373SERBSF10,624

373SERBSF10,624

Site Name (Subject):	SQUIBB E R & SONS
Site ID (Document ID):	NCD991278730
Document Name (DocType):	Correspondence (C)
Report Segment:	
Description:	Data Validation Package
Date of Document:	10/25/1991
Date Received:	
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DATA VALIDATION PACKAGE

For

E. R. Squibb & Sons
NCD 991 278 730
Kenly, Johnston County
North Carolina

CERCLA

DATA VALIDATION PACKAGE

For

E. R. Squibb & Sons
NCD 991 278 730
Kenly, Johnston County
North Carolina

INORGANIC VALIDATION

REVIEW DOCUMENTATION RECORD

Site Name: E. R. SQUIBB & SONS

Prepared By: KAREN SMECKER

Date: 10-8-91

Revision No.: 0

TDD No.: FH-9109-16

Title: INORGANIC DATA VALIDATION LETTER TO A.R. HANKE

	Signature	Date	Comments
Technical Review Sectional	Debra A. Shanto	10/25/91	approved
Field Operations Group (if applicable)			
Managerial Review			
Quality Assurance Review			

Additional Comments:

HALLIBURTON NUS
Environmental Corporation

661 ANDERSEN DRIVE · PITTSBURGH, PENNSYLVANIA 15220 (412) 921-7090

C-49-10-1-190

October 8, 1991

Mr. A. R. Hanke
Waste Programs Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Data Review, Case No. 1041-016, SGD A0501
E. R. Squibb & Sons
Inorganic Analysis by IEA
TDD No.: F4-9109-16
EPA ID No.: NCD991278730

Dear Mr. Hanke:

The above captioned Laboratory data package has been reviewed according to the contract Statement of Work (SOW), and EPA quidelines. As a result, several of the data were rejected and qualified. Further details are provided below and in the enclosed Attachment.

The Interference Check Sample analysis data was insufficient for evaluation. Consequently, sample data was not evaluated for this parameter.

ICP Analytes

Iron, manganese and zinc were detected as contaminants in the laboratory method blanks. An estimated action level of ten times (10 X) the maximum amount of contaminant found was used to evaluate the sample data. Adjustments for individual sample size, dilution factors and moisture content (if applicable) were made prior to application of the action levels. Sample results within the action levels were rounded to the nearest significant figure and qualified, U, in accordance with validation protocol. These affected results are considered to be false positives and the elevation of the detection limit serves to negate this effect. No actions were taken for manganese and iron since all sample concentrations for these analytes are greater than the action level.

Negative concentrations for antimony and beryllium were detected during the laboratory blank analyses. These occurrences indicate instrument baseline fluctuations and potential inconsistencies in readings for these analytes. Non-detects for beryllium were

qualified as estimated, UJ; no positive results were reported. No further action was necessary for antimony since all sample results for this analyte are non-detects and were qualified because of extremely low matrix spike recoveries.

CRDL Standard analysis recoveries for antimony, iron and silver were low (< 80%). Only non-detects were reported for antimony and silver. Silver results were qualified as estimated, UJ. Non-detects for antimony were qualified due to extremely low matrix spike recovery and all positive iron results were > CRDL, therefore, no further actions were required.

The Matrix Spike (MS) recovery for antimony for soils was very low (< 30%). Sample results for antimony in soils are considered unreliable and were qualified as rejected, "R"; no positive results were reported.

Poor laboratory duplicate precision was noted for manganese in the soil matrix. Positive soil results for this analyte were qualified as estimated, J; no non-detects were reported.

Suppresssion was noted for iron in the soil matrix during the ICP serial dilution analysis. Positive results for this analyte in affected samples were qualified as estimated, J.

Mercury

No problems were noted for this analyses.

Graphite Furnace Atomic Absorption (GFAA)

Selenium was detected as a contaminant in the laboratory method blanks. An estimated action levels of ten times (10 X) this contaminant amount was used to evaluate the sample data. Adjustments for sample size, dilution factor and moisture content (if applicable) were made prior to application of this action level. Sample results within the action levels were rounded to the nearest significant figure and qualified, U, in accordance with validation protocol. These affected results are considered to be false positives and the elevation of the detection limit serves to negate this effect.

