
MS = Matrix spike.
TV = True value.
DUP = Duplicate.
Q = Qualifier
RPD = RELATIVE PERCENT DEVIATION SHOULD BE <20%
RPD = RELATIVE PERCENT DEVIATION FOR PHC SHOULD BE <40%
QUALITY CONTROL LIMITS FOR PERCENT RECOVERY ARE (75-125%) UNLESS OTHERWISE NOTED.

Laboratory Resources INC.
Teterboro Division
100 Hollister Road
Teterboro, New Jersey 07608
FAX: 201-288-5311
201-288-3700 800-729-0852

QUALIFIERS-INORGANICS

Q	EXPLANATIONS
N	Matrix spiked sample recovery not within internal control limits due to matrix interference.
*	Duplicate analysis not within internal control limits due to matrix interference.
E	Reported value determined from a serial dilution due to matrix interference.
W	Post digestion sample spike recovery outside internal control limits but sample concentration is less than 50% of spiked sample.
N/A	Matrix spike recovery not applicable since sample concentration is greater than 4 times the amount of spike added.
MSA	Sample results determined from 3 point Method of Standards Additions(MSA).
ND	Analyte not detected, relative percent deviation cannot be calculated.

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100 Hollister Road
Teterboro, New Jersey 07608
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APR 23 1993

LABORATORY ANALYSIS REPORT

Client: Eikon Planning & Design Corp
221 High Street P.O. Box 469
Hackettstown, NJ 07840

Project Manager: Andreas Eisenberger

Project: Plainview
Plainview, NJ

Laboratory Report #: T303187

Lab ID No.:	Sample Reference	Matrix	Collection Date & Time
T303187-01	SS1-3	Soil	03/09/93 15:10
T303187-02	SS6-3	Soil	03/09/93 15:40
T303187-03	Field Blk	Aqueous	03/09/93 16:05

Date Received: March 10, 1993

Date of Report: April 21, 1993

N.J. Certification #02046
N.Y. Certification #10588

Mo Amirsoleymani
Quality Assurance Manager

TABLE OF CONTENTS

L[illegible] CHAIN OF CUSTODY

BILLING INFORMATION

CUSTOMER: EIKON PLANNING & DESIGN CORP.
ADDRESS: P.O. BOX 469, 111 HIGH ST.
HACKETTSTOWN, NJ 07840
PROJECT: PLAINVIEW
PROJECT MANAGER: ANDREAS EISENBERGER
PROJECT LOCATION: PLAINVIEW STATE: NY
PO NUMBER: 888

REPORT INFORMATION

SEND REPORT TO: ANDREAS EISENBERGER
DATE REPORT REQUIRED: 3/30/93
RUSH RESULTS: FAX (908) 813-8360

PROJECT INFORMATION

DELIVERABLES/REGULATION (PLEASE INDICATE): Tier II
TURNAROUND (INDICATE CALENDAR DAYS. CONFIRM WITH LAB): NAME OF PERSON CONFIRMING: 21 Days
IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:
NAME: RICH WITTAK
TELEPHONE: (908) 813-2313

ANALYTICAL REQUESTS

LAB ID CODE	SAMPLE IDENTIFICATION	NO. BOTTLES	COLLECTED DATE	COLLECTED TIME	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX: SOLID	SAMPLE MATRIX: LIQUID	SAMPLE MATRIX: PHASIC	SAMPLE MATRIX: SLUDGE	SAMPLE MATRIX: OTHER	ANALYSES	$HaSO_4$	NaOH	HCl	HNO_3	OTHER
01	SS1-3	1	15:10	3/9/93		X	X					VOA+15, Total Xylenes, Semi VOA (625+25), P.P. Metals					
02	SS6-3	1	15:40	3/9/93		X	X					VOA+15, Total Xylenes, Semi VOA (625+25), P.P. Metals					
03	FLD BLK, 3/9/93	3	16:05	3/9/93		X		X		(P)		VOA+15, Total Xylenes			X		

CUSTODY

RELINQUISHED: Rich Wittak	DATE: 3/10/93	
RECEIVED: John Ford LABORATORY RES.	TIME: 10:40	
RELINQUISHED:	DATE: 3/10/93	
RECEIVED: K. Daigle Lab Res	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	
RELINQUISHED:	DATE:	
RECEIVED:	TIME:	

COMMENTS, REQUESTS OR REMARKS:

NO SUBCONTRACTORS WITHOUT PRIOR EIKON APPROVAL.

SAMPLE DISPOSAL: Return to Client ☐ Lab Disposal ☐ (additional Fee)
CONCENTRATIONS EXPECTED High ☐ Medium ☐ Low ☐
KNOWN HAZARD YES ☐ NO ☐
DESCRIBE:

METHODS SUMMARY

ORGANIC EXTRACTIONS

Routine aqueous samples are prepared using Method 3510 (separatory funnel extraction) or Method 3520 (continuous liquid-liquid extraction) cited in SW846. Soil samples are extracted using Method 3550 (sonication extraction) from SW846.

ALUMINA COLUMN CLEANUP

After the sample has been extracted for base/neutral semivolatiles using Method 3550, it then undergoes acid-base partition cleanup using SW846 Method 3650. The base neutral extract is then further separated using alumina column cleanup Method 3611 in SW846.

TCLP EXTRACTION SUMMARY

Sample requiring TCLP analyses are extracted according to Method 1311, cited in 40 CFR 261 et seq, June 29, 1990.

VOLATILES BY GC/MS

Samples requesting volatiles by GC/MS have been analyzed using Method 8240 as cited in USEPA SW846.

BASE/NEUTRALS AND ACID EXTRACTABLES BY GC/MS

Samples requesting semi-volatiles have been analyzed using Method 8270 as cited in USEPA SW846.

PESTICIDES/PCBs

Aqueous samples are analyzed for pesticides and PCBs via USEPA Method 608. Non-aqueous samples are analyzed using Method 8080 as cited in USEPA SW846.

HERBICIDES

The herbicide extraction and analysis is performed according to Method 509B, cited in the 16th edition of Standard Methods. Samples are extracted, derivitized, and then analyzed via a gas chromatograph utilizing an electron capture detector (ECD).

METHODS SUMMARY

TRACE METALS

Reference: EPA SW846 3rd Edition, 1986 Vol. 1 A

Non-aqueous samples are digested for ICAP and GFAA according to method 3050 and for CV according to method 7470. Extracts and aqueous samples (ECRA and RCRA projects) are digested for ICAP, GFAA, and CV according to methods 3010, 3020, and 7470 respectively.

ICAP analyses are conducted in accordance with Method 6010. GFAA analyses are conducted in accordance with methods 7041 for antimony, 7060 for arsenic, 7740 for selenium and 7841 for thallium. CV analyses are conducted in accordance with method 7470.

Titanium and tin are analyzed for GFAA according to methods 282.2 and 283.3 respectively (EPA 600/4-79-020, 1983 revision).

TRACE METALS

Reference: EPA 600/4-79-020, 1983 revision.

Potable water, aqueous wastes, and surface water are digested according to EPA methods 4.1.4 for GFAA and FLAA, 200.7 for ICAP, and 245.1 for CV. GFAA analyses are conducted in accordance with methods 204.4 for antimony, 206.2 for arsenic, 239.2 for lead, 270.2 for selenium, 279.2 for thallium, 282.2 for tin, and 283.2 for titanium. ICAP analyses are conducted in accordance with method 200.7, CV analyses with method 245.1, and FLAA analyses with method 273.1 for sodium only.

GFAA = Graphite furnace atomic absorption.
ICAP = Inductively Coupled Argon Plasma.
FLAA = Flame atomic absorption.
CV = Cold vapor atomic absorption for Hg.

TCLP METALS

Samples are extracted and analyzed in accordance with method 1311 published in the Federal Register, 40 CFR 261, June 29, 1990.

LABORATORY RESOURCES, INC. - TETERBORO 1993
GENERAL CHEMISTRY METHODOLOGY
SOIL MATRIX

PARAMETER	METHOD (1)
Acidity	305.1
Alkalinity	310.1
BOD, 5 day	507(4)
BOD, 20 day	507(4)
Chloride	9252
Chlorine, Residual	330.5
COD	HACH
Conductivity	9050
Cyanide, Total	9010
Cyanide, Amenable	9010
Ignitability	1010
MBAS, Surfactants	512B(4)
Nitrogen, NH3	350.1(2)
Nitrogen, NO3	9200
Nitrogen, NO2	354.1
Nitrogen, TKN	351.2(2)
Odor	140.1
Petroleum Hydro, Soil	418.1(5)
pH	9045
Phenolics, Total	9065
Phosphorous, Total	365.2(2)
Solids, Fixed	209D(4)
Solids, Total	CLP
Solids, Volatile	209D(4)
Sulfate	9038
Sulfide	9030
Sulfite	377.1(2)
TOC	415.1
Turbidity	180.1

(1) = Solid and hazardous waste methods approved by NJDEP ECRA and RCRA and listed in EPS SW 846 3rd Edition, 1986.
(2) = Water and wastewater methods approved in the Federal Register in section 40 CFR 136 and listed in EPA 600/4-79-020.
(4) = Methods cited in Standard Methods 16th Edition, 1986.
(5) = NJDEP modification of EPA Method 418.1.
CLP = Contract Laboratory Program procedure for total solids determination, SOW 7/88, Part F, page D-83.
HACH = Method 8000, Hach Handbook of Water Analysis, 1979. Approved in the Federal Register, April 21, 1980, page 26811.

ORGANIC NON-CONFORMANCE SUMMARY

GC/MS VOLATILES

1. The quantitation limits are elevated due to the dilution required for samples SS1-3 and SS6-3 (T303187-01 and 02).

GC/MS SEMIVOLATILES

1. Twenty three tentatively identified compounds were present in the library search of method blank, D4838.

2. The quantitation limits are elevated due to the high concentration of analytes in sample SS1-3 (T303187-01).

3. The quantitation limits are elevated due to the dilution required for samples SS1-3 and SS6-3 (T303187-01 and 02).

4. The sample SS6-3 (T303187-02) blew down to the final volume of 2.6 mls due to the sample matrix.

INORGANIC NON-CONFORMANCE SUMMARY

METALS

1. The quantitation limits are elevated due to the dilution required for the mercury analysis for sample SS1-3 (T303187-01).

2. The matrix spike recovery for Copper on the QC sample T303139-01, was not within the required quality control limits due to matrix interference.

LABORATORY RESOURCES, INC. T3037/87 LABORATORY CHRONICLES

Sample Number	Analyst Initial	551-3 01	556-3 02	FLD BLK 3/9/93 03
Received & Refrigerated Date:	KD	3-10-93	→	→
Organics Extraction Date:				
Base/Neutrals/Acids	TC	3-23-93	→	
Acids Extractables				
Pesticides/PCBs				
Herbicides				
Analysis Date :				
Volatiles/GCMS	AP	3-23-93	3-18-93	→
Base/Neutrals/Acids	Greg	3-31-93	→	
Pesticides/PCBs				
Herbicides				
Volatiles/GC				
Total Solids				
Organic Supervisor Review & Approval	MB	4-16-93	→	→

Laboratory Resources INC.
Teterboro Division
100 Hollister Road
Teterboro, New Jersey 07608
FAX: 201-288-5311
201-288-3700 800-729-0852

TABLE 2-16. REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES

Name	Container[1]	Preservation	Maximum holding time
Bacterial Tests:			
Coliform, fecal and total	P, G	Cool, 4°C, 0.008% $Na_2S_2O_3$	6 hours
Fecal streptococci	P, G	Cool, 4°C, 0.008% $Na_2S_2O_3$	6 hours
Inorganic Tests:			
Acidity	P, G	Cool, 4°C	14 days
Alkalinity	P, G	Cool, 4°C	14 days
Ammonia	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Biochemical oxygen demand	P, G	Cool, 4°C	48 hours
Bromide	P, G	None required	28 days
Biochemical oxygen demand, carbonaceous	P, G	Cool, 4°C	48 hours
Chemical oxygen demand	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Chloride	P, G	None required	28 days
Chlorine, total residual	P, G	None required	Analyze immediately
Color	P, G	Cool, 4°C	48 hours
Cyanide, total and amenable to chlorination	P, G	Cool, 4°C, NaOH to pH>12, 0.6g ascorbic acid	14 days
Fluoride	P	None required	28 days
Hardness	P, G	HNO_3 to pH<2, H_2SO_4 to pH<2	6 months
Hydrogen ion (pH)	P, G	None required	Analyze immediately
Kjeldahl and organic nitrogen	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Metals:			
Chromium VI	P, G	Cool, 4°C	24 hours
Mercury	P, G	HNO_3 to pH<2	28 days
Metals, except chromium VI and mercury	P, G	HNO_3 to pH<2	6 months
Nitrate	P, G	Cool, 4°C	48 hours
Nitrate-nitrite	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Nitrite	P, G	Cool, 4°C	48 hours
Oil and grease	G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Organic carbon	P, G	Cool, 4°C, HCl or H_2SO_4 to pH<2	28 days
Orthophosphate	P, G	Filter immediately, cool, 4°C	48 hours
Oxygen, Dissolved Probe	G Bottle and top	None required	Analyze immediately
Winkler	do	Fix on site and store in dark	8 hours
Phenols	G only	Cool, 4°C, H_2SO_4 to pH<2	28 days
Phosphorus (elemental)	G	Cool, 4°C	48 hours
Phosphorus, total	P, G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Residue, total	P, G	Cool, 4°C	7 days
Residue, Filterable	P, G	Cool, 4°C	7 days
Residue, Nonfilterable (TSS)	P, G	Cool, 4°C	7 days
Residue, Settleable	P, G	Cool, 4°C	48 hours
Residue, volatile	P, G	Cool, 4°C	7 days
Silica	P	Cool, 4°C	28 days
Specific conductance	P, G	Cool, 4°C	28 days

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TABLE 2-16. REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES (CONTINUED)

Name	Container[1]	Preservation	Maximum holding time
Sulfate	P, G	Cool, 4°C	28 days
Sulfide	P, G	Cool, 4°C, add zinc acetate plus sodium hydroxide to pH>9	7 days
Sulfite	P, G	None required	Analyze immediately
Surfactants	P, G	Cool, 4°C	48 hours
Temperature	P, G	None required	Analyze
Turbidity	P, G	Cool, 4°C	48 hours
Organic Tests:			
Purgeable Halocarbons	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$	14 days
Purgeable aromatic hydrocarbons	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$, HCl to pH2	14 days
Acrolein and acrylonitrile	G, Teflon-lined septum	Cool, 4°C, 0.008% $Na_2S_2O_3$, Adjust pH to 4-5	14 days
Phenols	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	7 days until extraction, 40 days after extraction
Benzidines	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	7 days until extraction
Phthalate esters	G, Teflon-lined cap	Cool, 4°C	7 days until extraction 40 days after extraction
Nitrosamines	G, Teflon-lined cap	Cool, 4°C, store in dark, 0.008% $Na_2S_2O_3$	40 days after extraction
PCBs, acrylonitrile	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
Nitroaromatics and isophorone	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ store in dark	40 days after extraction
Polynuclear aromatic hydrocarbons	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ store in dark	40 days after extraction
Haloethers	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	40 days after extraction
Chlorinated hydrocarbons	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
TCDD	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$	40 days after extraction
Total organic halogens	G, Teflon-lined cap	Cool, 4°C; H_2SO_4 to pH<2	7 days
Pesticides Tests:			
Pesticides	G, Teflon-lined cap	Cool, 4°C, pH 5-9	40 days after extraction
Radiological Tests:			
Alpha, beta and radium	P, G	HNO_3 to pH<2	6 months

[1] Polyethylene (P) or Glass (G)

009

CASE NARRATIVE

Laboratory Resources, New Jersey Division, received two soil samples plus a field blank for Reduced Deliverables Format on March 10, 1993. The samples were analyzed for the parameters outlined in the chain of custody.

The samples were analyzed within the required holding time. Any parameters which were outside of their respective quality control ranges are noted in the non-conformance summaries.

Please contact us if there are any questions regarding the enclosed results.

GC/MS CONFORMANCE/NONCONFORMANCE SUMMARY

	No	Yes
1. Chromatograms Labeled/Compounds Identified		✓
2. Tune Specifications		
a. BFB Meets Criteria		✓
b. DFTPP Meets Criteria		
3. Tuning Frequency Performed every 24 hours for 600 series and 12 hours for 8000 series		✓
4. Calibration Frequency Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series		✓
5. Calibration Requirements		
a. Calibration Check Compounds (CCCs)		✓
b. System Performance Check Compounds (SPCCs)		✓
6. Blank Contamination If yes, list compounds and concentrations in each blank:	✓	
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
7. Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
If not met, were the calculations checked and the results qualified as estimated?		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
9. Internal Standard Areas and Retention Time Shifts Meet Criteria Internal standard areas between -50% and +100% of daily standard		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓

000011

Laboratory Supervisor: MRA Date: 4-16-93

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/09/93
DATE RECEIVED : 03/10/93
DATE ANALYZED : 03/23/93
DILUTION FACT.: 250000.0

CLIENT : EIKON SS 1-3
LAB SAMPLE : T303187-01
ANALYST : ANDY
FILE NAME : >C8585

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	3665688	1,2-DICHLOROPROPANE	ND	1832844
VINYL CHLORIDE	ND	3665688	BROMODICHLOROMETHANE	ND	1832844
BROMOMETHANE	ND	3665688	2-CHLOROETHYLVINYLETHER	ND	1832844
CHLOROETHANE	ND	3665688	TRANS-1,3-DICHLOROPROPENE	ND	1832844
ACROLEIN	ND	18328446	CIS-1,3-DICHLOROPROPENE	ND	1832844
TRICHLOROFLUOROMETHANE	ND	1832844	1,1,2-TRICHLOROETHANE	ND	1832844
1,1-DICHLOROETHENE	ND	1832844	DIBROMOCHLOROMETHANE	ND	1832844
CARBON DISULFIDE	ND	1832844	BROMOFORM	ND	1832844
ACETONE	ND	3665688	4-METHYL-2-PENTANONE	ND	3665688
ACRYLONITRILE	ND	18328446	TOLUENE	ND	1832844
METHYLENE CHLORIDE	ND	1832844	TETRACHLOROETHENE	48170000	1832844
TRANS-1,2-DICHLOROETHENE	ND	1832844	2-HEXANONE	ND	3665688
1,1-DICHLOROETHANE	ND	1832844	CHLOROBENZENE	ND	1832844
CHLOROFORM	ND	1832844	ETHYLBENZENE	ND	1832844
1,2-DICHLOROETHANE	ND	1832844	M,P-XYLENE	ND	1832844
VINYL ACETATE	ND	3665688	O-XYLENE	ND	1832844
2-BUTANONE	ND	3665688	STYRENE	ND	1832844
1,1,1-TRICHLOROETHANE	ND	1832844	1,1,2,2-TETRACHLOROETHANE	ND	1832844
CARBON TETRACHLORIDE	ND	1832844	1,3-DICHLOROBENZENE	ND	1832844
BENZENE	ND	1832844	1,4-DICHLOROBENZENE	ND	1832844
TRICHLOROETHENE	932410 J	1832844	1,2-DICHLOROBENZENE	ND	1832844

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	99 %	70 - 121	OK
TOLUENE-D8	101 %	81 - 117	OK
4-BROMOFLUOROBENZENE	99 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 68.2 is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO: SS 1-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303187-01

Sample wt/vol: 4.0 (g/ml) g Lab File ID: >C8585

Level: (low/med) MED Date Received: 03/10/93

% Solid: 68.2 Date Analyzed: 03/23/93

Column: CAP Dilution Factor: 250000

Number of TICs found: 0 CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

013

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/09/93
DATE RECEIVED : 03/10/93
DATE ANALYZED : 03/18/93
DILUTION FACT.: 10000.0

CLIENT : EIKON SS 6-3
LAB SAMPLE : T303187-02
ANALYST : ED
FILE NAME : >B9054

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	126904	1,2-DICHLOROPROPANE	ND	63452
VINYL CHLORIDE	ND	126904	BROMODICHLOROMETHANE	ND	63452
BROMOMETHANE	ND	126904	2-CHLOROETHYLVINYLETHER	ND	63452
CHLOROETHANE	ND	126904	TRANS-1,3-DICHLOROPROPENE	ND	63452
ACROLEIN	ND	634518	CIS-1,3-DICHLOROPROPENE	ND	63452
TRICHLOROFLUOROMETHANE	ND	63452	1,1,2-TRICHLOROETHANE	ND	63452
1,1-DICHLOROETHENE	ND	63452	DIBROMOCHLOROMETHANE	ND	63452
CARBON DISULFIDE	ND	63452	BROMOFORM	ND	63452
ACETONE	ND	126904	4-METHYL-2-PENTANONE	ND	126904
ACRYLONITRILE	ND	634518	TOLUENE	ND	63452
METHYLENE CHLORIDE	ND	63452	TETRACHLOROETHENE	1479378	63452
TRANS-1,2-DICHLOROETHENE	ND	63452	2-HEXANONE	ND	126904
1,1-DICHLOROETHANE	ND	63452	CHLOROBENZENE	ND	63452
CHLOROFORM	ND	63452	ETHYLBENZENE	ND	63452
1,2-DICHLOROETHANE	ND	63452	M,P-XYLENE	ND	63452
VINYL ACETATE	ND	126904	O-XYLENE	ND	63452
2-BUTANONE	ND	126904	STYRENE	ND	63452
1,1,1-TRICHLOROETHANE	ND	63452	1,1,2,2-TETRACHLOROETHANE	ND	63452
CARBON TETRACHLORIDE	ND	63452	1,3-DICHLOROBENZENE	ND	63452
BENZENE	ND	63452	1,4-DICHLOROBENZENE	ND	63452
TRICHLOROETHENE	119511	63452	1,2-DICHLOROBENZENE	ND	63452

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	100 %	70 - 121	OK
TOLUENE-D8	99 %	81 - 117	OK
4-BROMOFLUOROBENZENE	101 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 78.8 is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO: SS 6-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303187-02

Sample wt/vol: 4.0 (g/ml) g Lab File ID: >B9054

Level: (low/med) MED Date Received: 03/10/93

% Solid: 78.8 Date Analyzed: 03/18/93

Column: CAP Dilution Factor: 10000

Number of TICs found: 2

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	124389	Carbon Dioxide	1.68	304568	
2		Unknown Alkane	20.64	76142	

015

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 6-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303187-02

Sample wt/vol: ~~0.0004~~ 4.0 (g/ml) g Lab File ID: >B9054

Level: (low/med) MED Date Received: 03/10/93

% Solid: 78.8 Date Analyzed: 03/18/93

Column: CAP Dilution Factor: 10000

Number of TICs found: 2

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	124389	Carbon Dioxide	1.68	304568	
2		Unknown Alkane	20.64	76142	

016

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/09/93
DATE RECEIVED : 03/10/93
DATE ANALYZED : 03/18/93
DILUTION FACT.: 1.0

CLIENT : EIKON FB
LAB SAMPLE : T303187-03
ANALYST : ED
FILE NAME : >89055

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
CHLOROMETHANE	ND	10	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	10	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	10	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	10	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	50	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	ND	10	4-METHYL-2-PENTANONE	ND	10
ACRYLONITRILE	ND	50	TOLUENE	ND	5
METHYLENE CHLORIDE	ND	5	TETRACHLOROETHENE	ND	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	10
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	10	O-XYLENE	ND	5
2-BUTANONE	ND	10	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	94 %	76 - 114	OK
TOLUENE-D8	99 %	88 - 110	OK
4-BROMOFLUOROBENZENE	103 %	86 - 115	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

FB

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: WATER Lab Sample ID: T303187-03

Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >B9055

Level: (low/med) LOW Date Received: 03/10/93

% Solid: 0 Date Analyzed: 03/18/93

Column: CAP Dilution Factor: 1

Number of TICs found: 1

CONCENTRATION UNITS:
ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
11 124389	Carbon Dioxide	1.70	19	

018

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TB701 BFB Injection date: 2/23/93

Instrument ID: 0881 BFB Injection time: 9:43

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	19.7
75	30-60% of mass 95	46.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	.5(.6)1
174	Greater than 50.0% of mass 95	84.1
175	5.0 - 9.0% of mass 174	5.8(6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.2(100.2)1
177	5.0 - 9.0% of mass 176	5.3(6.3)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB VOA S	>B8810	2/23/93	10:22
2	----------	20 PPB VOA S	>B8811	2/23/93	11:16
3	----------	100 PPB VOA	>B8812	2/23/93	12:06
4	----------	150 PPB VOA	>B8813	2/23/93	12:54
5	----------	200 PPB VOA	>B8814	2/23/93	13:34
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22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TC527 BFB Injection date: 3/15/93

Instrument ID: 0881 BFB Injection time: 9:44

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.2
75	30-60% of mass 95	50.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	89.5
175	5.0 - 9.0% of mass 174	7.6(8.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.7(97.9)1
177	5.0 - 9.0% of mass 176	5.8(6.6)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	VSTD 50 PPB	>C8443	3/15/93	10:17
2	----------	VSTD 20 PPB	>C8444	3/15/93	10:54
3	----------	VSTD 100 PPB	>C8445	3/15/93	11:30
4	----------	VSTD 150 PPB	>C8446	3/15/93	12:05
5	----------	VSTD 200 PPB	>C8447	3/15/93	12:41
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5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TB718 BFB Injection date: 3/18/93

Instrument ID: 0881 BFB Injection time: 9:29

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	21.9
75	30-60% of mass 95	48.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	.5(.6)1
174	Greater than 50.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	6.2(7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.6(98.0)1
177	5.0 - 9.0% of mass 176	5.3(6.2)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB VOA S	>B9050	3/18/93	10:12
2	----------	METHOD BLANK	>B9051	3/18/93	11:02
3	----------	MEDIUM LEVEL	>B9052	3/18/93	11:50
4	----------	T303187-01	>B9053	3/18/93	12:45
5	----------	T303187-02	>B9054	3/18/93	13:31
6	----------	T303187-03	>B9055	3/18/93	14:17
7	----------	T303118-02	>B9056	3/18/93	15:02
8	----------	T303118-03	>B9057	3/18/93	15:48
9	----------	T303214-01	>B9058	3/18/93	16:33
10	----------	T303214-02	>B9059	3/18/93	17:19
11	----------	T303214-03	>B9060	3/18/93	18:05
12	----------	T303214-03 MS	>B9061	3/18/93	18:51
13	----------	T303214-03 MSD	>B9062	3/18/93	19:37
14	----------	T303214-04	>B9063	3/18/93	20:22
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16					
17					
18					
19					
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21					
22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TB721 BFB Injection date: 3/22/93

Instrument ID: 0881 BFB Injection time: 11:39

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.8
75	30-60% of mass 95	50.2
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	89.0
175	5.0 - 9.0% of mass 174	6.1(6.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.7(99.6)1
177	5.0 - 9.0% of mass 176	5.6(6.4)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPB VOA S	>B9088	3/22/93	14:21
2	----------	METHOD BLANK	>B9089	3/22/93	15:08
3	----------	MEDIUM LEVEL	>B9090	3/22/93	15:53
4	----------	T303185-04A	>B9091	3/22/93	16:44
5	----------	T303218-04	>B9092	3/22/93	17:29
6	----------	T303260-01	>B9094	3/22/93	19:00
7	----------	T303260-01	>B9094	3/22/93	19:00
8	----------	T303268-01	>B9095	3/22/93	19:46
9	----------	T303268-02	>B9096	3/22/93	20:32
10	----------	T303268-02 MS	>B9097	3/22/93	21:18
11	----------	T303268-02 MSD	>B9098	3/22/93	22:04
12	----------	T303245-06A	>B9099	3/22/93	22:50
13	----------	T303245-07A	>B9100	3/22/93	23:37
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18					
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22					

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TC533 BFB Injection date: 3/23/93

Instrument ID: 0881 BFB Injection time: 10:47

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.1
75	30-60% of mass 95	51.3
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	82.4
175	5.0 - 9.0% of mass 174	6.5(7.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.0(99.5)1
177	5.0 - 9.0% of mass 176	5.4(6.6)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	VSTD 50 PPB	>C8569	3/23/93	11:29
2	----------	METHOD BLANK	>C8570	3/23/93	12:10
3	----------	T303298-07	>C8571	3/23/93	13:25
4	----------	T303298-06	>C8572	3/23/93	14:01
5	----------	T303298-06 MS	>C8574	3/23/93	15:40
6	----------	T303298-06 MSD	>C8575	3/23/93	16:16
7	----------	QC CHECK	>C8576	3/23/93	16:52
8	----------	MEDIUM BLANK	>C8578	3/23/93	18:03
9	----------	T303187-01	>C8585	3/23/93	22:20
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19					
20					
21					
22					

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >B9051 Lab Sample ID: METHOD BLAN

Date Analyzed: 03/18/93 Time Analyzed: 11:02

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>B9055	T303187-03 ✓	14:17

Comments: _____

_____

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE RECEIVED :
DATE ANALYZED : 03/18/93
DILUTION FACT.: 1.0

CLIENT :
LAB SAMPLE : METHOD BLANK
ANALYST : ED
FILE NAME : >B9051

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
CHLOROMETHANE	ND	10	1,2-DICHLOROPROPANE	ND	5
VINYL CHLORIDE	ND	10	BROMODICHLOROMETHANE	ND	5
BROMOMETHANE	ND	10	2-CHLOROETHYLVINYLETHER	ND	5
CHLOROETHANE	ND	10	TRANS-1,3-DICHLOROPROPENE	ND	5
ACROLEIN	ND	50	CIS-1,3-DICHLOROPROPENE	ND	5
TRICHLOROFLUOROMETHANE	ND	5	1,1,2-TRICHLOROETHANE	ND	5
1,1-DICHLOROETHENE	ND	5	DIBROMOCHLOROMETHANE	ND	5
CARBON DISULFIDE	ND	5	BROMOFORM	ND	5
ACETONE	ND	10	4-METHYL-2-PENTANONE	ND	10
ACRYLONITRILE	ND	50	TOLUENE	ND	5
METHYLENE CHLORIDE	2 J	5	TETRACHLOROETHENE	1 JB	5
TRANS-1,2-DICHLOROETHENE	ND	5	2-HEXANONE	ND	10
1,1-DICHLOROETHANE	ND	5	CHLOROBENZENE	ND	5
CHLOROFORM	ND	5	ETHYLBENZENE	ND	5
1,2-DICHLOROETHANE	ND	5	M,P-XYLENE	ND	5
VINYL ACETATE	ND	10	O-XYLENE	ND	5
2-BUTANONE	ND	10	STYRENE	ND	5
1,1,1-TRICHLOROETHANE	ND	5	1,1,2,2-TETRACHLOROETHANE	ND	5
CARBON TETRACHLORIDE	ND	5	1,3-DICHLOROBENZENE	ND	5
BENZENE	ND	5	1,4-DICHLOROBENZENE	ND	5
TRICHLOROETHENE	ND	5	1,2-DICHLOROBENZENE	ND	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	102 %	76 - 114	OK
TOLUENE-D8	101 %	88 - 110	OK
4-BROMOFLUOROBENZENE	101 %	86 - 115	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

METHOD BLANK

Lab Name: Laboratory Resources, Inc.   Contract:-------

Lab Code: GC/MS   Case No.: -----   SAS No.: -----   SDG No.: -----

Matrix: WATER   Lab Sample ID: METHOD BLANK

Sample wt/vol: 5.0 (g/ml) ml   Lab File ID: >B9051

Level: (low/med) LOW   Date Received:

% Solid: 0   Date Analyzed: 03/18/93

Column: CAP   Dilution Factor: 1

Number of TICs found: 0   CONCENTRATION UNITS: ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >B9052 Lab Sample ID: MEDIUM LEVE

Date Analyzed: 03/18/93 Time Analyzed: 11:50

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>B9053	T303187-01	12:45
>B9054	T303187-02	13:31
>B9056	T303118-02	15:02
>B9057	T303118-03	15:48
>B9058	T303214-01	16:33
>B9059	T303214-02	17:19
>B9060	T303214-03	18:05
>B9061	3214-03 MS	18:51
>B9062	3214-03 MSD	19:37
>B9063	T303214-04	20:22

Comments: _____

_____

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE RECEIVED :
DATE ANALYZED : 03/18/93
DILUTION FACT.: 125.0

CLIENT :
LAB SAMPLE : MEDIUM LEVEL
ANALYST : ED
FILE NAME : >89052

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	1250	1,2-DICHLOROPROPANE	ND	625
VINYL CHLORIDE	ND	1250	BROMODICHLOROMETHANE	ND	625
BROMOMETHANE	ND	1250	2-CHLOROETHYLVINYLETHER	ND	625
CHLOROETHANE	ND	1250	TRANS-1,3-DICHLOROPROPENE	ND	625
ACROLEIN	ND	6250	CIS-1,3-DICHLOROPROPENE	ND	625
TRICHLOROFLUOROMETHANE	ND	625	1,1,2-TRICHLOROETHANE	ND	625
1,1-DICHLOROETHENE	ND	625	DIBROMOCHLOROMETHANE	ND	625
CARBON DISULFIDE	ND	625	BROMOFORM	ND	625
ACETONE	ND	1250	4-METHYL-2-PENTANONE	ND	1250
ACRYLONITRILE	ND	6250	TOLUENE	ND	625
METHYLENE CHLORIDE	ND	625	TETRACHLOROETHENE	ND	625
TRANS-1,2-DICHLOROETHENE	ND	625	2-HEXANONE	ND	1250
1,1-DICHLOROETHANE	ND	625	CHLOROBENZENE	ND	625
CHLOROFORM	ND	625	ETHYLBENZENE	ND	625
1,2-DICHLOROETHANE	ND	625	M,P-XYLENE	ND	625
VINYL ACETATE	ND	1250	O-XYLENE	ND	625
2-BUTANONE	ND	1250	STYRENE	ND	625
1,1,1-TRICHLOROETHANE	ND	625	1,1,2,2-TETRACHLOROETHANE	ND	625
CARBON TETRACHLORIDE	ND	625	1,3-DICHLOROBENZENE	ND	625
BENZENE	ND	625	1,4-DICHLOROBENZENE	ND	625
TRICHLOROETHENE	ND	625	1,2-DICHLOROBENZENE	ND	625

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	99 %	70 - 121	OK
TOLUENE-D8	101 %	81 - 117	OK
4-BROMOFLUOROBENZENE	99 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 100. is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.

MEDIUM LEVEL

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: MEDIUM LEVEL

Sample wt/vol: 4.0 (g/ml) g Lab File ID: >B9052

Level: (low/med) MED Date Received:

% Solid: 100 Date Analyzed: 03/18/93

Column: CAP Dilution Factor: 125

Number of TICs found: 0

CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >C8578 Lab Sample ID: MEDIUM LEVE

Date Analyzed: 03/23/93 Time Analyzed: 18:03

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>C8585	T303187-01	22:20

Comments: _____

_____

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE RECEIVED :
DATE ANALYZED : 03/23/93
DILUTION FACT.: 125.0

CLIENT : BLANK FOR SOIL SAMPL
LAB SAMPLE : MEDIUM LEVEL
ANALYST : ANDY
FILE NAME : >CB578

GC/MS VOLATILE ORGANICS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
CHLOROMETHANE	ND	1250	1,2-DICHLOROPROPANE	ND	625
VINYL CHLORIDE	ND	1250	BROMODICHLOROMETHANE	ND	625
BROMOMETHANE	ND	1250	2-CHLOROETHYLVINYLETHER	ND	625
CHLOROETHANE	ND	1250	TRANS-1,3-DICHLOROPROPENE	ND	625
ACROLEIN	ND	6250	CIS-1,3-DICHLOROPROPENE	ND	625
TRICHLOROFLUOROMETHANE	ND	625	1,1,2-TRICHLOROETHANE	ND	625
1,1-DICHLOROETHENE	ND	625	DIBROMOCHLOROMETHANE	ND	625
CARBON DISULFIDE	ND	625	BROMOFORM	ND	625
ACETONE	ND	1250	4-METHYL-2-PENTANONE	ND	1250
ACRYLONITRILE	ND	6250	TOLUENE	ND	625
METHYLENE CHLORIDE	ND	625	TETRACHLOROETHENE	ND	625
TRANS-1,2-DICHLOROETHENE	ND	625	2-HEXANONE	ND	1250
1,1-DICHLOROETHANE	ND	625	CHLOROBENZENE	ND	625
CHLOROFORM	ND	625	ETHYLBENZENE	ND	625
1,2-DICHLOROETHANE	ND	625	M,P-XYLENE	ND	625
VINYL ACETATE	ND	1250	O-XYLENE	ND	625
2-BUTANONE	ND	1250	STYRENE	ND	625
1,1,1-TRICHLOROETHANE	ND	625	1,1,2,2-TETRACHLOROETHANE	ND	625
CARBON TETRACHLORIDE	ND	625	1,3-DICHLOROBENZENE	ND	625
BENZENE	ND	625	1,4-DICHLOROBENZENE	ND	625
TRICHLOROETHENE	ND	625	1,2-DICHLOROBENZENE	ND	625

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-DICHLOROETHANE-D4	98 %	70 - 121	OK
TOLUENE-D8	103 %	81 - 117	OK
4-BROMOFLUOROBENZENE	101 %	74 - 121	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 100. is used for all Target compounds.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: MED LEV BLK

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: MED LEV BLK

Sample wt/vol: 4.0 (g/ml) g Lab File ID: >C8578

Level: (low/med) MED Date Received:

% Solid: 100 Date Analyzed: 03/23/93

Column: CAP Dilution Factor: 125

Number of TICs found: 0 CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: 2637A0 1713

Contractor: LAB RESOURCES Calibration Date: 02/23/93

Contract No: _____

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30%

Laboratory ID:	>B8811	>B8810	>B8812	>B8813	>B8814					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	1.03110	.99709	1.27944	1.03106	.90082	.236	1.04790	13.359		**
VINYL CHLORIDE	1.06985	1.13309	1.46013	1.17299	1.04896	.254	1.17700	14.088	*	
BROMOMETHANE	1.18376	1.19454	1.65628	1.22916	1.15375	.306	1.28350	16.371		
CHLOROETHANE	.63681	.66703	.81113	.64046	.56291	.327	.66367	13.721		
ACROLEIN	.03946	.05717	.05725	.06831	.06325	.487	.05709	19.084		(Conc=40.0,100.0,200.0,
TRICHLOROFLUOROMETHANE	2.16960	2.31465	2.29552	2.11909	1.77167	.374	2.13410	10.253		
1,1-DICHLOROETHENE	1.08099	1.19905	1.11106	1.11153	1.00690	.486	1.10191	6.267	*	
CARBON DISULFIDE	2.02367	2.56016	2.52288	2.49527	2.34550	.909	2.38950	9.213		
ACETONE	.43134	.28131	.18264	.21634	.18849	.541	.26002	39.789		
ACRYLONITRILE	.14450	.08044	.14728	.16974	.14077	.718	.13655	24.416		
METHYLENE CHLORIDE	1.36919	1.47795	1.25734	1.24617	1.11161	.633	1.29245	10.692		
TRANS-1,2-DICHLOROETHENE	1.26791	1.56515	1.49606	1.43793	1.16098	.701	1.38561	12.049		
METHYL-TERT-BUTYL-ETHER	2.61650	2.92151	2.72241	2.66355	2.20895	.725	2.62658	9.929		(Conc=20.0,50.0,100.0,1
TERT-BUTYL-ALCOHOL	.13767	.08569	.04212	.07240	.05955	.761	.07949	45.659		(Conc=40.0,100.0,200.0,
1,1-DICHLOROETHANE	2.31533	2.63443	2.30093	2.46811	2.09870	.809	2.36350	8.480		**
DI-ISOPROPYL-ETHER	4.15636	4.16404	4.02480	4.38791	3.88577	.865	4.12378	4.519		(Conc=20.0,50.0,100.0,1
CIS-1,2-DICHLOROETHENE	2.00566	2.07110	1.88283	2.14222	1.96199	.950	2.01276	4.948		
CHLOROFORM	2.81423	3.12539	2.95947	3.04216	2.77092	1.038	2.94243	5.085	*	
1,2-DICHLOROETHANE	1.72399	1.90037	1.69869	1.87891	1.56076	1.148	1.75255	7.984		
1,2-DICHLOROETHANE-D4	1.86136	1.97717	1.59022	1.60653	1.46753	1.132	1.62056	8.964		(Conc=20.0,50.0,100.0,1
VINYL ACETATE	.75129	.73140	.76810	.48602	.86950	.689	.72126	19.670		
2-BUTANONE	.01014	.00959	.00938	.01199	.01276	.787	.01077	14.056		
1,1,1-TRICHLOROETHANE	.54942	.59638	.63822	.65465	.66188	.845	.62011	7.575		
CARBON TETRACHLORIDE	.53010	.60372	.64276	.66654	.68075	.871	.62477	9.673		
BENZENE	.68128	.72353	.75124	.79386	.79464	.911	.74891	6.451		
TRICHLOROETHENE	.40605	.48048	.42248	.45678	.43032	1.033	.43922	6.706		
1,2-DICHLOROPROPANE	.26473	.28730	.29234	.30400	.31885	1.072	.29344	6.858	*	
BROMODICHLOROMETHANE	.53061	.61615	.63672	.71221	.74792	1.134	.64872	13.131		
2-CHLOROETHYLVINYLETHER	.13377	.15457	.14684	.16151	.16508	1.206	.15235	8.215		
TRANS-1,3-DICHLOROPROPENE	.37993	.44745	.42989	.49409	.46189	1.325	.44265	9.542		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 2637A0 1713

Contractor: LAB RESOURCES Calibration Date: 02/23/93

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % RSD for CCC is 30%

Laboratory ID:	>B8811	>B8810	>B8812	>B8813	>B8814					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CIS-1,3-DICHLOROPROPENE	.36841	.45796	.47675	.49345	.50702	1.217	.46072	11.889		
1,1,2-TRICHLOROETHANE	.24712	.28075	.24950	.28950	.26398	1.354	.26617	7.035		
DIBROMOCHLOROMETHANE	.49148	.59726	.56494	.66038	.61777	1.419	.58637	10.802		
BROMOFORM	.41988	.52950	.49691	.58116	.53918	1.686	.51333	11.742		**
4-METHYL-2-PENTANONE	.21837	.24913	.18811	.20617	.19948	.828	.21225	11.000		
TOLUENE-D8	1.25769	1.14690	1.16096	1.13298	1.06133	.827	1.15197	6.117		(Conc=20.0,50.0,100.0,1
TOLUENE	.63413	.74238	.67810	.68139	.63894	.834	.67499	6.441	*	
TETRACHLOROETHENE	.64100	.69007	.60464	.63473	.55832	.897	.62575	7.765		
2-HEXANONE	.14622	.14218	.10270	.12304	.11092	.931	.12501	15.204		
CHLOROBENZENE	.86582	.99814	.90362	.98509	.90992	1.003	.93252	6.081		**
ETHYLBENZENE	.40853	.47697	.44057	.48089	.42546	1.023	.44649	7.110	*	
M,P-XYLENE	.51679	.59693	.53123	.56102	.50324	1.040	.54184	6.926		(Conc=40.0,100.0,200.0,
O-XYLENE	.47886	.56046	.50667	.54334	.46155	1.087	.51018	8.192		
STYRENE	.81023	.97015	.85821	.93464	.79033	1.091	.87271	8.918		
4-BROMOFLUOROBENZENE	1.18888	.90260	.87108	.92559	.79274	1.154	.93618	16.014		(Conc=20.0,50.0,100.0,1
1,1,2,2-TETRACHLOROETHANE	.48040	.46675	.36551	.42762	.38928	1.184	.42591	11.520		**
1,3-DICHLOROBENZENE	1.01720	1.35461	1.03110	1.10718	.98228	1.293	1.09847	13.680		
1,4-DICHLOROBENZENE	1.00972	1.33566	1.03343	1.12994	1.02382	1.306	1.10651	12.342		
1,2-DICHLOROBENZENE	1.26388	1.25934	.87321	1.02818	.84999	1.352	1.05492	19.029		

RF - Response Factor (Subscript is amount in UG/L)

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$\overline{RF}$ - Average Response Factor

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CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 2824A11 191

Contractor: LAB. RESOURCES Calibration Date: 03/15/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C8444	>C8443	>C8445	>C8446	>C8447					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	.73093	.63678	.62433	.59544	.61165	.191	.63982	8.312		**
VINYL CHLORIDE	.94066	.78890	.82583	.75783	.78431	.206	.81951	8.778	*	
BROMOMETHANE	1.40285	1.20227	1.22170	1.13926	1.15545	.250	1.22430	8.600		
CHLOROETHANE	.54936	.47671	.48503	.44599	.46357	.270	.48413	8.125		
ACROLEIN	.07614	.06350	.07716	.07013	.06857	.387	.07110	7.937		(Conc=40.0,100.0,200.(
TRICHLOROFLUOROMETHANE	2.69527	2.54286	2.18901	1.78948	1.73022	.303	2.18937	19.799		
1,1-DICHLOROETHENE	1.07088	1.03320	1.05735	.89492	.88186	.392	.98764	9.287	*	
CARBON DISULFIDE	2.44997	2.42472	2.45092	2.07539	2.06380	.412	2.29296	8.906		
ACETONE	.13029	.15694	.16398	.14169	.13450	.426	.14548	9.959		
ACRYLONITRILE	.10452	.10690	.14772	.14397	.14701	.592	.13002	17.117		
METHYLENE CHLORIDE	1.19394	1.16934	1.19857	1.03659	1.03889	.511	1.12747	7.332		
METHYL-TERT-BUTYL-ETHER	2.83046	2.41777	2.56558	2.36583	2.35203	.606	2.50633	7.979		
TERT-BUTYL-ALCOHOL	.03111	.05829	.07307	.07111	.07272	.639	.06126	29.265		(Conc=40.0,100.0,200.(
TRANS-1,2-DICHLOROETHENE	1.31008	1.33204	1.35308	1.17425	1.18855	.583	1.27160	6.597		
DI-ISOPROPYL-ETHER	4.83339	3.99024	4.19306	3.90664	3.94928	.803	4.17452	9.207		
1,1-DICHLOROETHANE	2.39196	2.29660	2.36997	2.04670	2.08730	.716	2.23851	7.198		**
CIS-1,2-DICHLOROETHENE	1.44873	1.44064	1.48065	1.28996	1.28972	.928	1.38994	6.662		
CHLOROFORM	3.47830	3.42482	3.38320	2.90340	2.91403	1.057	3.22075	8.907	*	
1,2-DICHLOROETHANE	2.01663	1.98962	2.05607	1.75572	1.74946	1.211	1.91350	7.776		
1,2-DICHLOROETHANE-D4	1.71797	1.54564	1.44200	1.40626	1.38712	1.186	1.49980	9.099		
VINYL ACETATE	.86913	.79782	.87289	.81140	.79215	.584	.82868	4.742		
2-BUTANONE	.05189	.04902	.06156	.05474	.05239	.712	.05392	8.777		
1,1,1-TRICHLOROETHANE	.68434	.73950	.70420	.60912	.59054	.794	.66554	9.541		
CARBON TETRACHLORIDE	.68361	.74030	.69550	.60261	.57833	.831	.66007	10.227		
BENZENE	.77800	.78369	.80093	.71314	.70312	.881	.75578	5.881		
TRICHLOROETHENE	.49390	.48971	.48756	.43552	.44296	1.040	.46993	6.008		
1,2-DICHLOROPROPANE	.31900	.31233	.32477	.29178	.27993	1.084	.30596	6.215	*	
BROMODICHLOROMETHANE	.77711	.82113	.79693	.70432	.68656	1.163	.75721	7.771		
2-CHLOROETHYLVINYLETHER	.14121	.14412	.15179	.14213	.14032	1.253	.14392	3.213		
TRANS-1,3-DICHLOROPROPENE	.52807	.54031	.56736	.50603	.49040	1.395	.52643	5.687		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**).