Negative concentrations for thallium, arsenic and lead were reported in the laboratory blanks. These occurrences are an indication of poor instrument performance (baseline drifting). Positive results and non-detects for these analytes in all samples were qualified as estimated, J and UJ, respectively.

The CRDL Standard analysis recovery for selenium was high (> 125%). No further qualification was needed because positive results for this analyte < CRDL were qualified on the basis of blank contamination.

Two samples had high GFAA Post Digestion Spike (PDS) recoveries for selenium. No qualifications were necessary as results for these samples were non-detects.

Cyanide

The 14-day cyanide holding time was exceeded for all samples. All sample data for this analyte are qualified as estimated, J and UJ.

Summary

Several problems such as blank contamination, poor instrument performance, laboratory duplicate imprecision, ICP suppression and non-compliant recoveries for CRDL Standard and matrix spike analyses were noted during the ICP analyses.

Some sample results for selenium were qualified due to positive blank contamination. Negative blank contamination was noted or arsenic, selenium and lead resulting in the estimation of all sample data. All soil data for antimony was rejected because of an extremely low matrix spike recovery. The CRDL Standard analysis recovery for selenium was high. Also, two GFAA post digestion spike recoveries for selenium were high.

All cyanide results were estimated because of holding time exceedances.

Please do not hesitiate to contact me if you have any questions regarding this review.

Very truly yours,

Karen Marie Smecker

Karen M. Smecker
Chemist

Approval

Attachments

ATTACHMENT

DATA REVIEW WORKSHEETS

HALLIBURTON NUS Environmental Corporation
1927 Lakeside Parkway, Suite 614
Tucker, GA 30084

DATE: October 8, 1991

SUBJECT: Ino. Contract Lab Data Review, Case 1041-016, SDG A0501
Site Name: E. R. Squibb & Sons
EPA ID No.: NCD991278730 TDD No.: F4-9109-16
Contractor Lab (Name) IEA, INC. SOW No. 3/90
Sample Nos.: SQSS01 - SQSS03, SQSB01, SQSB02
Matrix: Water 0 Soil/Sed. 5 Waste 0
Total No. Samples: 5

Reviewed by: Karen M. Smecker - HALLIBURTON NUS

SUMMARY OF REVIEW: Inorganic Data

A-Acceptable P-Provisional U-Unacceptable
N/A-Not Applicable

I. Sample Holding Times
(40 CFR 136 requirements for water)

Metals (6 months)	A
Mercury (28 days)	A
Cyanide (14 days)	P

Remarks: CN holding times were exceeded by 6 days for all samples. "J" and "UJ" CN data.

II. Calibration

	ICP	Furnace	Mercury	CN
Initial Calib.	A	A	A	A
Initial Cal. Verif.	A	A	A	A
Cont. Cal. Verif.	A	A	A	A
Calib. Blanks	P	P	A	A

Remarks: Fe, Se and Mn found in blanks. No actions for Fe and Mn. Neg. concs. for Tl, Sb, As and Pb. "J" and "UJ" data for these.

III. Blanks

Preparation Blanks	P
Blind Blanks	None

Remarks: See attached sheet, Remark [1].

IV. ICP Interference Check Sample

Recoveries A

Remarks: Cannot evaluate for ICP interferences due to insufficient data provided for the ICS analyses. Sample data were not evaluated on this basis.

V. Spiked Sample Results

	Water	Soil
Matrix Spike	NA	U,P
Blind Spike	None	None

Remarks: The MS %Rs for Sb was < 30 for soils. "R" soil non-detects for Sb; no positives.

VI. Other QC

Matrix Duplicate	P
LCS	A
Serial Dilution Results	P
Linear Range Check (2X CRDL)	P

Remarks: See attached sheet, Remark 2.