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 2824A11 191

Contractor: LAB. RESOURCES Calibration Date: 03/15/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C8444	>C8443	>C8445	>C8446	>C8447					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CIS-1,3-DICHLOROPROPENE	.50235	.52550	.53372	.47561	.46963	1.262	.50136	5.729		
1,1,2-TRICHLOROETHANE	.30348	.29879	.32031	.28409	.27002	1.428	.29534	6.489		
DIBROMOCHLOROMETHANE	.75163	.76080	.78566	.68628	.65707	1.504	.72829	7.436		
BROMOFORM	.55831	.56938	.60199	.52725	.49996	1.819	.55138	7.117		**
4-METHYL-2-PENTANONE	.22126	.20072	.23277	.21092	.20344	.809	.21382	6.196		
TOLUENE-D8	1.16657	1.10588	1.02305	1.02494	.98671	.807	1.06143	6.894		
TOLUENE	.72387	.72692	.73737	.66647	.65865	.815	.70266	5.272	*	
TETRACHLOROETHENE	.60553	.60206	.59868	.52902	.50785	.886	.56863	8.176		
2-HEXANONE	.11714	.11020	.14051	.12808	.11987	.926	.12316	9.434		
CHLOROBENZENE	1.05593	1.07230	1.07408	.95042	.91979	1.004	1.01451	7.258		**
ETHYLBENZENE	.49216	.48526	.48438	.43114	.42950	1.028	.46449	6.748	*	
M,P-XYLENE	.61246	.61291	.61009	.53877	.52488	1.047	.57982	7.606		(Conc=40.0,100.0,200.(
O-XYLENE	.57684	.58840	.59424	.53463	.51058	1.099	.56094	6.516		
STYRENE	1.00909	1.02895	1.06105	.95789	.92229	1.103	.99585	5.585		
4-BROMOFLUOROBENZENE	1.18044	1.01679	.95026	.94411	.88871	1.172	.99606	11.308		
1,1,2,2-TETRACHLOROETHANE	.47053	.46460	.52066	.47577	.41949	1.209	.47021	7.653		**
1,3-DICHLOROBENZENE	1.19437	1.20104	1.19989	1.06539	1.03482	1.325	1.13910	7.198		
1,4-DICHLOROBENZENE	1.24818	1.25177	1.25015	1.11144	1.07998	1.340	1.18831	7.176		
1,2-DICHLOROBENZENE	1.12153	1.12494	1.16241	1.01174	.97706	1.389	1.07954	7.438		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 03/18/93

Contractor: LAB RESOURCES | Time: 10:12

Contract No: | Laboratory ID: >B9050

Instrument ID: 2637A0 1713 | Initial Calibration Date: 02/23/93

Minimum $\overline{RF}$ for SPCC is 0.3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	1.04790	.70370	32.85		**	
VINYL CHLORIDE	1.17700	.95916	18.51	*		
BROMOMETHANE	1.28350	1.18393	7.76			
CHLOROETHANE	.66367	.63836	3.81			
ACROLEIN	.05709	.01998	65.00			(Conc=100.00)
TRICHLOROFLUOROMETHANE	2.13410	2.57365	20.60			
1,1-DICHLOROETHENE	1.10191	1.05729	4.05	*		
CARBON DISULFIDE	2.38950	2.12510	11.06			
ACETONE	.26002	.27016	3.90			
ACRYLONITRILE	.13655	.13019	4.65			
METHYLENE CHLORIDE	1.29245	1.21246	6.19			
TRANS-1,2-DICHLOROETHENE	1.38561	1.39509	.68			
METHYL-TERT-BUTYL-ETHER	2.62658	2.85955	8.87			
TERT-BUTYL-ALCOHOL	.07949	.06804	14.40			(Conc=100.00)
1,1-DICHLOROETHANE	2.36350	2.58493	9.37		**	
DI-ISOPROPYL-ETHER	4.12378	4.63145	12.31			
CIS-1,2-DICHLOROETHENE	2.01276	2.21954	10.27			
CHLOROFORM	2.94243	3.53386	20.10	*		
1,2-DICHLOROETHANE	1.75255	2.25995	28.95			
1,2-DICHLOROETHANE-D4	1.62056	1.80328	11.27			(Conc=50.00)
VINYL ACETATE	.72126	.82277	14.07			
2-BUTANONE	.01077	.00862	19.99			
1,1,1-TRICHLOROETHANE	.62011	.70900	14.33			
CARBON TETRACHLORIDE	.62477	.70024	12.08			
BENZENE	.74891	.72313	3.44			
TRICHLOROETHENE	.43922	.49300	12.24			
1,2-DICHLOROPROPANE	.29344	.30674	4.53	*		
BROMODICHLOROMETHANE	.64872	.74856	15.39			
2-CHLOROETHYLVINYLETHER	.15235	.12941	15.06			
TRANS-1,3-DICHLOROPROPENE	.44265	.49902	12.73			
CIS-1,3-DICHLOROPROPENE	.46072	.48540	5.36			
1,1,2-TRICHLOROETHANE	.26617	.27349	2.75			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

037

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/18/93

Contractor: LAB RESOURCES Time: 10:12

Contract No: Laboratory ID: >B9050

Instrument ID: 2637A0 1713 Initial Calibration Date: 02/23/93

Minimum $\overline{RF}$ for SPCC is 0.3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
DIBROMOCHLOROMETHANE	.58637	.65861	12.32			
BROMOFORM	.51333	.53092	3.43		**	
4-METHYL-2-PENTANONE	.21225	.21782	2.63			
TOLUENE-D8	1.15197	1.09483	4.96			(Conc=50.00)
TOLUENE	.67499	.74993	11.10	*		
TETRACHLOROETHENE	.62575	.71452	14.19			
2-HEXANONE	.12501	.12915	3.31			
CHLOROBENZENE	.93252	1.04609	12.18		**	
ETHYLBENZENE	.44649	.48488	8.60	*		
M,P-XYLENE	.54184	.61354	13.23			(Conc=100.00)
O-XYLENE	.51018	.56964	11.66			
STYRENE	.87271	.99385	13.88			
4-BROMOFLUOROBENZENE	.93618	.91903	1.83			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.42591	.46260	8.61		**	
1,3-DICHLOROBENZENE	1.09847	1.18444	7.83			
1,4-DICHLOROBENZENE	1.10651	1.16766	5.53			
1,2-DICHLOROBENZENE	1.05492	1.10057	4.33			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/23/93

Contractor: LAB. RESOURCES Time: 11:29

Contract No: Laboratory ID: >C8569

Instrument ID: 2824A11 191 Initial Calibration Date: 03/15/93

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.63982	.53860	15.82		**	
VINYL CHLORIDE	.81951	.83614	2.03	*		
BROMOMETHANE	1.22430	1.24645	1.81			
CHLOROETHANE	.48413	.52433	8.30			
ACROLEIN	.07110	.08255	16.11			(Conc=100.00)
TRICHLOROFLUOROMETHANE	2.18937	1.61662	26.16			
1,1-DICHLOROETHENE	.98764	.84286	14.66	*		
CARBON DISULFIDE	2.29296	1.75834	23.32			
ACETONE	.14548	.21165	45.49			
ACRYLONITRILE	.13002	.14987	15.26			
METHYLENE CHLORIDE	1.12747	1.01421	10.04			
METHYL-TERT-BUTYL-ETHER	2.50633	2.90577	15.94			
TERT-BUTYL-ALCOHOL	.06126	.06172	.75			(Conc=100.00)
TRANS-1,2-DICHLOROETHENE	1.27160	1.13178	11.00			
DI-ISOPROPYL-ETHER	4.17452	4.56031	9.24			
1,1-DICHLOROETHANE	2.23851	1.98164	11.47		**	
CIS-1,2-DICHLOROETHENE	1.38994	1.26427	9.04			
CHLOROFORM	3.22075	2.72184	15.49	*		
1,2-DICHLOROETHANE	1.91350	1.65472	13.52			
1,2-DICHLOROETHANE-D4	1.49980	1.58267	5.55			
VINYL ACETATE	.82868	.86189	4.01			
2-BUTANONE	.05392	.05787	7.33			
1,1,1-TRICHLOROETHANE	.66554	.54585	17.98			
CARBON TETRACHLORIDE	.66007	.52901	19.86			
BENZENE	.75578	.69141	8.52			
TRICHLOROETHENE	.46993	.40041	14.79			
1,2-DICHLOROPROPANE	.30556	.28737	5.95	*		
BROMODICHLOROMETHANE	.75721	.63903	15.61			
2-CHLOROETHYLVINYLETHER	.14392	.14995	4.19			
TRANS-1,3-DICHLOROPROPENE	.52643	.46373	11.91			
CIS-1,3-DICHLOROPROPENE	.50136	.45000	10.24			
1,1,2-TRICHLOROETHANE	.29534	.28364	3.96			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/23/93

Contractor: LAB. RESOURCES Time: 11:29

Contract No: Laboratory ID: >C8569

Instrument ID: 2824A11 191 Initial Calibration Date: 03/15/93

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
DIBROMOCHLOROMETHANE	.72829	.60571	16.83			
BROMOFORM	.55138	.45887	16.78		**	
4-METHYL-2-PENTANONE	.21382	.22906	7.12			
TOLUENE-D8	1.06143	1.04176	1.85			
TOLUENE	.70266	.62058	11.68	*		
TETRACHLOROETHENE	.56863	.47418	16.61			
2-HEXANONE	.12316	.13461	9.30			
CHLOROBENZENE	1.01451	.91347	9.96		**	
ETHYLBENZENE	.46449	.40976	11.78	*		
M,P-XYLENE	.57982	.50595	12.74			(Conc=100.00)
O-XYLENE	.56094	.49732	11.34			
STYRENE	.99585	.87141	12.50			
4-BROMOFLUOROBENZENE	.99606	.84851	14.81			
1,1,2,2-TETRACHLOROETHANE	.47021	.49057	4.33		**	
1,3-DICHLOROBENZENE	1.13910	.95940	15.78			
1,4-DICHLOROBENZENE	1.18831	.99569	16.21			
1,2-DICHLOROBENZENE	1.07954	.91173	15.54			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/18/93

LAB SAMP NO.	($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	OTHER	TOT OUT
METHOD BLA	W	102	101	101		0
MEDIUM LEV	S	99	101	99		0
T303187-01	S	96	98	100		0
T303187-02	S	100	99	101		0
T303187-03	W	94	99	103		0
T303118-02	S	93	99	102		0
T303118-03	S	97	99	89		0
T303214-01	S	94	100	105		0
T303214-02	S	95	100	106		0
T303214-03	S	95	103	106		0
T303214-03	MS	93	105	104		0
T303214-03	MS	93	108	105		0
T303214-04	S	97	100	108		0

EPA CLP QC Limits For:	Soil	Water
S1 (DCE) = 1,2-DICHLOROETHANE-D4	70-121	76-114
S2 (TOL) = TOLUENE-D8	81-117	88-110
S3 (BFB) = 4-BROMOFLUOROBENZENE	74-121	86-115

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/23/93

LAB SAMP NO. ($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	OTHER	TOT OUT
METHOD BLA W	102	103	99		0
T303298-07 W	96	103	97		0
T303298-06 W	105	103	102		0
T303298-06 WM	96	102	95		0
T303298-06 WM	101	102	102		0
QC CHECK W	97	104	101		0
MEDIUM BLA S	98	103	101		0
T303187-01 S	99	101	99		0

EPA CLP QC Limits For:	Soil	Water
S1 (DCE) = 1,2-DICHLOROETHANE-D4	70-121	76-114
S2 (TOL) = TOLUENE-D8	81-117	88-110
S3 (BFB) = 4-BROMOFLUOROBENZENE	74-121	86-115

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/22/93

LAB SAMP NO. ($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	OTHER	TOT OUT
METHOD BLA W	98	101	96		0
MEDIUM LEV S	98	99	97		0
T303185-04 W	96	99	98		0
T303218-04 W	98	100	97		0
T303260-01 S	100	102	95		0
T303260-01 S	100	102	95		0
T303268-01 S	94	99	96		0
T303268-02 S	94	99	101		0
T303268-02 SM	93	102	102		0
T303268-02 SM	92	101	100		0
T303245-06 S	93	99	101		0
T303245-07 S	93	99	100		0

EPA CLP QC Limits For:	Soil	Water
S1 (DCE) = 1,2-DICHLOROETHANE-D4	70-121	76-114
S2 (TOL) = TOLUENE-D8	81-117	88-110
S3 (BFB) = 4-BROMOFLUOROBENZENE	74-121	86-115

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

LABORATORY RESOURCES INC.

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laboratory Resources Contract:

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

Matrix Spike - Sample No.: T303298-06 Level: LOW
Date : 03-23-93

COMPOUNDS	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	117.40	123.10	11	*	61-145
BENZENE	50.00	79.34	126.01	93		76-127
TRICHLOROETHENE	50.00	33.81	81.49	95		71-120
TOLUENE	50.00	23.90	75.11	102		76-125
CHLOROBENZENE	50.00	46.73	96.51	100		75-130

COMPOUNDS	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
1,1-DICHLOROETHENE	50.00	145.98	57	*	133	*	14	61-145
BENZENE	50.00	122.95	87		7		11	76-127
TRICHLOROETHENE	50.00	80.74	94		2		14	71-120
TOLUENE	50.00	70.62	93		9		13	76-125
CHLOROBENZENE	50.00	94.98	97		3		13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of advisory EPA contract Lab QC limits.

RPD: 1 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

Comments: Spiked recoveries and RPD's are for reference use only._____.

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LABORATORY RESOURCES INC.

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laboratory Resources Contract:

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

Matrix Spike Sample No.: T303214-03 Level: MED

COMPOUNDS	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	0.00	62.73	125	59-172
BENZENE	50.00	3.45	54.96	103	66-142
TRICHLOROETHENE	50.00	0.00	52.29	105	62-137
TOLUENE	50.00	68.05	111.31	87	59-139
CHLOROBENZENE	50.00	0.00	51.03	102	60-133

COMPOUNDS	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	43.66	87	36 *	22	59-172
BENZENE	50.00	57.18	107	4	21	66-142
TRICHLOROETHENE	50.00	53.08	106	1	24	62-137
TOLUENE	50.00	109.56	83	4	21	59-139
CHLOROBENZENE	50.00	53.07	106	4	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of advisory EPA contract Lab QC limits.

RPD: 1 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

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LABORATORY RESOURCES INC.

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laboratory Resources Contract:

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

Matrix Spike - Sample No.: T303268-02 Level: MED

Date: 03/22/93

COMPOUNDS	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	#	QC LIMITS REC.
1,1-DICHLOROETHENE	50.00	0.00	31.82	64		59-172
BENZENE	50.00	0.00	46.44	93		66-142
TRICHLOROETHENE	50.00	0.00	50.72	101		62-137
TOLUENE	50.00	0.00	49.09	98		59-139
CHLOROBENZENE	50.00	0.00	51.35	103		60-133

COMPOUNDS	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
1,1-DICHLOROETHENE	50.00	37.15	74		15		22	59-172
BENZENE	50.00	50.15	100		8		21	66-142
TRICHLOROETHENE	50.00	54.65	109		7		24	62-137
TOLUENE	50.00	51.29	103		4		21	59-139
CHLOROBENZENE	50.00	53.74	107		5		21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of advisory EPA contract Lab QC limits.

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

_____

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >B9050 Lab Sample ID: 50 PPB VOA

Date Analyzed: 03/18/93 Time Analyzed: 10:12

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	35187		8.80	164972		11.00	131115		16.70
UPPER LIMIT	70374			329944			262230		
LOWER LIMIT	17593			82486			65558		
LAB SAMPLE #									
METHOD BLA	32153		8.79	163966		11.01	115821		16.71
MEDIUM LEV	35998		8.82	173231		11.00	138690		16.70
T303187-01	32262		8.80	143137		11.00	122871		16.71
T303187-02	31963		8.83	147964		11.03	125578		16.73
T303187-03	33534		8.82	152347		11.01	125568		16.70
T303118-02	31175		8.81	141278		11.03	119700		16.72
T303118-03	31540		8.86	144037		11.06	121861		16.73
T303214-01	30246		8.82	135224		11.02	117297		16.72
T303214-02	32351		8.87	150399		11.07	126183		16.77
T303214-03	29074		8.84	133981		11.05	109364		16.73
T303214-03M	33655		8.82	173463		11.02	138301		16.72
T303214-03M	41082		8.82	209417		11.02	165733		16.72
T303214-04	21766		8.83	99783		11.03	86288		16.72

IS1 (BCM) = Bromochlormethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

047

Column used to flag internal standard are values with an asterisk

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >B9088 Lab Sample ID: 50 PPB VOA

Date Analyzed: 03/22/93 Time Analyzed: 14:21

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	42804		8.81	195544		11.01	159591		16.71
UPPER LIMIT	85608			391088			319182		
LOWER LIMIT	21402			97772			79795		
LAB SAMPLE #									
METHOD BLA	44352		8.84	203717		11.04	167524		16.73
MEDIUM LEV	41402		8.79	188553		11.01	157836		16.69
T303185-04	42272		8.81	191662		11.01	159747		16.72
T303218-04	41534		8.81	190901		11.02	157814		16.70
T303260-01	42287		8.81	197320		11.01	162798		16.71
T303260-01	42287		8.81	197320		11.01	162798		16.71
T303268-01	37450		8.89	176486		11.10	146653		16.80
T303268-02	39437		8.83	182749		11.03	151537		16.72
T303268-02M	38598		8.85	178188		11.05	145127		16.75
T303268-02M	28420		8.86	133787		11.04	109138		16.72
T303245-06	40652		8.98	184708		11.16	156992		16.85
T303245-07	39883		8.83	183243		11.04	153422		16.73

IS1 (BCM) = Bromochlormethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard are values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >C8569 Lab Sample ID: VSTD 50 PPB

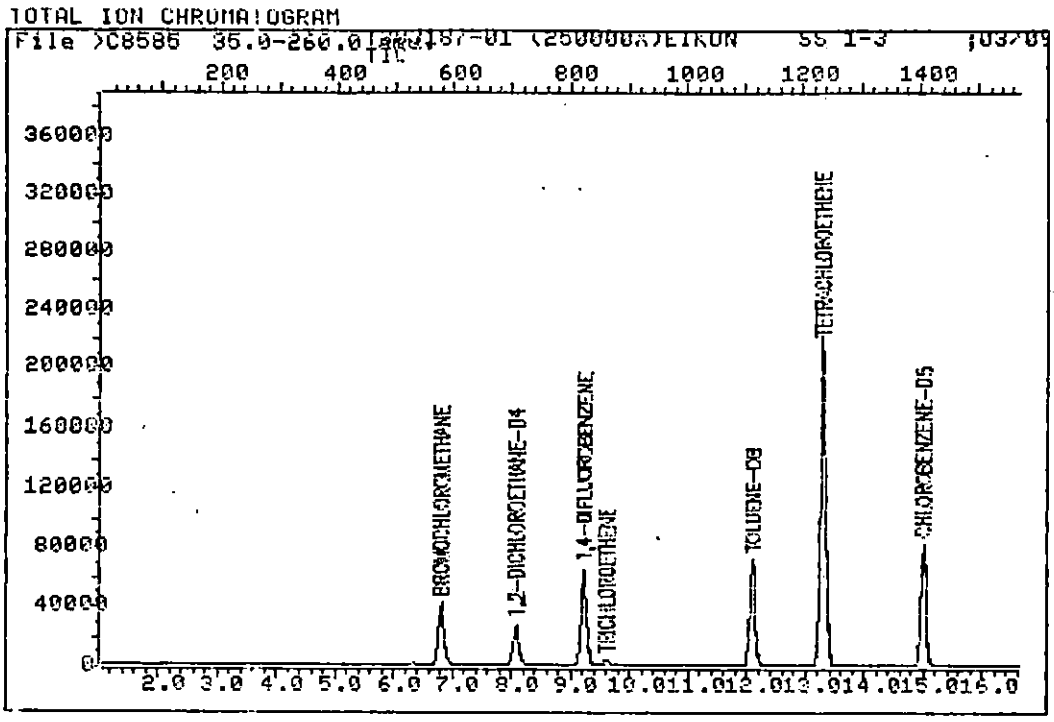
Date Analyzed: 03/23/93 Time Analyzed: 11:29

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	40028	6.88	170167	9.25	142706	14.99
UPPER LIMIT	80056		340334		285412	
LOWER LIMIT	20014		85083		71353	
LAB SAMPLE #						
METHOD BLA	39013	6.85	175720	9.24	145979	14.99
T303298-07	33348	6.85	159490	9.24	130421	14.99
T303298-06	38524	6.84	168497	9.25	143094	14.99
T303298-06M	40032	6.85	188324	9.24	155006	14.99
T303298-06M	42935	6.83	184979	9.25	158308	15.03
QC CHECK	41020	6.81	181720	9.23	152588	15.04
MEDIUM BLA	35656	6.74	158212	9.20	131898	14.98
T303187-01	42184	6.80	185077	9.22	157975	14.99

IS1 (BCM) = Bromochlormethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard are values with an asterisk

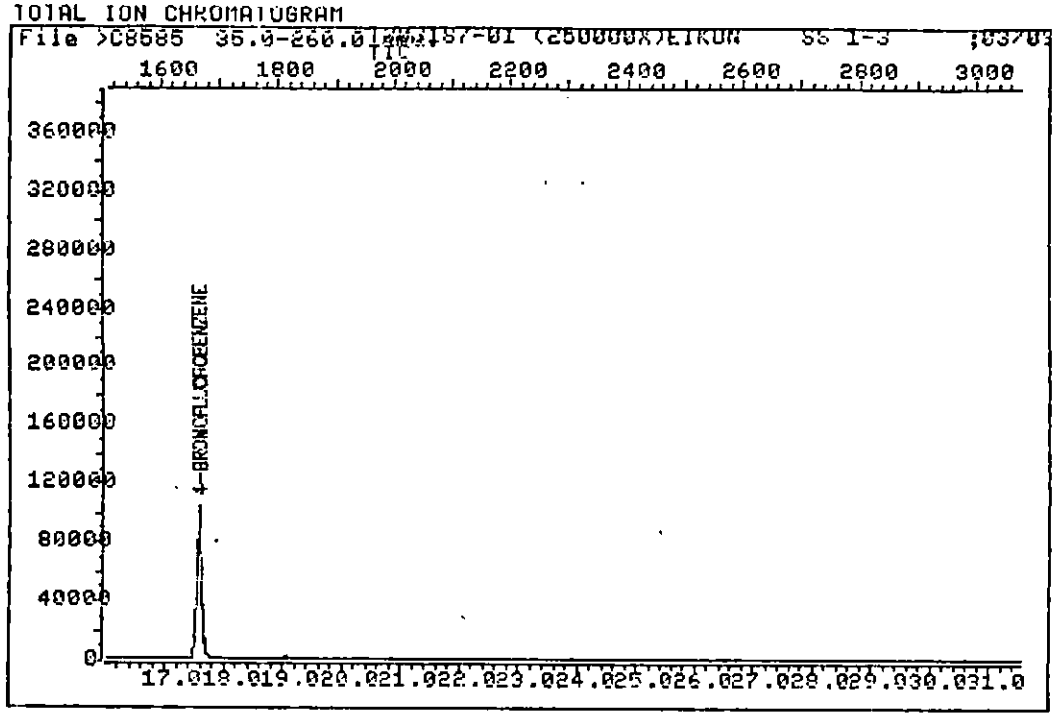


Data File: >C8585::C4 Quant Output File: ^C8585::QT
Name: T303187-01 (250000X) Instrument ID: C
Misc: EIKON SS 1-3 ;03/09/93;03/10/93

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

Operator ID: ANDY
Quant Time : 930323 22:53
Injected at: 930323 22:20

TOTAL ION CHROMATOGRAM



Data File: >C8585::C4 Quant Output File: ^C8585::QT
Name: T303187-01 (250000X) Instrument ID: C
Misc: EIKON SS 1-3 ;03/09/93;03/10/93

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

Operator ID: ANDY
Quant Time : 930323 22:53
Injected at: 930323 22:20

5A

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TC533 BFB Injection date: 3/23/93

Instrument ID: 0881 BFB Injection time: 10:47

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	20.1
75	30-60% of mass 95	51.3
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	82.4
175	5.0 - 9.0% of mass 174	6.5(7.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.0(99.5)1
177	5.0 - 9.0% of mass 176	5.4(6.6)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	VSTD 50 PPB	>C8569	3/23/93	11:29
2	----------	METHOD BLANK	>C8570	3/23/93	12:10
3	----------	T303298-07	>C8571	3/23/93	13:25
4	----------	T303298-06	>C8572	3/23/93	14:01
5	----------	T303298-06 MS	>C8574	3/23/93	15:40
6	----------	T303298-06 MSD	>C8575	3/23/93	16:16
7	----------	QC CHECK	>C8576	3/23/93	16:52
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

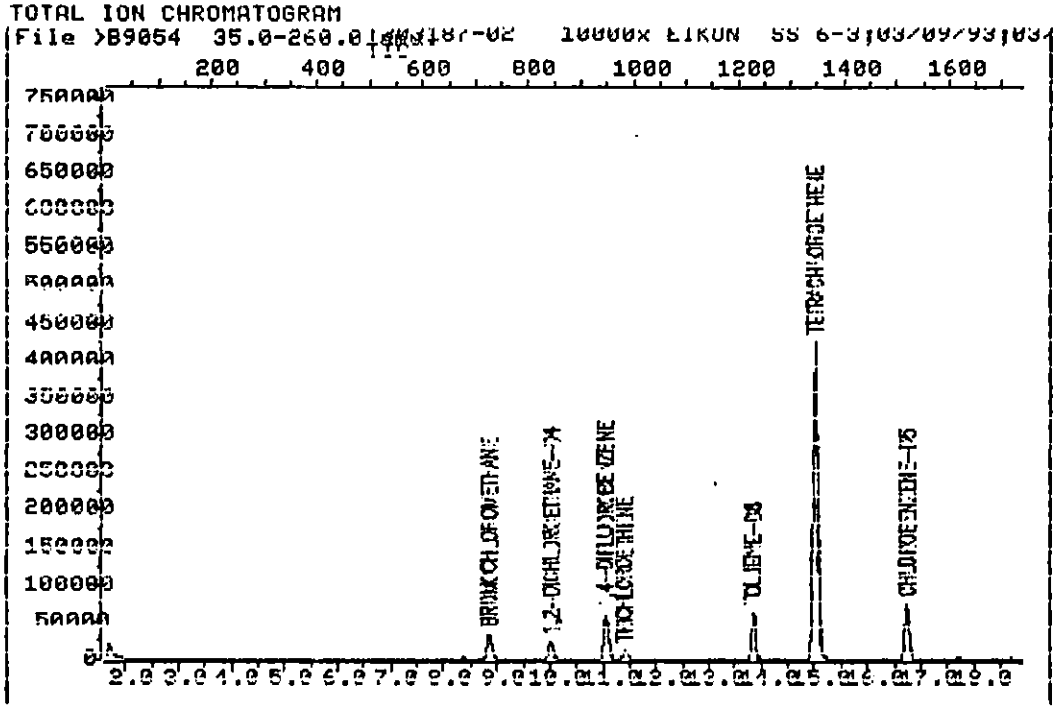
052

Operator ID: ANDY Quant Rev: 7 Quant Time: 930323 22:53
Output File: ^C8585::QT Injected at: 930323 22:20
Data File: >C8585::C4 Dilution Factor: 1.00000
Name: T303187-01 (250000X) Instrument ID: C
Misc: EIKON SS 1-3 ;03/09/93;03/10/93

ID File: IDOVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

	Compound	R.T.	Q ion	Area	Conc	Units	
1)	*BROMOCHLOROMETHANE	6.80	128.0	42184	50.00	UG/L	
21)	1,2-DICHLOROETHANE-D4	8.08	65.0	66198	49.58	UG/L	
22)	*1,4-DIFLUOROBENZENE	9.22	114.0	185077	50.00	UG/L	
28)	TRICHLOROETHENE	9.60	130.0	3770	2.54	UG/L	
37)	*CHLOROBENZENE-D5	14.99	117.0	157975	50.00	UG/L	
39)	TOLUENE-D8	12.10	98.0	166244	50.51	UG/L	
41)	TETRACHLOROETHENE	13.28	164.0	196868	131.40	UG/L	
48)	4-BROMOFLUOROBENZENE	17.56	95.0	132034	49.25	UG/L	

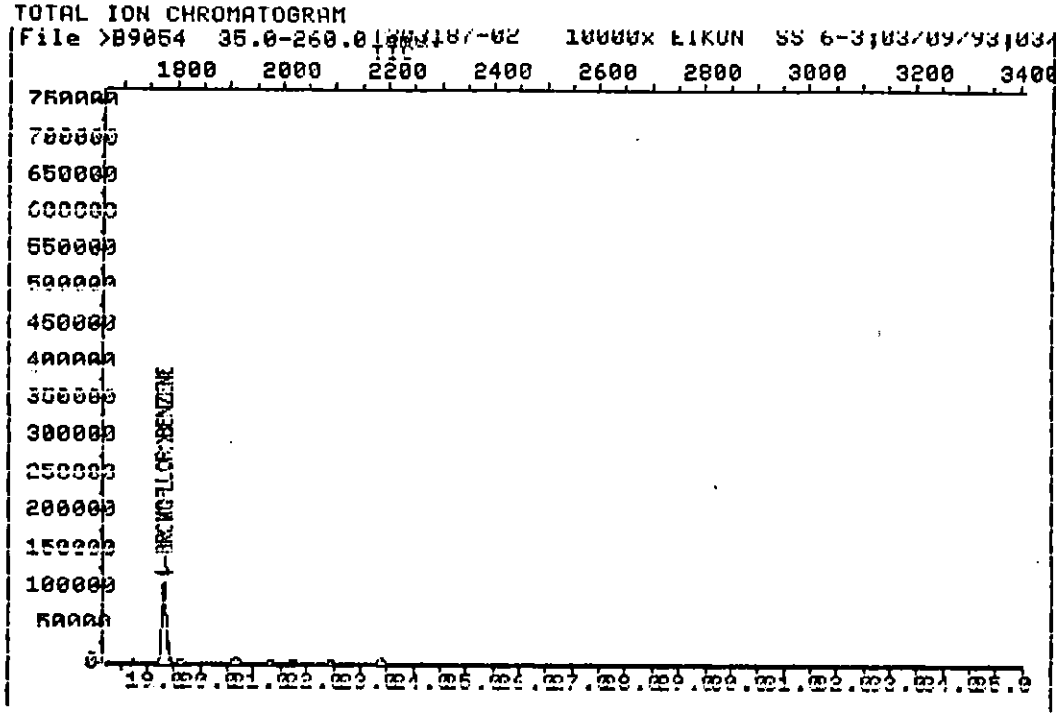
* Compound is ISTD



Data File: >B9054::B2 Quant Output File: ^B9054::QT
Name: T303187-02 10000x Instrument ID: B
Misc: EIKON SS 6-3;03/09/93;03/10/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

Operator ID: ED
Quant Time : 930318 14:19
Injected at: 930318 13:31



Data File: >B9054::B2 Quant Output File: ^B9054::QT
Name: T303187-02 10000x Instrument ID: B
Misc: EIKON SS 6-3;03/09/93;03/10/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

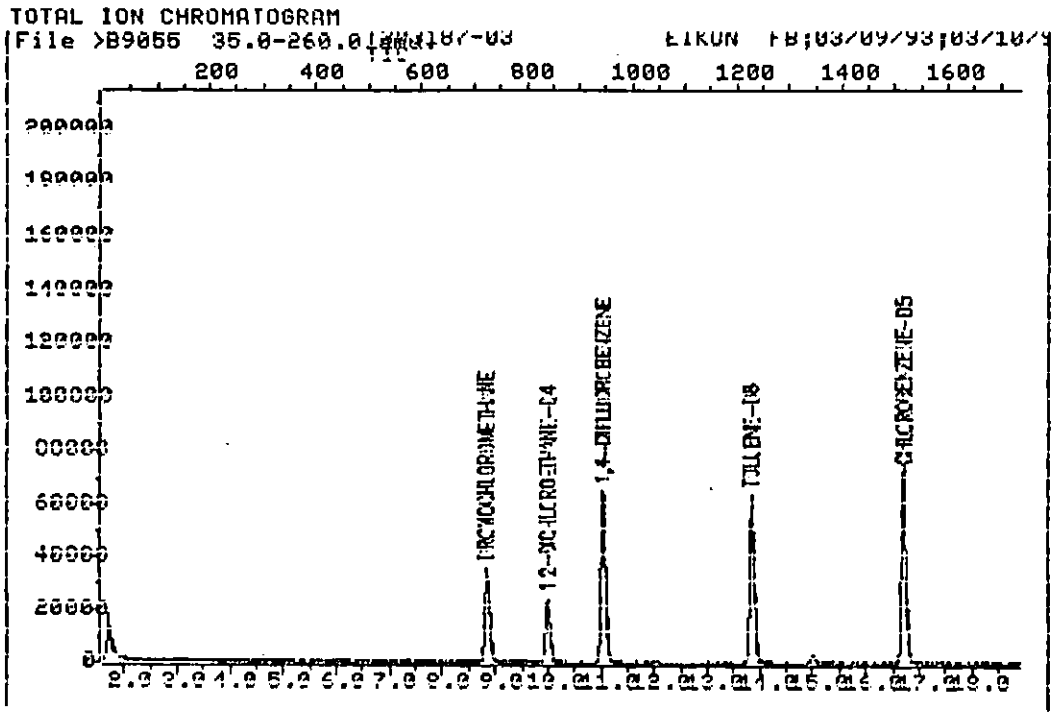
Operator ID: ED
Quant Time : 930318 14:19
Injected at: 930318 13:31

Operator ID: ED Quant Rev: 7 Quant Time: 930318 14:19
Output File: ^B9054::QT Injected at: 930318 13:31
Data File: >B9054::B2 Dilution Factor: 1.00000
Name: T303187-02 10000x Instrument ID: B
Misc: EIKON SS 6-3;03/09/93;03/10/93

ID File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.83	127.9	31963	50.00	UG/L	94
21)	1,2-DICHLOROETHANE-D4	10.00	65.0	54147	49.97	UG/L	98
22)	*1,4-DIFLUOROBENZENE	11.03	114.0	147964	50.00	UG/L	95
28)	TRICHLOROETHENE	11.39	130.0	13618	9.42	UG/L	89
37)	*CHLOROBENZENE-D5	16.73	117.0	125578	50.00	UG/L	91
39)	TOLUENE-D8	13.83	98.0	132317	49.49	UG/L	97
41)	TETRACHLOROETHENE	15.00	164.0	393270	116.57	UG/L	99
48)	4-BROMOFLUOROBENZENE	19.30	95.0	115355	50.41	UG/L	91

* Compound is ISTD

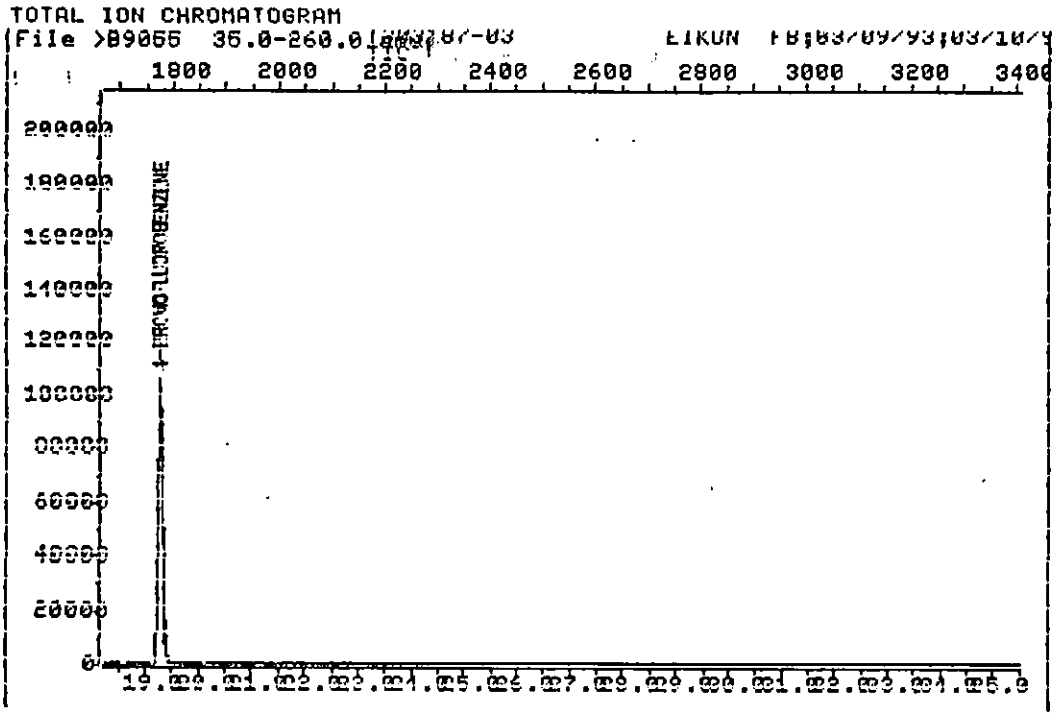


Data File: >B9055::B2 Quant Output File: ^B9055::QT
Name: T303187-03 Instrument ID: B
Misc: EIKON FB;03/09/93;03/10/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

Operator ID: ED
Quant Time : 930318 15:00
Injected at: 930318 14:17

Page 1 of 2



Data File: >B9055::B2 Quant Output File: ^B9055::QT
Name: T303187-03 Instrument ID: 8
Misc: EIKON FB;03/09/93;03/10/93

Id File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

Operator ID: ED
Quant Time : 930318 15:00
Injected at: 930318 14:17

Page 2 of 2

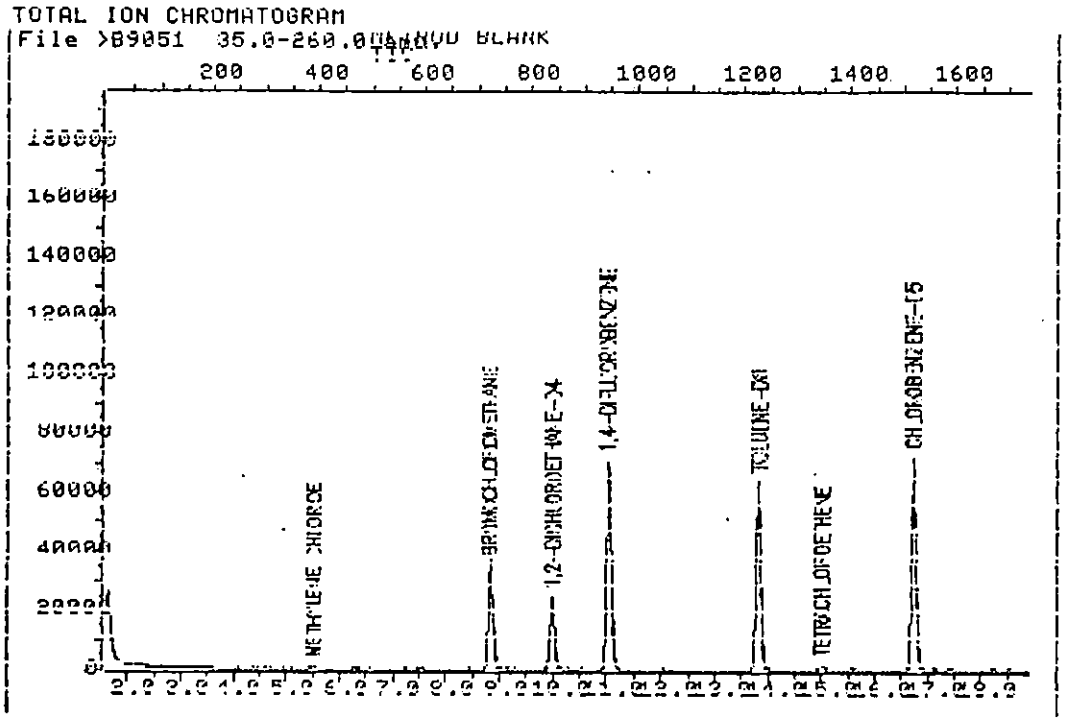
QUANT REPORT Page 1

Operator ID: ED Quant Rev: 7 Quant Time: 930318 15:00
Output File: ^B9055::QT Injected at: 930318 14:17
Data File: >B9055::B2 Dilution Factor: 1.00000
Name: T303187-03 Instrument ID: B
Misc: EIKON FB:03/09/93;03/10/93

ID File: IDDSVO::C4
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930224 17:25 Last Qcal Time: 930317 10:14

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.82	127.9	33534	50.00	UG/L	97
21)	1,2-DICHLOROETHANE-D4	9.99	65.0	53372	46.95	UG/L	98
22)	*1,4-DIFLUOROBENZENE	11.01	114.0	152347	50.00	UG/L	94
37)	*CHLOROBENZENE-D5	16.70	117.0	125568	50.00	UG/L	92
39)	TOLUENE-D8	13.81	98.0	131946	49.36	UG/L	94
48)	4-BROMOFLUOROBENZENE	19.27	95.0	117633	51.41	UG/L	82

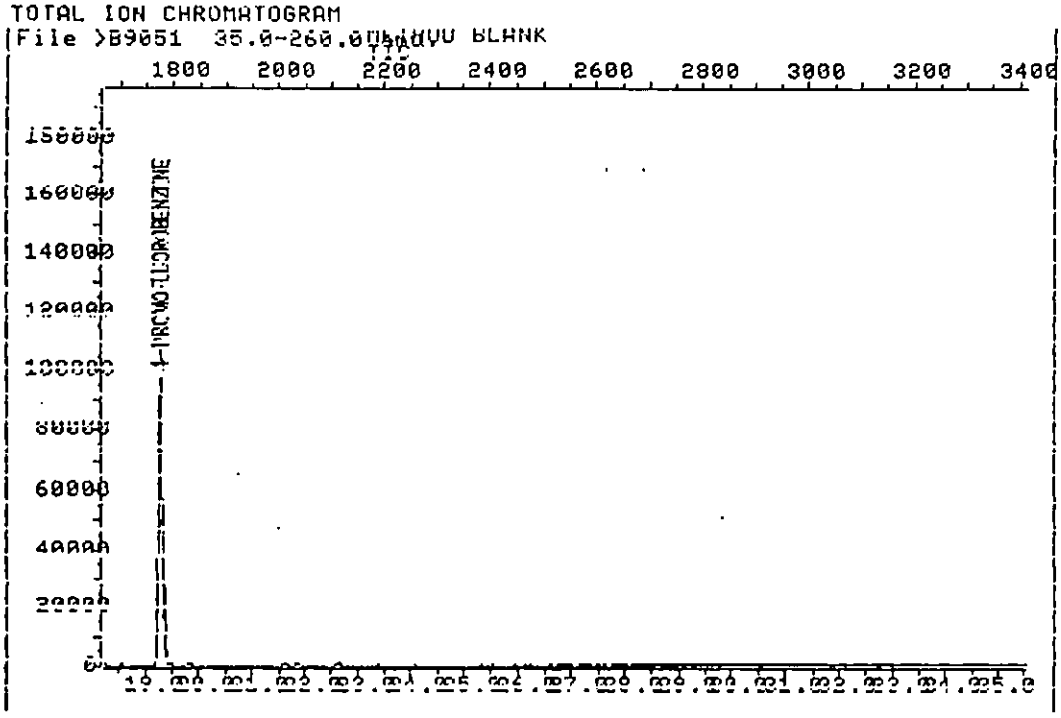
* Compound is ISTD



Data File: >B9051::B2 Quant Output File: ^B9051::QT
Name: METHOD BLANK Instrument ID: B
Misc:

Id File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

Operator ID: ED
Quant Time : 930318 11:46
Injected at: 930318 11:02



Data File: >B9051::B2 Quant Output File: ^B9051::QT
Name: METHOD BLANK Instrument ID: B
Misc:

Id File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

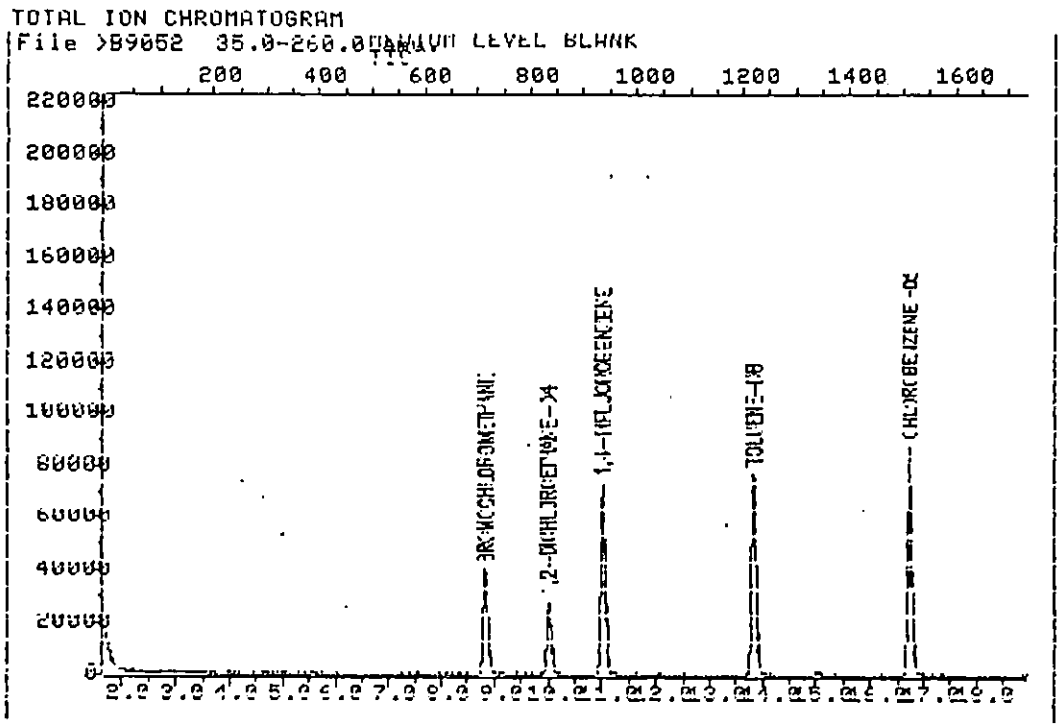
Operator ID: ED
Quant Time : 930318 11:46
Injected at: 930318 11:02