VII. Deliverables

Cover Page	A
Form Is	A
QC Summaries	A
Raw Data	A
Trafffic Reports	A
Digestion Logs	A

Remarks: _____

VIII. Contact with Contract Lab required during data review?

Yes _____ No X

Remarks: _____

VI. Other QC

Remark[1]: Se and Zn found in soil. Neg. concs. for Sb, As and Be in soil. "J" and "UJ" data for soil As and Be; no actions for Sb.

Remark[2]: CRDL Std. analysis %Rs - low for Fe, Sb and Ag and high for Se. "UJ" As and Sb data (not qual. for extremely low MS %R); no actions for Fe and Se. Lab. dup. imprecision for Mn in soils. "J" Mn soil results; no non-detects. ICP serial dil. %D > 15 for Fe in soils. "J" Fe soil data. High GFAA PDS %Rs for Se in two samples. No actions as affected Se data are non-detects.

IX. Final Remarks/Summary

Element	Flag	Samples Affected	Reason
Antimony	R	All	Extremely low MS %R for soils.
Arsenic	J	All	Negative blank contam.
Beryllium	UJ	All	Negative blank contam.
Iron	J	All	ICP serial dil. %D > 15 for soils.
Lead	J	All	Negative blank contam.
Manganese	J	All	Lab. dup. imprecision for soils.
Selenium	U	All except SQSB01	Blank contam.
Silver	UJ	All	Low CRDL Std. analysis %R.
Thallium	UJ	All	Negative blank contam.
Zinc	U	All except SQSB01	Blank contam.
Cyanide	J and UJ	All	Holding time was exceeded by 5 or 6 days.

APPENDIX

QUALIFIED FORM I
DATA REPORTS

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

A0601

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No.: 1041-16_ SAS No.: _____ SDG No.: A0501_

Matrix (soil/water): SOIL_ Lab Sample ID: A0601_____

Level (low/med): LOW__ Date Received: 05/29/91

% Solids: _86.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	2400			P_
7440-36-0	Antimony_	11.3	~~U~~	~~N~~ R	P_
7440-38-2	Arsenic__	0.29	~~B~~	J	F_
7440-39-3	Barium___	16.4	~~B~~		P_
7440-41-7	Beryllium	0.50	~~U~~	UJ	P_
7440-43-9	Cadmium__	0.76	U		P_
7440-70-2	Calcium__	177	~~B~~		P_
7440-47-3	Chromium_	3.5			P_
7440-48-4	Cobalt___	2.5	U		P_
7440-50-8	Copper___	3.0	U		P_
7439-89-6	Iron_____	1910		~~E~~ J	P_
7439-92-1	Lead_____	5.5		J	F_
7439-95-4	Magnesium	75.3	~~B~~		P_
7439-96-5	Manganese	23.7		~~*~~ J	P_
7439-97-6	Mercury__	0.06	U		CV
7440-02-0	Nickel___	5.0	U		P_
7440-09-7	Potassium	310	U		P_
7782-49-2	Selenium_	~~0.24~~	~~B~~	1U	F_
7440-22-4	Silver___	2.3	~~U~~	UJ	P_
7440-23-5	Sodium___	23.3	~~B~~		P_
7440-28-0	Thallium_	0.48	~~U~~	UJ	F_
7440-62-2	Vanadium_	3.5	~~B~~		P_
7440-66-6	Zinc_____	~~9.2~~		10U	P_
	Cyanide__	2.7		J	AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: NO_

Comments:

SQSS01 (E.R. SQUIBB & SONS)

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

A0602

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No.: 1041-16_ SAS No.: _____ SDG No.: A0501_