Operator ID: ED Quant Rev: 7 Quant Time: 930318 11:46
Output File: ^B9051::QT Injected at: 930318 11:02
Data File: >B9051::B2 Dilution Factor: 1.00000
Name: METHOD BLANK Instrument ID: B
Misc:

ID File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.79	127.9	32153	50.00	UG/L	90
12)	METHYLENE CHLORIDE	5.51	84.0	1814	2.33	UG/L	84
21)	1,2-DICHLOROETHANE-D4	9.98	65.0	59011	50.89	UG/L	97
22)	*1,4-DIFLUOROBENZENE	11.01	114.0	163966	50.00	UG/L	99
37)	*CHLOROBENZENE-D5	16.71	117.0	115821	50.00	UG/L	92
39)	TOLUENE-D8	13.82	98.0	127544	50.29	UG/L	91
41)	TETRACHLOROETHENE	14.99	164.0	2033	1.23	UG/L	91
48)	4-BROMOFLUOROBENZENE	19.28	95.0	107327	50.42	UG/L	96

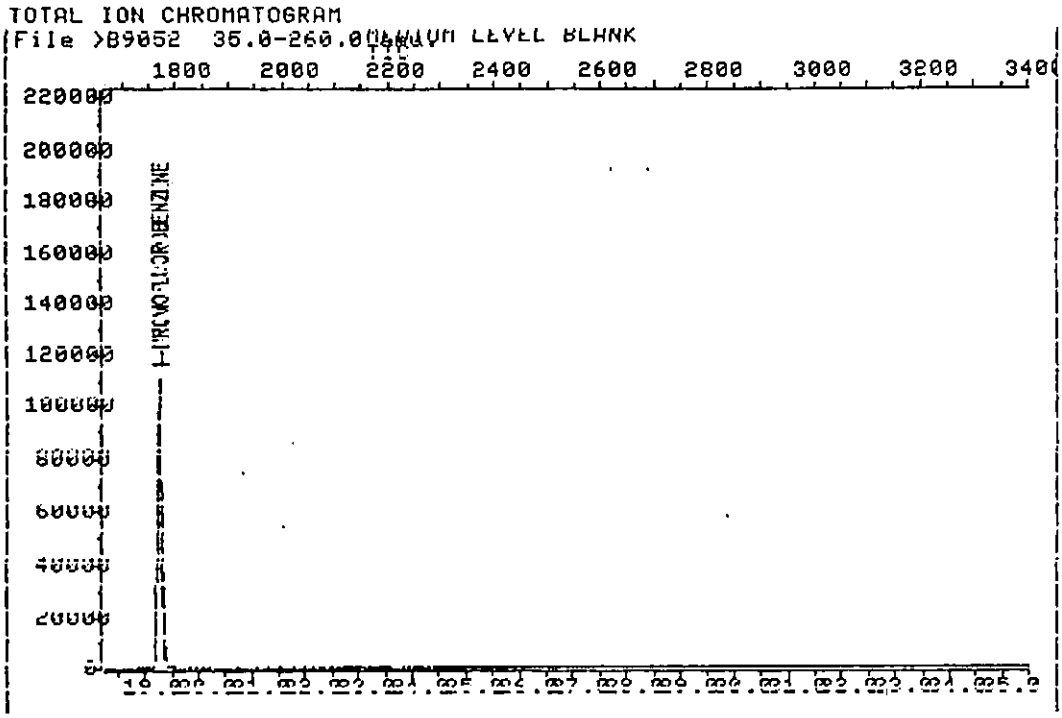
* Compound is ISTD



Data File: >B9052::B2 Quant Output File: ^B9052::QT
Name: MEDIUM LEVEL BLANK Instrument ID: B
Misc:

Id File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

Operator ID: ED
Quant Time : 930318 12:34
Injected at: 930318 11:50



Data File: >B9052::B2 Quant Output File: ^B9052::QT
Name: MEDIUM LEVEL BLANK Instrument ID: B
Misc:

Id File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

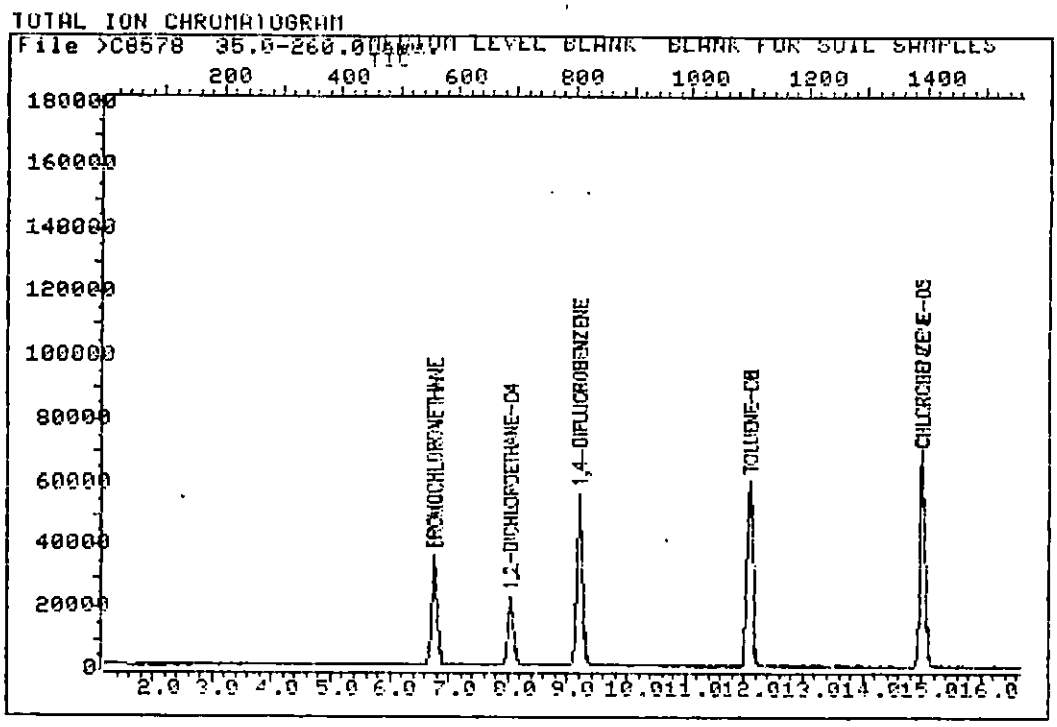
Operator ID: ED
Quant Time : 930318 12:34
Injected at: 930318 11:50

Operator ID: ED Quant Rev: 7 Quant Time: 930318 12:34
Output File: ^B9052::QT Injected at: 930318 11:50
Data File: >B9052::B2 Dilution Factor: 1.00000
Name: MEDIUM LEVEL BLANK Instrument ID: B
Misc:

ID File: IDDWVO::EM
Title: LABORATORY RESOURCES ID FILE FOR VOLATILE ORGANICS GC/MS
Last Calibration: 930223 16:19 Last Qcal Time: 930318 10:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	8.82	127.9	35998	50.00	UG/L	87
21)	1,2-DICHLOROETHANE-D4	9.98	65.0	64133	49.40	UG/L	97
22)	*1,4-DIFLUOROBENZENE	11.00	114.0	173231	50.00	UG/L	98
37)	*CHLOROBENZENE-D5	16.70	117.0	138690	50.00	UG/L	93
39)	TOLUENE-D8	13.81	98.0	154020	50.72	UG/L	95
48)	4-BROMOFLUOROBENZENE	19.28	95.0	125617	49.28	UG/L	99

* Compound is ISTD

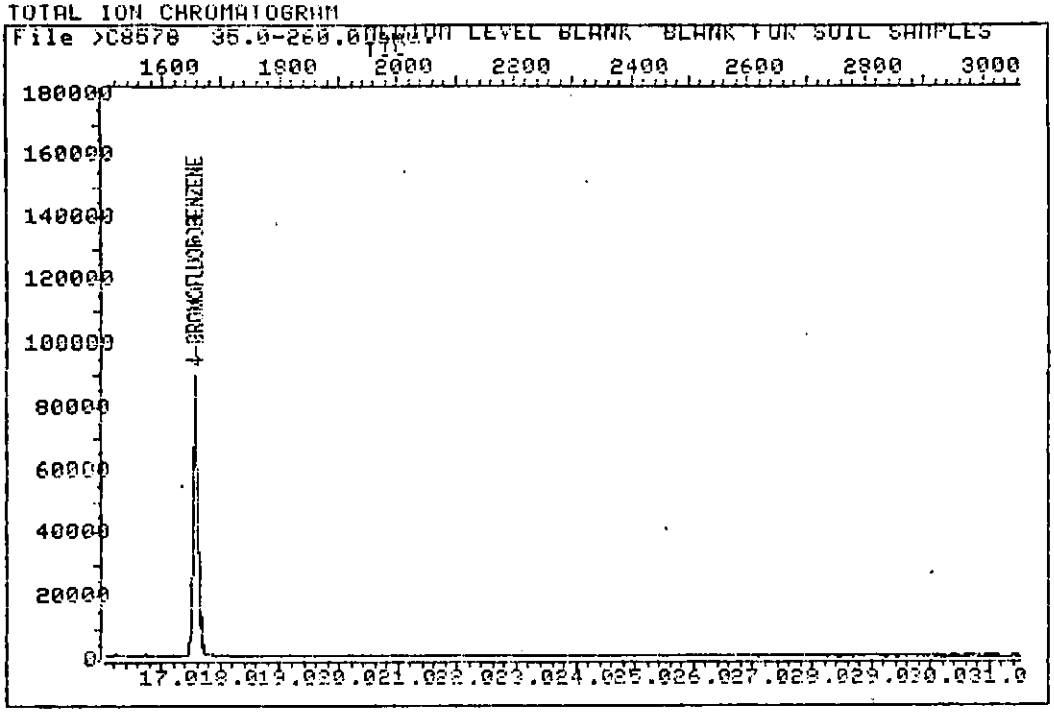


Data File: >C8578::C4 Quant Output File: ^C8578::QT
Name: MEDIUM LEVEL BLANK Instrument ID: C
Misc: BLANK FOR SOIL SAMPLES

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

Operator ID: ANDY
Quant Time : 930323 18:36
Injected at: 930323 18:03

TOTAL ION CHROMATOGRAM



Data File: >C8578::C4 Quant Output File: ^C8578::QT
Name: MEDIUM LEVEL BLANK Instrument ID: C
Misc: BLANK FOR SOIL SAMPLES

Id File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

Operator ID: ANDY
Quant Time : 930323 18:36
Injected at: 930323 18:03

Operator ID: ANDY Quant Rev: 7 Quant Time: 930323 18:36
Output File: ^C8578::QT Injected at: 930323 18:03
Data File: >C8578::C4 Dilution Factor: 1.00000
Name: MEDIUM LEVEL BLANK Instrument ID: C
Misc: BLANK FOR SOIL SAMPLES

ID File: IDDVOC::SC
Title: LABORATORY RESOURCES ID FILE FOR VOLATILES ORGANICS GC/MS
Last Calibration: 930315 14:01 Last Qcal Time: 930323 11:29

	Compound	R.T.	Q ion	Area	Conc	Units	c
1)	*BROMOCHLOROMETHANE	6.74	128.0	35656	50.00	UG/L	9
21)	1,2-DICHLOROETHANE-D4	8.03	65.0	55352	49.04	UG/L	9
22)	*1,4-DIFLUOROBENZENE	9.20	114.0	158212	50.00	UG/L	9
37)	*CHLOROBENZENE-D5	14.98	117.0	131898	50.00	UG/L	8
39)	TOLUENE-D8	12.08	98.0	141012	51.31	UG/L	9
48)	4-BROMOFLUOROBENZENE	17.55	95.0	113259	50.60	UG/L	9

* Compound is ISTD

GC/MS CONFORMANCE/NONCONFORMANCE SUMMARY

	No	Yes
1. Chromatograms Labeled/Compounds Identified		✓
2. Tune Specifications		
a. BFB Meets Criteria		
b. DFTPP Meets Criteria		✓
3. Tuning Frequency Performed every 24 hours for 600 series and 12 hours for 8000 series		✓
4. Calibration Frequency Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series		✓
5. Calibration Requirements		
a. Calibration Check Compounds (CCCs)		✓
b. System Performance Check Compounds (SPCCs)		✓
6. Blank Contamination If yes, list compounds and concentrations in each blank:	✓	
a. VOA Fraction _____		
b. B/N Fraction _____		
c. Acid Fraction _____		
7. Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
a. VOA Fraction _____		
b. B/N Fraction _____		
c. Acid Fraction _____		
If not met, were the calculations checked and the results qualified as estimated?		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
a. VOA Fraction _____		
b. B/N Fraction _____		
c. Acid Fraction _____		
9. Internal Standard Areas and Retention Time Shifts Meet Criteria Internal standard areas between -50% and +100% of daily standard		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
_____		
_____		
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
_____		
_____		

Laboratory Supervisor: B J Date: 4-16-93

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/09/93
DATE EXTRACTED: 03/23/93
DATE ANALYZED : 03/31/93
DILUTION FACT.: 10.0

CLIENT : EIKON SS 1-3
LAB SAMPLE : T303187-01
ANALYST : GREG
FILE NAME : >D4839

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	4839	3-NITROANILINE	ND	24194
PHENOL	ND	4839	ACENAPHTHENE	ND	4839
2-CHLOROPHENOL	ND	4839	2,4-DINITROPHENOL	ND	24194
BIS(2-CHLOROETHYL)ETHER	ND	4839	DIBENZOFURAN	ND	4839
1,3-DICHLOROBENZENE	ND	4839	4-NITROPHENOL	ND	24194
1,4-DICHLOROBENZENE	ND	4839	2,4-DINITROTOLUENE	ND	4839
BENZYL ALCOHOL	ND	4839	FLUORENE	ND	4839
1,2-DICHLOROBENZENE	ND	4839	4-NITROANILINE	ND	24194
2-METHYLPHENOL	ND	4839	DIETHYLPHTHALATE	ND	4839
BIS(2-CHLOROISOPROPYL)ETHER	ND	4839	4-CHLOROPHENYL-PHENYLETHER	ND	4839
N-NITROSO-DI-N-PROPYLAMINE	ND	4839	4,6-DINITRO-2-METHYLPHENOL	ND	24194
HEXACHLOROETHANE	ND	4839	N-NITROSODIPHENYLAMINE	ND	4839
3- and 4-METHYLPHENOL	ND	9677	4-BROMOPHENYL-PHENYLETHER	ND	4839
NITROBENZENE	ND	4839	HEXACHLOROBENZENE	ND	4839
ISOPHORONE	ND	4839	PENTACHLOROPHENOL	ND	24194
2-NITROPHENOL	ND	4839	PHENANTHRENE	3163 J	4839
2,4-DIMETHYLPHENOL	ND	4839	ANTHRACENE	506 J	4839
BIS(2-CHLOROETHOXY)METHANE	ND	4839	DI-N-BUTYLPHTHALATE	ND	4839
2,4-DICHLOROPHENOL	ND	4839	FLUORANTHENE	4865	4839
BENZOIC ACID	ND	24194	BENZIDINE	ND	4839
1,2,4-TRICHLOROBENZENE	1613 J	4839	PYRENE	3738 J	4839
NAPHTHALENE	2697 J	4839	BUTYLBENZYLPHTHALATE	976 J	4839
4-CHLOROANILINE	ND	4839	BENZO(A)ANTHRACENE	2386 J	4839
HEXACHLOROBUTADIENE	ND	4839	3,3'-DICHLOROBENZIDINE	ND	9677
2-METHYLNAPHTHALENE	1258 J	4839	CHRYSENE	3708 J	4839
4-CHLORO-3-METHYLPHENOL	ND	4839	BIS(2-ETHYLHEXYL)PHTHALATE	18983	4839
HEXACHLOROCYCLOPENTADIENE	ND	4839	DI-N-OCTYLPHTHALATE	493 J	4839
2,4,5-TRICHLOROPHENOL	ND	24194	BENZO(B)FLUORANTHENE	1651 J	4839
2,4,6-TRICHLOROPHENOL	ND	4839	BENZO(K)FLUORANTHENE	1711 J	4839
2-CHLORONAPHTHALENE	ND	4839	BENZO(A)PYRENE	1325 J	4839
2-NITROANILINE	ND	24194	INDENO(1,2,3-CD)PYRENE	1039 J	4839
ACENAPHTHYLENE	ND	4839	DIBENZO(A,H)ANTHRACENE	ND	4839
DIMETHYLPHTHALATE	ND	4839	BENZO(G,H,I)PERYLENE	1008 J	4839
2,6-DINITROTOLUENE	ND	4839			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	88 %	23 - 120	OK
2-FLUOROBIPHENYL	94 %	30 - 115	OK
4-TERPHENYL-D14	100 %	18 - 137	OK
PHENOL-D6	92 %	24 - 113	OK
2-FLUOROPHENOL	82 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	98 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 68.2 is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 1-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303187-01

Sample wt/vol: 30 (g/ml) g Lab File ID: >D4839

Level: (low/med) LOW Date Received: 03/10/93

% Solid: 68.2 Date Extracted: 03/23/93

Extraction: (Sepf/Cont/Sonc) Sonc Date Analyzed: 03/31/93

GPC Cleanup: (Y/N) N Dilution Factor: 10

Number of TICs found: 25

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Condensation product (B)	4.11	77419	
2		Unknown alkane	5.67	36774	
3		Unknown (B)	7.16	87096	
4		Unknown cyclic alkane	7.60	48387	
5		Unknown alkane (B)	8.01	154838	
6		Unknown	8.44	120967	
7		Unknown	8.54	53225	
8		Unknown	8.64	35806	
9		Unknown	8.72	38225	
10		Unknown	8.95	101612	
11		Unknown alkane	9.15	101612	
12		Unknown alkane	9.21	62903	
13		Unknown	9.34	58064	
14		Unknown alkane (B)	9.89	96774	
15		Unknown	10.13	20806	
16		Unknown alkane	10.76	19354	
17		Unknown alkane	10.91	15000	
18		Unknown alkane (B)	11.48	42580	
19		Unknown alkane	16.85	26612	
20		Unknown alkane	18.02	48387	
21		Unknown	18.77	13548	
22		Unknown carboxylic acid	20.90	33387	
23		Unknown	22.58	18387	
24	57114	Octadecanoic acid (9CI)	22.78	14516	
25		Unknown	24.77	8709	

071

(B) Compound present in blank

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED: 03/09/93
DATE EXTRACTED: 03/23/93
DATE ANALYZED : 03/31/93
DILUTION FACT.: 26.0

CLIENT : EIKON SS 6-3
LAB SAMPLE : T303187-02
ANALYST : GREG
FILE NAME : >D4840

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	10888	3-NITROANILINE	ND	54442
PHENOL	ND	10888	ACENAPHTHENE	ND	10888
2-CHLOROPHENOL	ND	10888	2,4-DINITROPHENOL	ND	54442
BIS(2-CHLOROETHYL)ETHER	ND	10888	DIBENZOFURAN	ND	10888
1,3-DICHLOROBENZENE	ND	10888	4-NITROPHENOL	ND	54442
1,4-DICHLOROBENZENE	ND	10888	2,4-DINITROTOLUENE	ND	10888
BENZYL ALCOHOL	ND	10888	FLUORENE	ND	10888
1,2-DICHLOROBENZENE	ND	10888	4-NITROANILINE	ND	54442
2-METHYLPHENOL	ND	10888	DIETHYLPHTHALATE	ND	10888
BIS(2-CHLOROISOPROPYL)ETHER	ND	10888	4-CHLOROPHENYL-PHENYLETHER	ND	10888
N-NITROSO-DI-N-PROPYLAMINE	ND	10888	4,6-DINITRO-2-METHYLPHENOL	ND	54442
HEXACHLOROETHANE	ND	10888	N-NITROSODIPHENYLAMINE	ND	10888
3- and 4-METHYLPHENOL	ND	21777	4-BROMOPHENYL-PHENYLETHER	ND	10888
NITROBENZENE	ND	10888	HEXACHLOROBENZENE	ND	10888
ISOPHORONE	ND	10888	PENTACHLOROPHENOL	ND	54442
2-NITROPHENOL	ND	10888	PHENANTHRENE	3918 J	10888
2,4-DIMETHYLPHENOL	ND	10888	ANTHRACENE	ND	10888
BIS(2-CHLOROETHOXY)METHANE	ND	10888	DI-N-BUTYLPHTHALATE	ND	10888
2,4-DICHLOROPHENOL	ND	10888	FLUORANTHENE	6203 J	10888
BENZOIC ACID	ND	54442	BENZIDINE	ND	10888
1,2,4-TRICHLOROBENZENE	1148 J	10888	PYRENE	4697 J	10888
NAPHTHALENE	2253 J	10888	BUTYLBENZYLPHTHALATE	ND	10888
4-CHLOROANILINE	ND	10888	BENZO(A)ANTHRACENE	3461 J	10888
HEXACHLOROBUTADIENE	ND	10888	3,3'-DICHLOROBENZIDINE	ND	21777
2-METHYLNAPHTHALENE	ND	10888	CHRYSENE	4904 J	10888
4-CHLORO-3-METHYLPHENOL	ND	10888	BIS(2-ETHYLHEXYL)PHTHALATE	7690 J	10888
HEXACHLOROCYCLOPENTADIENE	ND	10888	DI-N-OCTYLPHTHALATE	ND	10888
2,4,5-TRICHLOROPHENOL	ND	54442	BENZO(B)FLUORANTHENE	2083 J	10888
2,4,6-TRICHLOROPHENOL	ND	10888	BENZO(K)FLUORANTHENE	2706 J	10888
2-CHLORONAPHTHALENE	ND	10888	BENZO(A)PYRENE	2110 J	10888
2-NITROANILINE	ND	54442	INDENO(1,2,3-CD)PYRENE	1103 J	10888
ACENAPHTHYLENE	ND	10888	DIBENZO(A,H)ANTHRACENE	ND	10888
DIMETHYLPHTHALATE	ND	10888	BENZO(G,H,I)PERYLENE	1279 J	10888
2,6-DINITROTOLUENE	ND	10888			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	103 %	23 - 120	OK
2-FLUOROBIPHENYL	100 %	30 - 115	OK
4-TERPHENYL-D14	101 %	18 - 137	OK
PHENOL-D6	91 %	24 - 113	OK
2-FLUOROPHENOL	76 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	99 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 78.8 is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: SS 6-3

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: T303187-02

Sample wt/vol: 30 (g/ml) g Lab File ID: >D4840

Level: (low/med) LOW Date Received: 03/10/93

% Solid: 78.8 Date Extracted: 03/23/93

Extraction: (Sepf/Cont/Sonc) Sonc Date Analyzed: 03/31/93

GPC Cleanup: (Y/N) N Dilution Factor: 26

Number of TICs found: 24

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Condensation product (B)	4.09	46819	
2		Unknown alkane	5.65	29398	
3		Unknown (B)	7.14	60974	
4		Unknown cyclic alkane	7.59	41375	
5		Trimethyl benzene isomer	7.79	37020	
6		Unknown alkane (B)	7.97	141548	
7		Unknown alkane	8.42	89284	
8		Unknown	8.52	38109	
9		Unknown alkane	8.64	21776	
10		Unknown	8.71	28309	
11		Unknown	8.93	75129	
12		Unknown alkane	9.13	72951	
13		Unknown alkane	9.19	44642	
14		Unknown alkane	9.32	41375	
15		Unknown	9.72	14154	
16		Unknown alkane (B)	9.85	152436	
17		Unknown	9.93	21776	
18		Unknown	10.11	34842	
19		Unknown	10.74	23954	
20		Unknown alkane	10.88	15243	
21		Unknown alkane (B)	11.45	40286	
22		High molecular weight alkane	16.84	17421	
23		High molecular weight alkane	18.00	32664	
24		Unknown	19.10	13065	
25		Unknown	20.83	13065	