Matrix (soil/water): SOIL_ Lab Sample ID: A0602_____

Level (low/med): LOW__ Date Received: 05/29/91

% Solids: _81.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	17200	_		P_
7440-36-0	Antimony_	11.0	~~U~~	~~N~~ R	P_
7440-38-2	Arsenic__	1.00	~~B~~	J	F_
7440-39-3	Barium__	10.6	~~B~~		P_
7440-41-7	Beryllium	0.49	~~U~~	UJ	P_
7440-43-9	Cadmium__	2.4	_		P_
7440-70-2	Calcium__	498	~~B~~		P_
7440-47-3	Chromium_	28.5	_		P_
7440-48-4	Cobalt___	2.4	U		P_
7440-50-8	Copper___	2.9	U		P_
7439-89-6	Iron____	22900	_	~~E~~ J	P_
7439-92-1	Lead____	8.0	_	J	F_
7439-95-4	Magnesium	169	~~B~~		P_
7439-96-5	Manganese	36.7	_	~~*~~ J	P_
7439-97-6	Mercury__	0.05	U		CV
7440-02-0	Nickel___	4.9	U		P_
7440-09-7	Potassium	324	U		P_
7782-49-2	Selenium_	~~<0.35~~	~~B~~	1U	F_
7440-22-4	Silver___	2.2	~~U~~	UJ	P_
7440-23-5	Sodium___	24.5	~~B~~		P_
7440-28-0	Thallium_	0.50	~~U~~	UJ	F_
7440-62-2	Vanadium_	48.2	_		P_
7440-66-6	Zinc____	~~9.9~~	_	10U	P_
_____	Cyanide__	3.0	~~U~~	UJ	AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ROCKS

SQSS02 (E.R. SQUIBB & SONS)

FORM I - IN

3/90

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

A0603

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No.: 1041-16_ SAS No.: _____ SDG No.: A0501_

Matrix (soil/water): SOIL_ Lab Sample ID: A0603_____

Level (low/med): LOW__ Date Received: 05/29/91

% Solids: _89.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	5600			P_
7440-36-0	Antimony_	10.3	~~U~~	~~N~~ R	P_
7440-38-2	Arsenic__	0.45	~~B~~	J	F_
7440-39-3	Barium__	23.4	~~B~~		P_
7440-41-7	Beryllium	0.46	~~U~~	UJ	P_
7440-43-9	Cadmium__	0.69	U		P_
7440-70-2	Calcium__	413	~~B~~		P_
7440-47-3	Chromium_	6.8			P_
7440-48-4	Cobalt__	2.3	U		P_
7440-50-8	Copper__	2.8	U		P_
7439-89-6	Iron____	5050		~~E~~ J	P_
7439-92-1	Lead____	7.4		J	F_
7439-95-4	Magnesium	132	~~B~~		P_
7439-96-5	Manganese	48.8		~~*~~ J	P_
7439-97-6	Mercury__	0.06	U		CV
7440-02-0	Nickel__	4.6	U		P_
7440-09-7	Potassium	292	U		P_
7782-49-2	Selenium_	~~0.26~~	~~B~~	~~W~~ U	F_
7440-22-4	Silver__	2.1	~~U~~	UJ	P_
7440-23-5	Sodium__	23.2	~~B~~		P_
7440-28-0	Thallium_	0.47	~~U~~	UJ	F_
7440-62-2	Vanadium_	10.0	~~B~~		P_
7440-66-6	Zinc____	~~7.6~~		BU	P_
_____	Cyanide__	2.6	~~U~~	UJ	AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES___

Comments:

TWIGS

SQSS03 (E.R. SQUIBB & SONS)

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

A0604

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No.: 1041-16_ SAS No.: _____ SDG No.: A0501_