(B) Compound present in blank

5B

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

Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TD570 DFTPP Injection date: 3/04/93

Instrument ID: 0881 DFTPP Injection time: 9:35

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.8
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	79.1
70	Less than 2.0% of mass 69	.4(.5)1
127	40.0 - 60.0% of mass 198	40.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.64
441	Present, but less than mass 443	8.9
442	Greater than 40.0% of mass 198	64.6
443	17.0 - 23.0% of mass 442	11.9(18.5)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNAE	>D4647	3/04/93	10:00
2	----------	20 PPM BNA	>D4648	3/04/93	10:47
3	----------	80 PPM BNA	>D4649	3/04/93	11:34
4	----------	120 PPM BNA	>D4650	3/04/93	12:20
5	----------	160 PPM BNA	>D4651	3/04/93	13:07
6					
7					
8					
9					
10					
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14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

5B

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TD600 DFTPP Injection date: 3/31/93

Instrument ID: 0881 DFTPP Injection time: 9:18

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.9
68	Less than 2.0% of mass 69	.3(.4)1
69	Mass 69 relative abundance	76.5
70	Less than 2.0% of mass 69	.2(.2)1
127	40.0 - 60.0% of mass 198	40.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	19.7
365	Greater than 1.00% of mass 198	2.45
441	Present, but less than mass 443	9.3
442	Greater than 40.0% of mass 198	65.9
443	17.0 - 23.0% of mass 442	12.5(18.9)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNAE	>D4829	3/31/93	9:44
2	----------	T303298-09	>D4830	3/31/93	10:56
3	----------	SPIKE	>D4831	3/31/93	11:41
4	----------	SPIKE DUP	>D4832	3/31/93	12:26
5	----------	T303147-03	>D4834	3/31/93	13:57
6	----------	METHOD BLANK	>D4838	3/31/93	16:59
7	----------	T303187-01	>D4839	3/31/93	17:44
8	----------	T303187-02	>D4840	3/31/93	18:30
9	----------	T303222-13	>D4841	3/31/93	19:15
10	----------	T303222-14	>D4842	3/31/93	20:03
11	----------	T303222-15	>D4843	3/31/93	20:49
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

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

Lab Name: Laboratory Resources Inc., Contract: -----

Lab File ID: >TD601 DFTPP Injection date: 4/01/93

Instrument ID: 0881 DFTPP Injection time: 9:51

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.1
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	76.5
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	42.6
197	Less than 1.0% of mass 198	.7
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 1.00% of mass 198	3.66
441	Present, but less than mass 443	10.4
442	Greater than 40.0% of mass 198	72.9
443	17.0 - 23.0% of mass 442	14.2(19.4)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	50 PPM BNAE	>D4844	4/01/93	10:09
2	----------	BS110	>D4848	4/01/93	14:01
3	----------	METHOD BLANK	>D4852	4/01/93	17:09
4	----------	T303177-01	>D4853	4/01/93	17:55
5	----------	METHOD BLANK	>D4854	4/01/93	18:42
6					
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21					
22					

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >D4838 Lab Sample ID: METHOD BLANK

Date Extracted: 03/23/93 Extraction: Sonc

Date Analyzed: 03/31/93 Time Analyzed: 16:59

Matrix: SOIL

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

LAB FILE NO.	LAB SAMPLE ID	DATE ANALYZED
>D4839	T303187-01	03/31/93
>D4840	T303187-02	03/31/93
>D4841	T303222-13	03/31/93
>D4842	T303222-14	03/31/93
>D4843	T303222-15	03/31/93
>D4848	BS110	04/01/93
>D4861	T303260-01	04/02/93
>D4862	MS111	04/02/93
>D4863	MS112	04/02/93

Comments: _____

_____

LABORATORY RESOURCES, INC.
363 OLD HOOK ROAD
WESTWOOD, NJ 07675
LAB. CERTIFICATION: NJ 02046
NY 10588

DATE COLLECTED:
DATE EXTRACTED: 03/23/93
DATE ANALYZED : 03/31/93
DILUTION FACT.: 1.0

CLIENT :
LAB SAMPLE : METHOD BLANK
ANALYST : GREG
FILE NAME : >D4838

GC/MS BASE NEUTRALS ACIDS REPORT

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-NITROSODIMETHYLAMINE	ND	330	3-NITROANILINE	ND	1650
PHENOL	ND	330	ACENAPHTHENE	ND	330
2-CHLOROPHENOL	ND	330	2,4-DINITROPHENOL	ND	1650
BIS(2-CHLOROETHYL)ETHER	ND	330	DIBENZOFURAN	ND	330
1,3-DICHLOROBENZENE	ND	330	4-NITROPHENOL	ND	1650
1,4-DICHLOROBENZENE	ND	330	2,4-DINITROTOLUENE	ND	330
BENZYL ALCOHOL	ND	330	FLUORENE	ND	330
1,2-DICHLOROBENZENE	ND	330	4-NITROANILINE	ND	1650
2-METHYLPHENOL	ND	330	DIETHYLPHTHALATE	ND	330
BIS(2-CHLOROISOPROPYL)ETHER	ND	330	4-CHLOROPHENYL-PHENYLETHER	ND	330
N-NITROSO-DI-N-PROPYLAMINE	ND	330	4,6-DINITRO-2-METHYLPHENOL	ND	1650
HEXACHLOROETHANE	ND	330	N-NITROSODIPHENYLAMINE	ND	330
3- and 4-METHYLPHENOL	ND	660	4-BROMOPHENYL-PHENYLETHER	ND	330
NITROBENZENE	ND	330	HEXACHLOROBENZENE	ND	330
ISOPHORONE	ND	330	PENTACHLOROPHENOL	ND	1650
2-NITROPHENOL	ND	330	PHENANTHRENE	ND	330
2,4-DIMETHYLPHENOL	ND	330	ANTHRACENE	ND	330
BIS(2-CHLOROETHOXY)METHANE	ND	330	DI-N-BUTYLPHTHALATE	ND	330
2,4-DICHLOROPHENOL	ND	330	FLUORANTHENE	ND	330
BENZOIC ACID	ND	1650	BENZIDINE	ND	330
1,2,4-TRICHLOROBENZENE	ND	330	PYRENE	ND	330
NAPHTHALENE	ND	330	BUTYLBENZYLPHTHALATE	ND	330
4-CHLOROANILINE	ND	330	BENZO(A)ANTHRACENE	ND	330
HEXACHLOROBUTADIENE	ND	330	3,3'-DICHLOROBENZIDINE	ND	660
2-METHYLNAPHTHALENE	ND	330	CHRYSENE	ND	330
4-CHLORO-3-METHYLPHENOL	ND	330	BIS(2-ETHYLHEXYL)PHTHALATE	ND	330
HEXACHLOROCYCLOPENTADIENE	ND	330	DI-N-OCTYLPHTHALATE	ND	330
2,4,5-TRICHLOROPHENOL	ND	1650	BENZO(B)FLUORANTHENE	ND	330
2,4,6-TRICHLOROPHENOL	ND	330	BENZO(K)FLUORANTHENE	ND	330
2-CHLORONAPHTHALENE	ND	330	BENZO(A)PYRENE	ND	330
2-NITROANILINE	ND	1650	INDENO(1,2,3-CD)PYRENE	ND	330
ACENAPHTHYLENE	ND	330	DIBENZO(A,H)ANTHRACENE	ND	330
DIMETHYLPHTHALATE	ND	330	BENZO(G,H,I)PERYLENE	ND	330
2,6-DINITROTOLUENE	ND	330			

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
NITROBENZENE-D5	65 %	23 - 120	OK
2-FLUOROBIPHENYL	57 %	30 - 115	OK
4-TERPHENYL-D14	75 %	18 - 137	OK
PHENOL-D6	61 %	24 - 113	OK
2-FLUOROPHENOL	57 %	25 - 121	OK
2,4,6-TRIBROMOPHENOL	64 %	19 - 122	OK

J Indicates detected below MDL
ND Indicates compound not detected
B Indicates compound also present in blank

Percent Solid of 100. is used for all Target compounds.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.: METHOD BLANK

Lab Name: Laboratory Resources, Inc. Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL

Lab Sample ID: METHOD BLANK

Sample wt/vol: 30 (g/ml) g

Lab File ID: >D4838

Level: (low/med) LOW

Date Received:

% Solid: 100

Date Extracted: 03/23/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Analyzed: 03/31/93

GPC Cleanup: (Y/N) N

Dilution Factor: 1

Number of TICs found: 23

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Condensation product	4.31	11880	
2		Unknown	5.65	165	
3		Unknown	6.77	462	
4		Unknown	7.13	198	
5		Unknown alkane	7.97	297	
6		Unknown	8.42	132	
7		Unknown alkane	9.82	561	
8		Unknown	10.21	330	
9		Unknown	11.36	264	
10		Unknown alkane	11.47	297	
11		Unknown	11.85	462	
12		Unknown	12.08	231	
13		Unknown	12.36	363	
14		Unknown	12.95	660	
15		Unknown	13.17	231	
16		Unknown	13.26	231	
17		Unknown	18.73	231	
18		Unknown	19.11	330	
19		Unknown	19.97	330	
20		Unknown	20.94	165	
21		Unknown	24.82	165	
22		Unknown	27.53	198	
23		Unknown	27.81	2904	

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: #2637A01697

Contractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
PYRIDINE	.65964	.87720	.90026	1.04735	.87576	.274	.87204	15.878		
N-NITROSODIMETHYLAMINE	.98950	.98772	.94180	.99111	1.04680	.286	.99139	3.756		
2-FLUOROPHENOL	1.17061	1.05395	1.04893	1.02311	1.08324	.691	1.07597	5.303		
PHENOL-D6	1.76750	1.48348	1.23531	1.22015	1.21095	.960	1.38348	17.552		
PHENOL	1.83989	1.88167	1.49387	1.35475	1.29828	.964	1.57369	17.282	*	
2-CHLOROPHENOL	1.33890	1.36742	1.11348	1.11900	1.09786	.959	1.20733	11.076		
BIS(2-CHLOROETHYL)ETHER	1.46337	1.33905	1.13685	1.20461	1.22103	.964	1.27298	10.130		
1,3-DICHLOROBENZENE	1.47749	1.43188	1.35226	1.37139	1.45458	.988	1.41752	3.793		
1,4-DICHLOROBENZENE	1.46389	1.43088	1.32197	1.32212	1.39622	1.004	1.38702	4.611		
BENZYL ALCOHOL	1.61066	1.46565	1.59236	1.55634	1.66530	1.065	1.57806	4.698		
1,2-DICHLOROBENZENE	1.48317	1.41163	1.30428	1.30906	1.41665	1.052	1.38496	5.550		
2-METHYLPHENOL	1.35526	1.28791	1.21415	1.24682	1.24157	1.112	1.26914	4.325		
BIS(2-CHLOROISOPROPYL)ETHER	3.39477	3.07243	3.50586	3.42325	3.83588	1.104	3.44644	7.924		
N-NITROSO-DI-N-PROPYLAMINE	1.48928	1.34162	1.50620	1.45275	1.54786	1.146	1.46754	5.332		**
HEXACHLOROETHANE	.83825	.80735	.78820	.79575	.81772	1.128	.80946	2.425		
3- and 4-METHYLPHENOL	1.67483	1.51694	1.42077	1.42957	1.38905	1.156	1.48623	7.778		(Conc=40.0,100.0,160.0,24
NITROBENZENE-D5	.48874	.46972	.46532	.46042	.49464	.869	.47577	3.163		
NITROBENZENE	.49528	.47900	.44450	.48838	.53894	.872	.48922	6.942		
ISOPHORONE	.99207	.95697	1.01135	.97151	1.11966	.921	1.01031	6.384		
2-NITROPHENOL	.25347	.28066	.24389	.25392	.26876	.935	.26014	5.579	*	
2,4-DIMETHYLPHENOL	.44698	.48368	.42041	.40298	.42186	.961	.43518	7.197		
BIS(2-CHLOROETHOXY)METHANE	.55465	.50549	.52686	.48835	.53348	.978	.52177	4.911		
2,4-DICHLOROPHENOL	.36478	.37524	.32118	.32491	.32707	.986	.34264	7.399	*	
BENZOIC ACID	.33482	.34438	.41961	.40998	.32005	1.011	.36577	12.498		
1,2,4-TRICHLOROBENZENE	.42189	.39036	.37312	.36836	.38984	.995	.38871	5.399		
NAPHTHALENE	1.13034	1.00413	.86916	.92598	.99169	1.005	.98426	9.959		
4-CHLOROANILINE	.53819	.52873	.43915	.42163	.44298	1.034	.47414	11.569		
HEXACHLOROBUTADIENE	.29115	.26988	.24416	.24961	.26764	1.046	.26449	7.035	*	
2-METHYLNAPHTHALENE	1.13295	1.03876	.75247	.78056	.79788	1.146	.90052	19.232		
4-CHLORO-3-METHYLPHENOL	.44793	.45332	.33342	.34819	.34596	1.144	.38577	15.425	*	

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: #2637A01697

Contractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
HEXACHLOROCYCLOPENTADIENE	.40177	.43273	.45012	.44293	.47227	.876	.43996	5.869		**
2,4,5-TRICHLOROPHENOL	.58899	.52610	.48214	.48479	.49962	.900	.51633	8.563		
2,4,6-TRICHLOROPHENOL	.53292	.51299	.45466	.44870	.44223	.894	.47830	8.698	*	
2-FLUOROBIPHENYL	1.46571	1.24673	1.05204	1.06060	1.12465	.906	1.18995	14.512		
2-CHLORONAPHTHALENE	1.31524	1.13698	1.07108	1.06999	1.07216	.913	1.13309	9.333		
2-NITROANILINE	.75150	.68219	.75645	.70375	.71695	.945	.72217	4.379		
ACENAPHTHYLENE	2.06961	1.74069	1.67966	1.70168	1.65826	.976	1.76998	9.619		
DIMETHYLPHTHALATE	1.91818	1.55348	1.67297	1.57249	1.68799	.981	1.68102	8.641		
2,6-DINITROTOLUENE	.46214	.42778	.42854	.44153	.49233	.991	.45047	6.043		
3-NITROANILINE	.50801	.38962	.45708	.40556	.42772	1.009	.43760	10.696		
ACENAPHTHENE	1.32325	1.07793	1.00513	1.02284	1.09211	1.005	1.10425	11.566	*	
2,4-DINITROPHENOL	.09890	.15986	.29547	.26854	.30689	1.024	.22593	40.631		**
DIBENZOFURAN	2.24750	1.83895	1.73861	1.72280	1.60905	1.029	1.83138	13.460		
4-NITROPHENOL	.43886	.46790	.43769	.40906	.43662	1.047	.43803	4.753		**
2,4-DINITROTOLUENE	.66871	.61536	.65529	.60972	.68196	1.048	.64621	4.985		
FLUORENE	1.60644	1.31420	1.21195	1.20751	1.28122	1.081	1.32426	12.398		
4-NITROANILINE	.54633	.45207	.48452	.42479	.46092	1.105	.47373	9.683		
DIETHYLPHTHALATE	2.20524	1.82761	1.84286	1.83439	1.96070	1.090	1.93416	8.330		
4-CHLOROPHENYL-PHENYLETHER	.87455	.71494	.68300	.69770	.67190	1.088	.72842	11.432		
2,4,6-TRIBROMOPHENOL	.57572	.47044	.46552	.44619	.48443	1.122	.48846	10.372		
4,6-DINITRO-2-METHYLPHENOL	.15408	.18258	.18649	.19585	.18101	.908	.18000	8.665		
N-NITROSODIPHENYLAMINE	.44731	.33545	.24251	.27424	.28860	.910	.31762	25.139	*	
AZOBENZENE	1.29010	1.09906	.99923	1.01299	.82711	.911	1.04570	16.115		
4-BROMOPHENYL-PHENYLETHER	.29211	.24623	.24223	.23963	.24709	.950	.25346	8.608		
HEXACHLOROBENZENE	.41803	.37318	.33969	.32925	.37454	.963	.36694	9.509		
PENTACHLOROPHENOL	.25142	.28233	.26593	.24263	.25539	.990	.25954	5.872	*	
PHENANTHRENE	1.20402	1.01398	.95872	.90447	.95811	1.003	1.00786	11.539		
ANTHRACENE	1.15199	1.00247	.92017	.92788	.96795	1.009	.99409	9.481		
DI-N-BUTYLPHTHALATE	2.17470	1.79487	1.78026	1.76571	1.75259	1.095	1.85363	9.720		
FLUORANTHENE	1.44839	1.23127	1.20005	1.16860	1.21770	1.151	1.25320	8.906	*	

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: #2637A01697

Contractor: LABORATORY RESOURCES Calibration Date: 03/04/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .050 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4648	>D4647	>D4649	>D4650	>D4651					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
BENZIDINE	.14190	.13485	.09584	.07360	.10657	.884	.11055	25.470		
PYRENE	1.25062	1.00998	.96437	.99198	1.10233	.884	1.06386	10.955		
4-TERPHENYL-D14	.95184	.83787	.79944	.73393	.85394	.906	.83540	9.557		
BUTYLBENZYLPHTHALATE	.88769	.73808	.79886	.75448	.87414	.961	.81065	8.396		
BENZO(A)ANTHRACENE	1.20284	1.02664	1.12954	1.03051	1.19266	.998	1.11644	7.613		
3,3'-DICHLOROBENZIDINE	.19957	.22054	.16234	.15033	.22262	.990	.19108	17.398		
CHRYSENE	1.09287	.95481	1.01418	.92846	1.11098	1.002	1.02026	7.940		
BIS(2-ETHYLHEXYL)PHTHALATE	1.26107	1.04278	1.05573	1.02080	1.11851	1.019	1.09978	8.838		
DI-N-OCTYLPHTHALATE	2.24394	1.92807	1.75368	1.88138	1.88097	.954	1.93761	9.451	*	
BENZO(B)FLUORANTHENE	1.53395	1.28091	1.60364	1.46285	1.58026	.973	1.49232	8.700		
BENZO(K)FLUORANTHENE	.71233	.78988	.36983	.50001	.53714	.974	.58184	29.008		
BENZO(A)PYRENE	1.10251	.96446	1.00067	.98225	1.08664	.996	1.02731	6.131	*	
INDENO(1,2,3-CD)PYRENE	.81942	.89395	.98767	.97087	1.09551	1.073	.95348	10.894		
DIBENZO(A,H)ANTHRACENE	.84382	.73060	.80926	.80800	.91336	1.076	.82101	8.063		
BENZO(G,H,I)PERYLENE	.80273	.70191	.77700	.76092	.86793	1.094	.78210	7.750		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/31/93

Contractor: LABORATORY RESOURCES Time: 09:44

Contract No: Laboratory ID: >D4829

Instrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
PYRIDINE	.87204	.77831	10.75			
N-NITROSODIMETHYLAMINE	.99139	1.10599	11.56			
2-FLUOROPHENOL	1.07597	.93969	12.67			
PHENOL-D6	1.38348	1.38883	.39			
PHENOL	1.57369	1.80586	14.75	*		
2-CHLOROPHENOL	1.20733	1.38895	15.04			
BIS(2-CHLOROETHYL)ETHER	1.27298	1.26834	.36			
1,3-DICHLOROBENZENE	1.41752	1.48772	4.95			
1,4-DICHLOROBENZENE	1.38702	1.50059	8.19			
BENZYL ALCOHOL	1.57806	1.45866	7.57			
1,2-DICHLOROBENZENE	1.38496	1.44200	4.12			
2-METHYLPHENOL	1.26914	1.24069	2.24			
BIS(2-CHLOROISOPROPYL)ETHER	3.44644	3.64326	5.71			
4-NITROSO-DI-N-PROPYLAMINE	1.46754	1.37157	6.54		**	
HEXACHLOROETHANE	.80946	.84966	4.97			
3- and 4-METHYLPHENOL	1.48623	1.42990	3.79			(Conc=100.00)
NITROBENZENE-D5	.47577	.41186	13.43			
NITROBENZENE	.48922	.36665	25.05			
ISOPHORONE	1.01031	.85954	14.92			
2-NITROPHENOL	.26014	.25867	.56	*		
2,4-DIMETHYLPHENOL	.43518	.43021	1.14			
BIS(2-CHLOROETHOXY)METHANE	.52177	.49324	5.47			
2,4-DICHLOROPHENOL	.34264	.37643	9.86	*		
BENZOIC ACID	.36577	.25108	31.35			
1,2,4-TRICHLOROBENZENE	.38871	.45031	15.85			
NAPHTHALENE	.98426	1.02082	3.71			
4-CHLOROANILINE	.47414	.53628	13.11			
HEXACHLOROBUTADIENE	.26449	.33039	24.92	*		
2-METHYLNAPHTHALENE	.90052	.91476	1.58			
4-CHLORO-3-METHYLPHENOL	.38577	.46782	21.27	*		
HEXACHLOROCYCLOPENTADIENE	.43996	.53368	21.30		**	
2,4,5-TRICHLOROPHENOL	.51633	.56509	9.44			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/31/93

Contractor: LABORATORY RESOURCES Time: 09:44

Contract No: Laboratory ID: >D4829

Instrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-TRICHLOROPHENOL	.47830	.54588	14.13	*	
2-FLUOROBIPHENYL	1.18995	1.34539	13.06		
2-CHLORONAPHTHALENE	1.13309	1.26185	11.36		
2-NITROANILINE	.72217	.72726	.70		
ACENAPHTHYLENE	1.76998	1.80096	1.75		
DIMETHYLPHTHALATE	1.68102	1.70383	1.36		
2,6-DINITROTOLUENE	.45047	.45016	.07		
3-NITROANILINE	.43760	.35345	19.23		
ACENAPHTHENE	1.10425	1.19068	7.83	*	
2,4-DINITROPHENOL	.22593	.13302	41.13		**
DIBENZOFURAN	1.83138	2.01551	10.05		
4-NITROPHENOL	.43803	.37020	15.48		**
2,4-DINITROTOLUENE	.64621	.62510	3.27		
FLUORENE	1.32426	1.46500	10.63		
4-NITROANILINE	.47373	.40607	14.28		
DIETHYLPHTHALATE	1.93416	1.97829	2.28		
4-CHLOROPHENYL-PHENYLETHER	.72842	.88977	22.15		
2,4,6-TRIBROMOPHENOL	.48846	.69196	41.66		
4,6-DINITRO-2-METHYLPHENOL	.18000	.15754	12.48		
N-NITROSODIPHENYLAMINE	.31762	.35188	10.79	*	
AZOBENZENE	1.04570	1.00030	4.34		
4-BROMOPHENYL-PHENYLETHER	.25346	.32031	26.38		
HEXACHLOROBENZENE	.36694	.53052	44.58		
PENTACHLOROPHENOL	.25954	.28116	8.33	*	
PHENANTHRENE	1.00786	1.12436	11.56		
ANTHRACENE	.99409	1.07821	8.46		
DI-N-BUTYLPHTHALATE	1.85363	1.75959	5.07		
FLUORANTHENE	1.25320	1.39804	11.56	*	
BENZIDINE	.11055	.10491	5.10		
PYRENE	1.06386	1.17925	10.85		
4-TERPHENYL-D14	.83540	.98038	17.35		
BUTYLBENZYLPHTHALATE	.81065	.67614	16.59		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: Calibration Date: 03/31/93

ontractor: LABORATORY RESOURCES Time: 09:44

Contract No: Laboratory ID: >D4829

nstrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
ENZO(A)ANTHRACENE	1.11644	1.13226	1.42		
3,3'-DICHLOROBENZIDINE	.19108	.14562	23.79		
CHRYSENE	1.02026	.97207	4.72		
IIS(2-ETHYLHEXYL)PHTHALATE	1.09978	.94763	13.83		
JI-N-OCTYLPHTHALATE	1.93761	2.35939	21.77	*	
BENZO(B)FLUORANTHENE	1.49232	1.71932	15.21		
ENZO(K)FLUORANTHENE	.58184	1.02126	75.52		
ENZO(A)PYRENE	1.02731	1.10371	7.44	*	
INDENO(1,2,3-CD)PYRENE	.95348	.56147	41.11		
DIBENZO(A,H)ANTHRACENE	.82101	.51674	37.06		
ENZO(G,H,I)PERYLENE	.78210	.51151	34.60		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/01/93