Matrix (soil/water): SOIL_ Lab Sample ID: A0604_____

Level (low/med): LOW__ Date Received: 05/29/91

% Solids: _90.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	14600			P
7440-36-0	Antimony_	10.5	~~U~~	~~N~~ R	P
7440-38-2	Arsenic__	12.3		J	F
7440-39-3	Barium___	2.4	~~B~~		P
7440-41-7	Beryllium	0.47	~~U~~	UJ	P
7440-43-9	Cadmium__	3.6			P
7440-70-2	Calcium__	1110	~~B~~		P
7440-47-3	Chromium_	17.0			P
7440-48-4	Cobalt___	14.2			P
7440-50-8	Copper___	23.5			P
7439-89-6	Iron____	38400		~~E~~ J	P
7439-92-1	Lead____	20.7		J	F
7439-95-4	Magnesium	6910			P
7439-96-5	Manganese	370		~~*~~ J	P
7439-97-6	Mercury__	0.05	U		CV
7440-02-0	Nickel___	36.4			P
7440-09-7	Potassium	297	U		P
7782-49-2	Selenium_	0.24	U		F
7440-22-4	Silver___	2.1	~~U~~	UJ	P
7440-23-5	Sodium___	18.6	~~B~~		P
7440-28-0	Thallium_	0.48	~~U~~	UJ	F
7440-62-2	Vanadium_	12.3			P
7440-66-6	Zinc____	66.1			P
_____	Cyanide__	2.6	~~U~~	UJ	AS

Color Before: GREY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: NO___

Comments:

SQSB01 (E.R. SQUIBB & SONS)

FORM I - IN

3/90

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

A0605

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No.: 1041-16_ SAS No.: _____ SDG No.: A0501_

Matrix (soil/water): SOIL_ Lab Sample ID: A0605_____

Level (low/med): LOW__ Date Received: 05/29/91

% Solids: _83.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	7830			P_
7440-36-0	Antimony_	10.7	~~U~~	~~W~~ R	P_
7440-38-2	Arsenic__	2.7		J	F_
7440-39-3	Barium___	9.0	~~B~~		P_
7440-41-7	Beryllium	0.48	~~U~~	UJ	P_
7440-43-9	Cadmium__	2.7			P_
7440-70-2	Calcium__	111	~~B~~		P_
7440-47-3	Chromium_	20.7			P_
7440-48-4	Cobalt___	2.4	U		P_
7440-50-8	Copper___	5.2	~~B~~		P_
7439-89-6	Iron_____	28400		~~E~~ J	P_
7439-92-1	Lead_____	10.6		J	F_
7439-95-4	Magnesium	146	~~B~~		P_
7439-96-5	Manganese	55.7		~~*~~ J	P_
7439-97-6	Mercury__	0.05	U		CV
7440-02-0	Nickel___	4.8	U		P_
7440-09-7	Potassium	293	U		P_
7782-49-2	Selenium_	~~0.32~~	~~B~~	~~W~~ U	F_
7440-22-4	Silver___	2.1	~~U~~	UJ	P_
7440-23-5	Sodium___	14.7	~~B~~		P_
7440-28-0	Thallium_	0.50	~~U~~	UJ	F_
7440-62-2	Vanadium_	29.4			P_
7440-66-6	Zinc_____	~~8.5~~		9 U	P_
_____	Cyanide__	2.8	~~U~~	UJ	AS
_____	_____	_____			

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: YES___

Comments:

ROCKS

SQSB02 (E.R. SQUIBB & SONS)

FORM I - IN

3/90

ORGANIC VALIDATION

REVIEW DOCUMENTATION RECORD

Site Name: E.R. SQUIBB & SONS

Prepared By: KENT E. WEAVER

Date: 10/10/91

Revision No.: 0

TDD No.: F4-9109-16

Title: ORGANIC DATA VALIDATION LETTER TO A. R. HANKE

	Signature	Date	Comments
Technical Review Sectional	Debra N. Shutt	10/24/91	approved
Field Operations Group (if applicable)			
Managerial Review			
Quality Assurance Review			

Additional Comments:

HALLIBURTON NUS
Environmental Corporation

661 ANDERSEN DRIVE · PITTSBURGH, PENNSYLVANIA 15220 (412) 921-7090

C-49-10-1-138

October 10, 1991

Mr. A. R. Hanke
Waste Programs Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Data Review, Case No. 1041-016 SDG A0501
E.R. Squibb & Sons
Organic Analysis by IEA
TDD No.: F4-9109-16
EPA ID No.: NCD991278730

Dear Mr. Hanke:

The above captioned laboratory data package has been reviewed according to the contract Statement of Work (SOW), and EPA quidelines. Further details are provided below and in the enclosed Attachment.