Contractor: LABORATORY RESOURCES Time: 10:09

Contract No: Laboratory ID: >D4844

Instrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
PYRIDINE	.87204	.86208	1.14			
N-NITROSODIMETHYLAMINE	.99139	1.09844	10.80			
2-FLUOROPHENOL	1.07597	.97412	9.47			
PHENOL-D6	1.38348	1.46544	5.92			
PHENOL	1.57369	1.93499	22.96	*		
2-CHLOROPHENOL	1.20733	1.42632	18.14			
BIS(2-CHLOROETHYL)ETHER	1.27298	1.31383	3.21			
1,3-DICHLOROBENZENE	1.41752	1.49785	5.67			
1,4-DICHLOROBENZENE	1.38702	1.42950	3.06			
BENZYL ALCOHOL	1.57806	1.60641	1.80			
1,2-DICHLOROBENZENE	1.38496	1.48453	7.19			
2-METHYLPHENOL	1.26914	1.32349	4.28			
BIS(2-CHLOROISOPROPYL)ETHER	3.44644	3.69294	7.15			
N-NITROSO-DI-N-PROPYLAMINE	1.46754	1.40462	4.29		**	
HEXACHLOROETHANE	.80946	.84228	4.05			
3- and 4-METHYLPHENOL	1.48623	1.47227	.94			(Conc=100.00)
NITROBENZENE-D5	.47577	.40504	14.87			
NITROBENZENE	.48922	.36306	25.79			
ISOPHORONE	1.01031	.94489	6.48			
2-NITROPHENOL	.26014	.27241	4.72	*		
2,4-DIMETHYLPHENOL	.43518	.46008	5.72			
BIS(2-CHLOROETHOXY)METHANE	.52177	.51000	2.25			
2,4-DICHLOROPHENOL	.34264	.38759	13.12	*		
BENZOIC ACID	.36577	.36231	.94			
1,2,4-TRICHLOROBENZENE	.38871	.43617	12.21			
NAPHTHALENE	.98426	1.02715	4.36			
4-CHLOROANILINE	.47414	.55762	17.61			
HEXACHLOROBUTADIENE	.26449	.33016	24.83	*		
2-METHYLNAPHTHALENE	.90052	.79443	11.78			
4-CHLORO-3-METHYLPHENOL	.38577	.47756	23.80	*		
HEXACHLOROCYCLOPENTADIENE	.43996	.51844	17.84		**	
2,4,5-TRICHLOROPHENOL	.51633	.57726	11.80			

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: Calibration Date: 04/01/93

ontractor: LABORATORY RESOURCES Time: 10:09

Contract No: Laboratory ID: >D4844

nstrument ID: #2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
,4,6-TRICHLOROPHENOL	.47830	.53810	12.50	*	
2-FLUOROBIPHENYL	1.18995	1.33819	12.46		
2-CHLORONAPHTHALENE	1.13309	1.28379	13.30		
-NITROANILINE	.72217	.74698	3.44		
ACENAPHTHYLENE	1.76998	1.86412	5.32		
DIMETHYLPHTHALATE	1.68102	1.67835	.16		
,6-DINITROTOLUENE	.45047	.46536	3.31		
-NITROANILINE	.43760	.43215	1.24		
ACENAPHTHENE	1.10425	1.19998	8.67	*	
,4-DINITROPHENOL	.22593	.13474	40.36		**
IBENZOFURAN	1.83138	2.01963	10.28		
-NITROPHENOL	.43803	.47903	9.36		**
,4-DINITROTOLUENE	.64621	.67743	4.83		
LUORENE	1.32426	1.49900	13.19		
-NITROANILINE	.47373	.48921	3.27		
IETHYLPHTHALATE	1.93416	2.03738	5.34		
-CHLOROPHENYL-PHENYLETHER	.72842	.87225	19.75		
,4,6-TRIBROMOPHENOL	.48846	.65132	33.34		
4,6-DINITRO-2-METHYLPHENOL	.18000	.15703	12.76		
-NITROSODIPHENYLAMINE	.31762	.35680	12.33	*	
ZOBENZENE	1.04570	1.03579	.95		
-BROMOPHENYL-PHENYLETHER	.25346	.29436	16.14		
EXACHLOROBENZENE	.36694	.46059	25.52		
ENTACHLOROPHENOL	.25954	.29947	15.38	*	
HENANTHRENE	1.00786	1.09990	9.13		
NTHRACENE	.99409	1.09355	10.00		
I-N-BUTYLPHTHALATE	1.85363	1.79210	3.32		
LUORANTHENE	1.25320	1.39843	11.59	*	
ENZIDINE	.11055	.10782	2.47		
YRENE	1.06386	1.13351	6.55		
-TERPHENYL-D14	.83540	.91008	8.94		
UTYLBENZYLPHTHALATE	.81065	.71957	11.24		

F - Response Factor from daily standard file at 50.00 UG/L

$\overline{F}$ - Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

087

Continuing Calibration Check
HSL Compounds

ase No: Calibration Date: 04/01/93

Contractor: LABORATORY RESOURCES Time: 10:09

Contract No: Laboratory ID: >D4844

nstrument ID: $2637A01697 Initial Calibration Date: 03/04/93

Minimum $\overline{RF}$ for SPCC is .050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
ENZO(A)ANTHRACENE	1.11644	1.16279	4.15		
3,3'-DICHLOROBENZIDINE	.19108	.26864	40.59		
CHRYSENE	1.02026	1.01798	.22		
IS(2-ETHYLHEXYL)PHTHALATE	1.09978	1.01067	8.10		
I-N-OCTYLPHTHALATE	1.93761	1.93656	.05	*	
ENZO(B)FLUORANTHENE	1.49232	1.22098	18.18		
ENZO(K)FLUORANTHENE	.58184	1.19541	105.45		
ENZO(A)PYRENE	1.02731	1.10016	7.09	*	
INDENO(1,2,3-CD)PYRENE	.95348	.71764	24.73		
IBENZO(A,H)ANTHRACENE	.82101	.68895	16.09		
ENZO(G,H,I)PERYLENE	.78210	.63943	18.24		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

2B
SEMIVOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 03/31/93

LAB SAMP NO.	($)	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	DF	TOT OUT
T303298-09	S	80	95	93	94	76	85	10	0
SPIKE	S	57	74	86	64	45	81	10	0
SPIKE DUP	S	62	70	75	66	49	69	10	0
T303147-03	W	80	83	94	N/A	N/A	N/A	5	0
METHOD BLA	S	65	57	75	61	57	64	1	0
T303187-01	S	88	94	100	92	82	98	10	0
T303187-02	S	40	39	39	35	29	38	10	0
T303222-13	S	80	65	69	N/A	N/A	N/A	1	0
T303222-14	S	92	74	80	N/A	N/A	N/A	1	0
T303222-15	S	53	51	63	N/A	N/A	N/A	1	0

EPA CLP QC Limits For:	Soil	Water
S1 (NBZ) = NITROBENZENE-D5	23-120	35-114
S2 (FBP) = 2-FLUOROBIPHENYL	30-115	43-116
S3 (TPH) = 4-TERPHENYL-D14	18-137	33-141
S4 (PHL) = PHENOL-D6	24-113	10- 94
S5 (2FP) = 2-FLUOROPHENOL	25-121	21-100
S6 (TBP) = 2,4,6-TRIBROMOPHENOL	19-122	10-123

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits
N/A Not applicable
DF Column indicating dilution factor of final extract
DO Surrogates diluted out, no recovery data available
D Surrogates diluted, recovery estimated

2B
SEMIVOLATILE SURROGATE RECOVERIES

Lab Name: Laboratory Resources Inc.,

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 04/01/93

LAB SAMP NO.	($)	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	DF	TOT OUT
3S110	S	77	66	80	66	61	67	1	0
METHOD BLA	W	82	75	82	68	64	65	1	0
T303177-01	W	77	67	82	N/A	N/A	N/A	1	0
METHOD BLA	W	80	73	88	N/A	N/A	N/A	1	0

EPA CLP QC Limits For:	Soil	Water
S1 (NBZ) = NITROBENZENE-D5	23-120	35-114
S2 (FBP) = 2-FLUOROBIPHENYL	30-115	43-116
S3 (TPH) = 4-TERPHENYL-D14	18-137	33-141
S4 (PHL) = PHENOL-D6	24-113	10- 94
S5 (2FP) = 2-FLUOROPHENOL	25-121	21-100
S6 (TBP) = 2,4,6-TRIBROMOPHENOL	19-122	10-123

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits
N/A Not applicable
DF Column indicating dilution factor of final extract
DO Surrogates diluted out, no recovery data available
D Surrogates diluted, recovery estimated

3D

SOIL SEMIVOLATILE BLANK SPIKE RECOVERY

Lab Name: Laboratory Resources Inc.,

Matrix Spike - Lab Sample No. BS110

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC#	QC LIMITS REC
Phenol	6600	0	3411	52	26- 90
2-Chlorophenol	6600	0	3157	48	25-102
1,4-Dichlorobenzene	3300	0	1685	51	28-104
N-Nitroso-di-n-prop.(1)	3300	0	2080	63	41-126
1,2,4-Trichlorobenzene	3300	0	1696	51	38-107
4-Chloro-3-methylphenol	6600	0	3784	57	26-103
Acenaphthene	3300	0	2053	62	31-137
4-Nitrophenol	6600	0	3391	51	11-114
2,4-Dinitrotoluene	3300	0	1782	54	28- 89
Pentachlorophenol	6600	0	3433	52	17-109
Pyrene	3300	0	2162	66	35-142

(1) N-Nitroso-di-n-propylamine

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

Spike Recovery: 0 of 11 outside limits

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >D4829 Lab Sample ID: 50 PPM BNAE

Date Analyzed: 03/31/93 Time Analyzed: 09:44

	IS1(DCB)		IS2(NPT)		IS3(ANT)		IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	19878	8.14	78836	11.17	53713	15.44	119453	18.98	148174	25.47	108535	28.70
UPPER LIMIT	39756		157672		107426		238906		296348		217070	
LOWER LIMIT	9939		39418		26856		59726		74087		54268	
LAB SAMPLE #												
T303298-09	13757	8.13	57254	11.18	41153	15.46	94698	18.99	115638	25.49	89232	28.72
SPIKE	14894	8.13	61572	11.17	43830	15.45	99577	18.98	114674	25.47	86764	28.73
SPIKE DUP	15053	8.13	63151	11.18	43905	15.45	101964	18.98	115139	25.49	84772	28.73
T303147-03	14675	8.12	59557	11.17	41877	15.44	97754	18.97	128012	25.46	87903	28.69
METHOD BLA	15496	8.13	64673	11.16	46389	15.43	107197	18.97	136982	25.45	92290	28.69
T303187-01	15023	8.15	63732	11.19	45839	15.45	103369	18.98	129395	25.47	91442	28.72
T303187-02	15238	8.14	62263	11.17	43974	15.44	101689	18.98	132540	25.46	93435	28.69
T303222-13	15031	8.15	62532	11.17	45367	15.44	104980	18.96	135686	25.45	93604	28.70
T303222-14	13231	8.13	56053	11.16	40524	15.43	93368	18.97	120839	25.45	86839	28.69
T303222-15	14637	8.12	60140	11.17	42302	15.44	94477	18.96	119752	25.44	81042	28.69

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Napthalene-d8
IS3 (ANT) = Acenapthene-d10
IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard are values with an asterisk

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.,

Lab file ID: >D4844 Lab Sample ID: 50 PPM BNAE

Date Analyzed: 04/01/93 Time Analyzed: 10:09

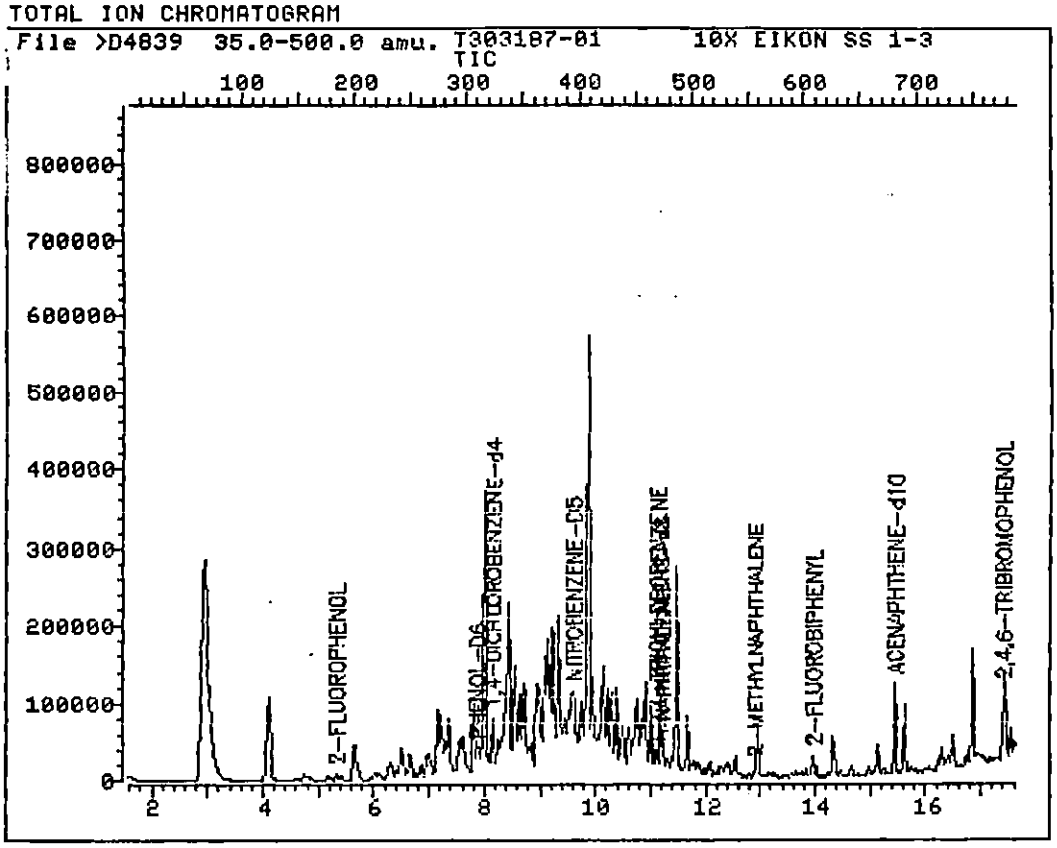
	IS1(DCB)		IS2(NPT)		IS3(ANT)		IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	23597	8.05	97187	11.10	70026	15.38	162228	18.92	205554	25.40	201264	28.64
UPPER LIMIT	47194		194374		140052		324456		411108		402528	
LOWER LIMIT	11798		48594		35013		81114		102777		100632	
LAB SAMPLE #												
BS110	20807	8.07	86049	11.11	63131	15.38	145318	18.92	183963	25.40	173676	28.63
METHOD BLA	25832	8.07	101750	11.12	67293	15.38	152072	18.92	185313	25.39	160981	28.65
T303177-01	23956	8.08	98577	11.13	67010	15.40	144587	18.94	175364	25.43	156423	28.67
METHOD BLA	23736	8.06	98073	11.09	66839	15.38	149713	18.92	172722	25.40	150986	28.63

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Napthalene-d8
IS3 (ANT) = Acenapthene-d10
IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard are values with an asterisk

TOTAL ION CHROMATOGRAM

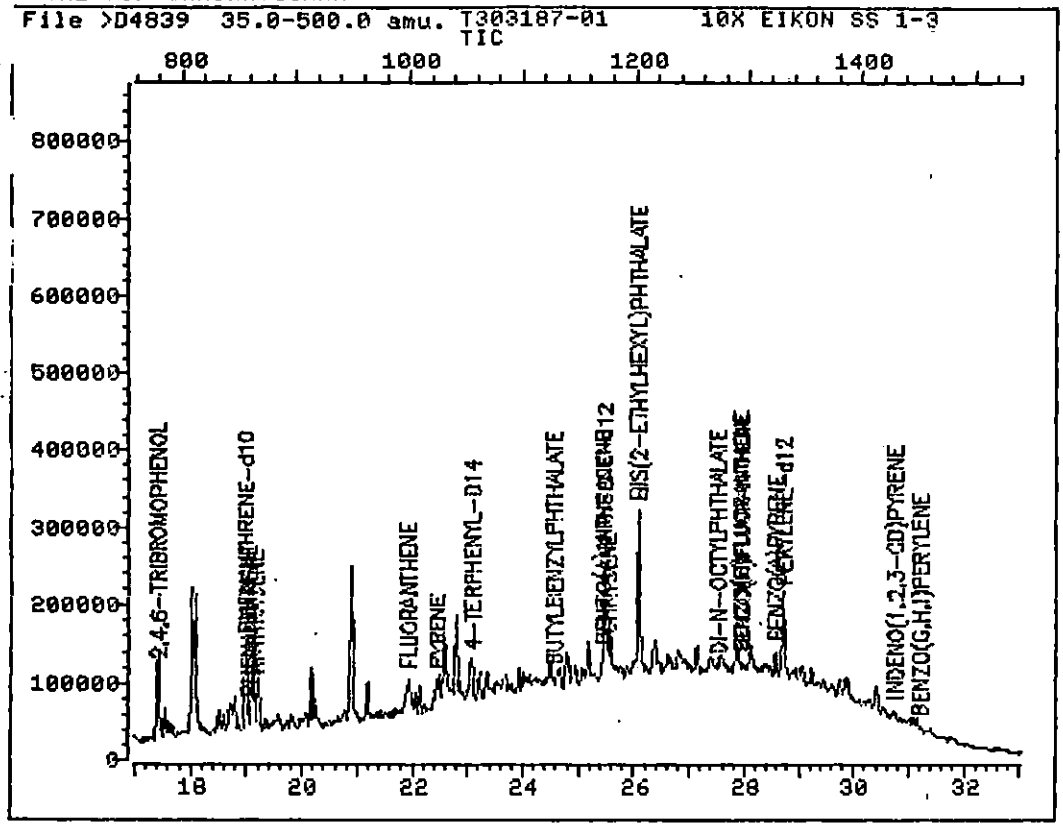


Data File: >D4839::D2 Quant Output File: ^D4839::QT
Name: T303187-01 10X Instrument ID: D
Misc: EIKON SS 1-3 ;03/09/93;03/23/93 BTL#10

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 18:18
Injected at: 930331 17:44

TOTAL ION CHROMATOGRAM



Data File: >D4839::D2 Quant Output File: ^D4839::QT
Name: T303187-01 10X Instrument ID: D
Misc: EIKON SS 1-3 ;03/09/93;03/23/93 BTL#10

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 18:18
Injected at: 930331 17:44

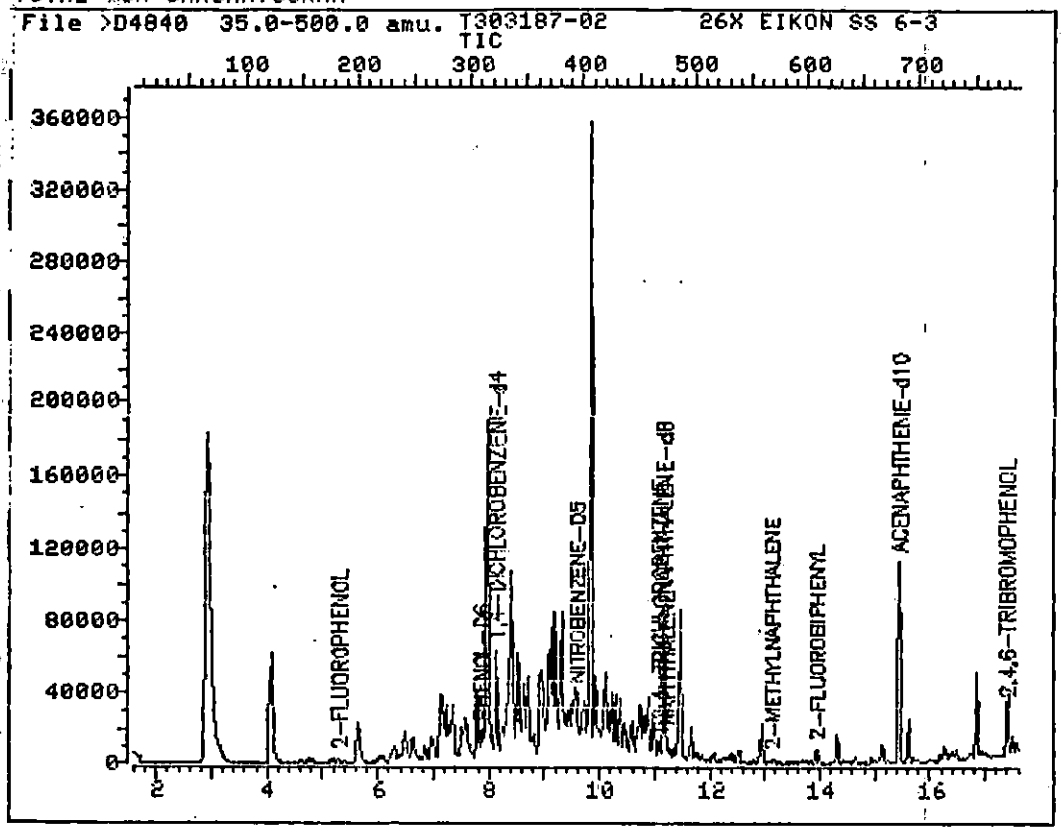
Operator ID: GREG Quant Rev: 7 Quant Time: 930331 18:18
Output File: ^D4839::QT Injected at: 930331 17:44
Data File: >D4839::D2 Dilution Factor: 1.00000
Name: T303187-01 10X Instrument ID: D
Misc: EIKON SS 1-3 ;03/09/93;03/23/93 BTL#10

File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
First Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.15	152.0	15023	40.00	UG/L	97
4)	2-FLUOROPHENOL	5.33	112.0	5792	16.41	UG/L	91
5)	PHENOL-D6	7.87	99.1	9633	18.47	UG/L	79
18)	*NAPHTHALENE-d8	11.19	136.1	63732	40.00	UG/L	98
19)	NITROBENZENE-D5	9.60	82.1	5779M	8.81	UG/L	95
7)	1,2,4-TRICHLOROBENZENE	11.13	179.9	2392	3.33	UG/L	93
28)	NAPHTHALENE	11.23	128.0	9064	5.57	UG/L	97
31)	2-METHYLNAPHTHALENE	12.90	142.0	3788	2.60	UG/L	93
3)	*ACENAPHTHENE-d10	15.45	164.1	45839	40.00	UG/L	90
7)	2-FLUOROBIPHENYL	13.96	172.0	14487	9.40	UG/L	98
53)	2,4,6-TRIBROMOPHENOL	17.40	329.7	15616	19.69	UG/L	97
54)	*PHENANTHRENE-d10	18.98	188.1	103369	40.00	UG/L	97
1)	PHENANTHRENE	19.04	178.0	18996	6.54	UG/L	97
62)	ANTHRACENE	19.14	178.1	2916	1.05	UG/L	89
64)	FLUORANTHENE	21.92	202.1	36326	10.05	UG/L	98
5)	*CHRYSENE-d12	25.47	240.1	129395	40.00	UG/L	97
67)	PYRENE	22.43	202.1	29466	7.72	UG/L	97
68)	4-TERPHENYL-D14	23.07	244.1	31618	9.97	UG/L	99
9)	BUTYLBENZYLPHTHALATE	24.55	149.0	4412	2.02	UG/L	96
10)	BENZO(A)ANTHRACENE	25.43	228.1	18062	4.93	UG/L	91
72)	CHRYSENE	25.53	228.1	24095	7.66	UG/L	94
73)	BIS(2-ETHYLHEXYL)PHTHALATE	26.09	149.0	120260	39.23	UG/L	93
74)	*PERYLENE-d12	28.72	264.1	91442	40.00	UG/L	98
75)	DI-N-OCTYLPHTHALATE	27.50	149.0	5494	1.02	UG/L	92
76)	BENZO(B)FLUORANTHENE	27.92	252.1	13412M	3.41	UG/L	97
77)	BENZO(K)FLUORANTHENE	27.96	252.1	8255M	3.54	UG/L	98
78)	BENZO(A)PYRENE	28.57	252.1	6911	2.74	UG/L	94
79)	INDENO(1,2,3-CD)PYRENE	30.75	276.1	2756	2.15	UG/L	89
81)	BENZO(G,H,I)PERYLENE	31.20	276.1	2437	2.08	UG/L	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM

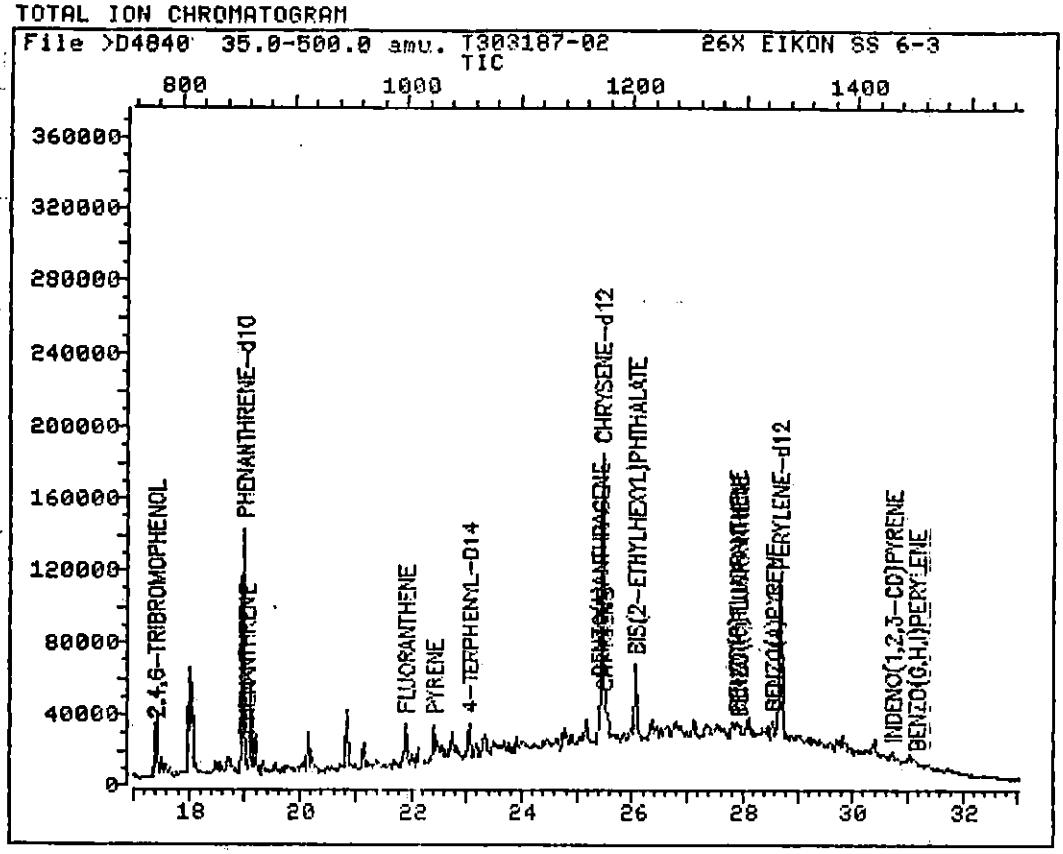


Data File: >D4840::D2 Quant Output File: ^D4840::QT
Name: T303187-02 26X Instrument ID: D
Misc: EIKON SS 6-3 ;03/09/93;03/23/93 BTL#11

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 19:04
Injected at: 930331 18:30

TOTAL ION CHROMATOGRAM



Data File: >D4840::D2 Quant Output File: ^D4840::QT
Name: T303187-02 26X Instrument ID: D
Misc: EIKON SS 6-3 ;03/09/93;03/23/93 BTL#11

Id File: IDD625::HB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 19:04
Injected at: 930331 18:30

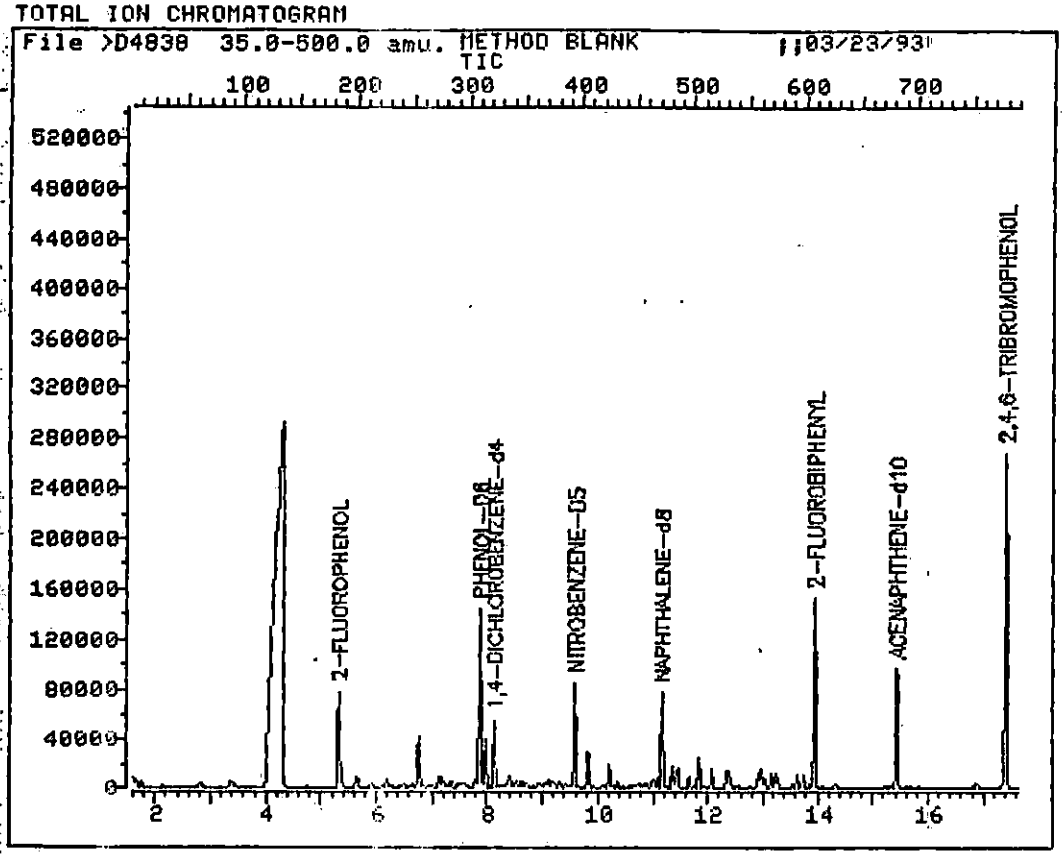
Operator ID: GREG Quant Rev: 7 Quant Time: 930331 19:04
Output File: ^D4840::QT Injected at: 930331 18:30
Data File: >D4840::D2 Dilution Factor: 1.00000
Name: T303187-02 26X Instrument ID: D
Misc: EIKON SS 6-3 ;03/09/93;03/23/93 BTL#11

Cal File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
First Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.14	152.0	15238	40.00	UG/L	98
4)	2-FLUOROPHENOL	5.31	112.0	2088	5.83	UG/L	87
5)	PHENOL-D6	7.87	99.1	3700	6.99	UG/L	82
18)	*NAPHTHALENE-d8	11.17	136.1	62263	40.00	UG/L	98
19)	NITROBENZENE-D5	9.60	82.1	2538M	3.96	UG/L	90
27)	1,2,4-TRICHLOROBENZENE	11.11	179.9	739	1.05	UG/L	94
28)	NAPHTHALENE	11.21	128.0	3288	2.07	UG/L	97
31)	2-METHYLNAPHTHALENE	13.14	142.0	777	.546	UG/L	98
3)	*ACENAPHTHENE-d10	15.44	164.1	43974	40.00	UG/L	92
7)	2-FLUOROBIPHENYL	13.95	172.0	5702	3.86	UG/L	96
53)	2,4,6-TRIBROMOPHENOL	17.39	329.7	5806	7.63	UG/L	93
54)	*PHENANTHRENE-d10	18.98	188.1	101689	40.00	UG/L	86
1)	PHENANTHRENE	19.02	178.0	10285	3.60	UG/L	96
64)	FLUORANTHENE	21.91	202.1	20247	5.70	UG/L	98
65)	*CHRYSENE-d12	25.46	240.1	132540	40.00	UG/L	96
7)	PYRENE	22.42	202.1	16856	4.31	UG/L	98
68)	4-TERPHENYL-D14	23.05	244.1	12563	3.87	UG/L	98
70)	BENZO(A)ANTHRACENE	25.42	228.1	11927	3.18	UG/L	92
72)	CHRYSENE	25.50	228.1	14507	4.50	UG/L	95
73)	BIS(2-ETHYLHEXYL)PHTHALATE	26.07	149.0	22177	7.06	UG/L	95
74)	*PERYLENE-d12	28.69	264.1	93435	40.00	UG/L	97
76)	BENZO(B)FLUORANTHENE	27.89	252.1	7682M	1.91	UG/L	97
77)	BENZO(K)FLUORANTHENE	27.93	252.1	5928M	2.48	UG/L	96
78)	BENZO(A)PYRENE	28.57	252.1	4996	1.94	UG/L	97
79)	INDENO(1,2,3-CD)PYRENE	30.73	276.1	1329	1.01	UG/L	81
1)	BENZO(G,H,I)PERYLENE	31.18	276.1	1404	1.18	UG/L	88

* Compound is ISTD

TOTAL ION CHROMATOGRAM



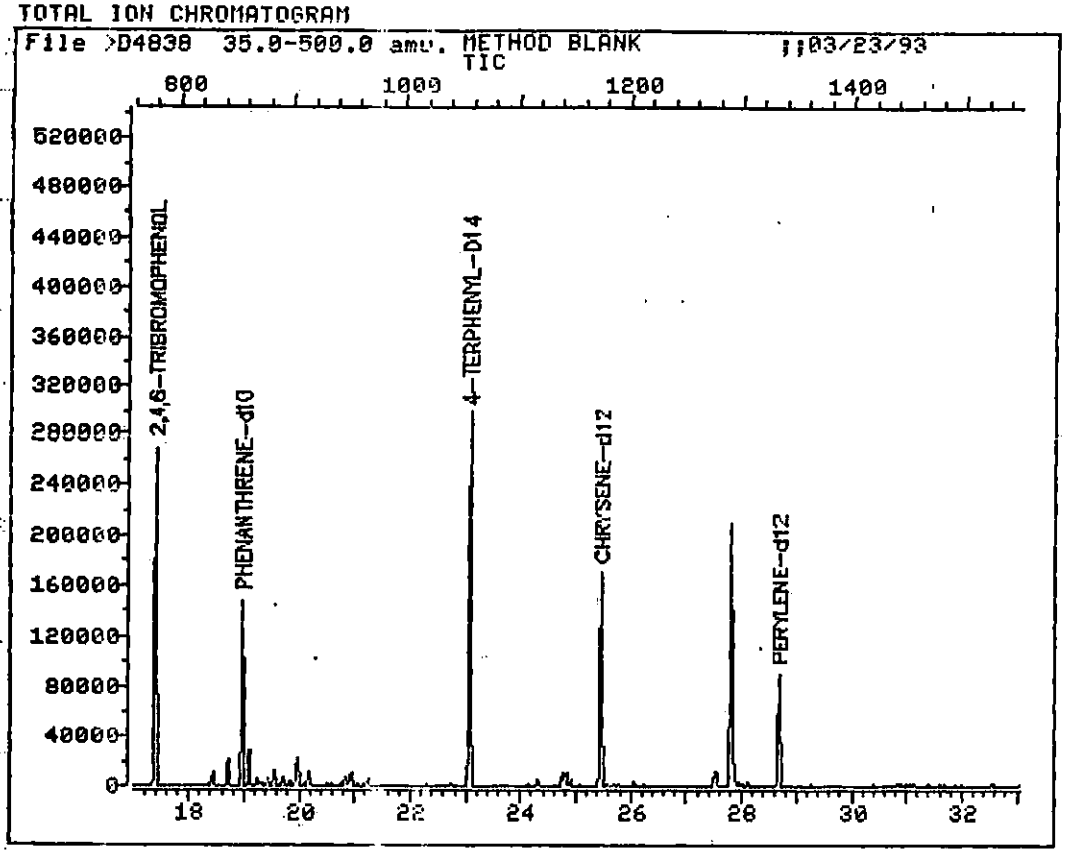
Data File: >D4838::D2 Quant Output File: ^D4838::QT
Name: METHOD BLANK Instrument ID: D
Misc: ;;03/23/93 BTL# 9

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 17:33
Injected at: 930331 16:59

Page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >D4838::D2 Quant Output File: ^D4838::QT
Name: METHOD BLANK Instrument ID: D
Misc: ;;03/23/93 BTL# 9

Id File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

Operator ID: GREG
Quant Time : 930331 17:33
Injected at: 930331 16:59

Page 2 of 2

QUANT REPORT Page 1

Operator ID: GREG Quant Rev: 7 Quant Time: 930331 17:33
Output File: ^D4838::QT Injected at: 930331 16:59
Data File: >D4838::D2 Dilution Factor: 1.00000
Name: METHOD BLANK Instrument ID: D
Misc: ;;03/23/93 BTL# 9

Cal File: IDD625::FB
Title: LABORATORY RESOURCES AQUARIUS ID FILE FOR SEMIVOLATILES
Last Calibration: 930304 14:20 Last Qcal Time: 930331 09:44

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	8.13	152.0	15496	40.00	UG/L	97
4)	2-FLUOROPHENOL	5.32	112.0	41601	114.28	UG/L	95
5)	PHENOL-D6	7.87	99.1	65470	121.68	UG/L	92
18)	*NAPHTHALENE-d8	11.16	136.1	64673	40.00	UG/L	98
19)	NITROBENZENE-D5	9.60	82.1	43300	65.02	UG/L	98
33)	*ACENAPHTHENE-d10	15.43	164.1	46389	40.00	UG/L	94
37)	2-FLUOROBIPHENYL	13.95	172.0	89579	57.41	UG/L	95
53)	2,4,6-TRIBROMOPHENOL	17.40	329.7	103509	128.99	UG/L	97
54)	*PHENANTHRENE-d10	18.97	188.1	107197	40.00	UG/L	94
65)	*CHRYSENE-d12	25.45	240.1	136982	40.00	UG/L	97
68)	4-TERPHENYL-D14	23.08	244.1	252151	75.10	UG/L	97
74)	*PERYLENE-d12	28.69	264.1	92290	40.00	UG/L	98

* Compound is ISTD

METALS ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

		No	Yes
1.	Calibration Summaries Meet Criteria	—	✓
2.	ICP Interference Check Sample (ICS) Results Summary ~~Submitted~~ Meets Criteria (If applicable)	—	✓
3.	Serial Dilution Summary ~~Submitted~~ Meets Criteria (If applicable)	—	✓
4.	Laboratory Control Sample (LCS) Summary ~~Submitted~~ Meets Criteria (If applicable)	—	✓
5.	Blank Contamination If yes, list compounds and concentrations in each blank:	✓	—
6.	Matrix Spike Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range: Cu = 130 %	—	✓
7.	Sample Duplicate Analyses Meet QC Criteria If not met, list those compounds and their criteria which fall outside the acceptable range:	—	✓
10.	Digestion and Analysis Holding Time Met If not met, list compounds and number of days exceeded for each sample:	—	✓

Laboratory Supervisor: Rodica Holt/SM Date: 4-21-93

METALS ANALYSIS DATA SHEET

Laboratory: Laboratory Resources, Inc.
Division: New Jersey
LRI Order No: T303187
LRI Sample No: 1

Client: Eikon Planning & Design
Location: Plainview (880789)
Project: Plainview
Sample Description: SS 1-3

Date Collected: 03/09/93
Date Received: 03/10/93

Matrix: Soil
Percent Moisture: 31.8%

Parameter	Result	Qual	QL	Units	Started Date	Started By	Completed Date	Completed By	Dilution
Arsenic by Furnace by 7060									
	3200		730	µg/kg	04/06/93	MY	04/13/93	MP	
Mercury by Cold Vapor by 7471									
	5100		3700	µg/kg	04/08/93	BD	04/08/93	BD	
Metals Analysis by ICP by 6010									
Antimony	10000		2900	µg/kg	04/02/93	MY	04/09/93	RH	
Beryllium	480		370	µg/kg	04/02/93	MY	04/09/93	RH	
Cadmium	4100		370	µg/kg	04/02/93	MY	04/09/93	RH	
Chromium	160000		730	µg/kg	04/02/93	MY	04/09/93	RH	
Copper	140000		1900	µg/kg	04/02/93	MY	04/09/93	RH	
Lead	130000		2200	µg/kg	04/02/93	MY	04/09/93	RH	
Nickel	66000		1500	µg/kg	04/02/93	MY	04/09/93	RH	
Silver	370	U	370	µg/kg	04/02/93	MY	04/09/93	RH	
Zinc	230000		1500	µg/kg	04/02/93	MY	04/09/93	RH	
Selenium by Furnace by 7740									
	370	U	370	µg/kg	04/06/93	MY	04/14/93	MP	
Thallium by Furnace by 7841									
	0.37	U	0.37	µg/kg	04/06/93	MY	04/13/93	MP	

METALS ANALYSIS DATA SHEET

Laboratory: Laboratory Resources, Inc.
Division: New Jersey
LRI Order No: T303187
LRI Sample No: 2

Client: Eikon Planning & Design
Location: Plainview (880789)
Project: Plainview
Sample Description: SS 6-3

Date Collected: 03/09/93
Date Received: 03/10/93

Matrix: Soil
Percent Moisture: 21.2%

Parameter	Result	Qual	QL	Units	Started Date	Started By	Completed Date	Completed By	Dilution
Arsenic by Furnace by 7060									
	2700		630	µg/kg	04/06/93	MY	04/13/93	MP	
Mercury by Cold Vapor by 7471									
	440		320	µg/kg	04/08/93	BD	04/08/93	BD	
Metals Analysis by ICP by 6010									
Antimony	15000		2500	µg/kg	04/06/93	MY	04/09/93	RH	
Beryllium	320	U	320	µg/kg	04/06/93	MY	04/09/93	RH	
Cadmium	4300		320	µg/kg	04/06/93	MY	04/09/93	RH	
Chromium	390000		630	µg/kg	04/06/93	MY	04/09/93	RH	
Copper	120000		1600	µg/kg	04/06/93	MY	04/09/93	RH	
Lead	120000		1900	µg/kg	04/06/93	MY	04/09/93	RH	
Nickel	160000		1300	µg/kg	04/06/93	MY	04/09/93	RH	
Silver	320	U	320	µg/kg	04/06/93	MY	04/09/93	RH	
Zinc	250000		1300	µg/kg	04/06/93	MY	04/09/93	RH	
Selenium by Furnace by 7740									
	320	U	320	µg/kg	04/06/93	MY	04/14/93	MP	
Thallium by Furnace by 7841									
	0.32	U	0.32	µg/kg	04/06/93	MY	04/13/93	MP	

LABORATORY RESOURCES, INC. - TETERBORO 1993

QUALITY CONTROL REPORT FOR WORK ORDER: T3-03-187

PARAMETER	Q	BLANK mg/kg	BLANK SPK % REC	SAMPLE CONC. (*)	SAMPLE DUP CONC. (*)	RPD %	MS TV CONC. (*)	MS CONC. (*)	MS % REC
TRACE METALS									
Aluminum (Al)									
Antimony (Sb)		<2.0		<24.0	<24.0	ND	462	444	96
Arsenic (As)		<0.50		<19.0	<19.0	ND	37.0	33.9	92
Barium (Ba)									
Beryllium (Be)		<0.25		<1.9	<1.9	ND	46.2	42.5	92
Boron (B)									
Cadmium (Cd)		<0.25		<4.6	<4.6	ND	46.2	44.4	96
Calcium (Ca)									
Chromium (Cr)		<0.50		370	389	5	185	574	110
Chromium Hex									
Cobalt (Co)									
Copper (Cu)	N	<1.3		444	481	8	231	740	130
Iron (Fe)									
Lead (Pb)		<1.5		180	185	3	463	611	93
Magnesium (Mg)									
Manganese (Mn)									
Mercury (Hg)		<0.25		<4.6	<4.6	ND	37.0	27.7	75
Molybdenum (Mo)									
Nickel (Ni)		<1.0		<24.0	<24.0	ND	463	426	92
Potassium (K)									
Selenium (Se)		<0.25		<9.3	<9.3	ND	37.0	28.9	78
Silicon (Si)									
Silver (Ag)		<0.25		<4.6	<4.6	ND	46.3	50.0	108
Sodium (Na)									
Thallium (Tl)		<0.25		<9.3	<9.3	ND	37.0	43.3	117
Tin (Sn)									
Titanium (Ti)									
Vanadium (V)									
Zinc (Zn)		<1.0		1040	1220	11	463	1650	120

COMMENTS: The QC is based on a batch system in which a sample is chosen at random for MS and Dup analyses for a given matrix and represents all of the samples included in that batch.

(*) = Results in mg/kg dry weight
MS = Matrix spike
TV = True value
Dup = Duplicate
Q = Qualifier
RPD = RELATIVE PERCENT DEVIATION SHOULD BE <35%
QUALITY CONTROL LIMITS FOR PERCENT RECOVERY ARE (75-125).
LABORATORY SAMPLE IDENTIFICATION: T303139-01

Laboratory Resources INC.
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QUALIFIERS-INORGANICS

Q	EXPLANATIONS
N	Matrix spiked sample recovery not within internal control limits due to matrix interference.
*	Duplicate analysis not within internal control limits due to matrix interference.
E	Reported value determined from a serial dilution due to matrix interference.
W	Post digestion sample spike recovery outside internal control limits but sample concentration is less than 50% of spiked sample.
N/A	Matrix spike recovery not applicable since sample concentration is greater than 4 times the amount of spike added.
MSA	Sample results determined from 3 point Method of Standards Additions(MSA).
ND	Analyte not detected, relative percent deviation cannot be calculated.