Volatiles

Matrix spike/matrix spike duplicate analyses were not performed for this sample set; consequently, the data were not evaluated for this parameter.

No other problems were noted.

Extractables (BNAs)

Continuing calibration Percent Differences (%Ds) for 2,4-dinitrophenol, 4-nitrophenol, and hexachlorobenzene exceeded the 25% quality control limit. No action was taken because no positive results were reported for these compounds in affected samples.

One TIC was found in associated blanks, but not in samples. Several TICs were found in samples which are not attributable to blank contamination. Those TICs found in samples which are attributable to blank contamination have been deleted (crossed out) on the Form 1 BNA-TIC reports.

No other problems were noted.

Summary

All data are accepted for use without qualification.

Please do not hesitate to contact me if you have any questions regarding this review.

Very truly yours,

Kent E. Weaver

Kent E. Weaver
Chemist

Approval

Attachments

ATTACHMENT

DATA REVIEW WORKSHEETS

HALLIBURTON NUS Environmental Corporation
1927 Lakeside Parkway, Suite 614
Tucker, GA 30084

DATE: October 10, 1991

SUBJECT: Org. Contract Lab Data Review, Case 1041-016 SDG A0501
Site Name: E.R. SQUIBB & SONS
EPA ID No.: NCD991278730
Sample Nos.: A0601-A0606
TDD No.: F4-9109-16 Level: Low X Med. ____ High ____
Samples per Fraction: VOA 6 BNA 5 Pest. - PCB -
Matrix: Water 1 Soil/Sed. 5 Waste 0
Total No. Samples: 6

Reviewed by: Kent E. Weaver - HALLIBURTON NUS

I. SUMMARY OF PROBLEMS AND COMMENTS

See remarks, worksheet page 9.

SUMMARY OF DATA REVIEW FOR THIS CASE:

II. Actual Sample Holding Time

VOA	No. Samples	No. Late
Water:	1	0
Soil/Sed.:	5	0
Waste:	0	0

BNA	No. Samples	No. Late
Water:	0	0
Soil/Sed.:	5	0
Waste:	0	0

Pesticide	No. Samples	No. Late
Water:	0	0
Soil/Sed.:	0	0
Waste:	0	0

PCB	No. Samples	No. Late
Water:	0	0
Soil/Sed.:	0	0
Waste:	0	0

Remarks: All criteria met.

III. GC/MS Tuning and Performance (Form V)

VOA (BFB) A BNA (DFTPP) A

A - Acceptable - All criteria met, spectra of good quality.

P - Provisional - All criteria not met, spectra of reasonable quality; data useable.

U - Unacceptable - Criteria not met, spectra of poor quality, data unusable.

Remarks: All criteria met.

IV. Initial and Continuing Calibration Checks

VOA __A__ B/N __P__ Acid __P__ Pest. __-__ PCB __-__

A - Acceptable - All criteria met.

P - Provisional - Some criteria not met, data useable; see remarks.

U - Unacceptable - Criteria not met, data unusable, see remarks.

Remarks: CC %D > 25 2,4-dinitrophenol, 4-nitrophenol, hexachlorobenzene; no qualifications, no affected positives.

V. Blank Analysis

Water:	VOA	A	B/N	-	Acid	-	Pest.	-	PCB	-
Soil/Sed.:	VOA	A	B/N	A	Acid	A	Pest.	-	PCB	-
Waste:	VOA	-	B/N	-	Acid	-	Pest.	-	PCB	-

A - Acceptable - No contaminants above minimum detection limit, no interference with sample results.

P - Provisional - Contaminants present but minimal interference with sample results.

U - Unacceptable - Gross contamination, too much interference to use data for certain components or the entire fraction.

Remarks: All criteria met.

VI. Surrogate Spike Results (Form II)

		No. Samples	No. Samples J	No. Samples R
Water:	VOA	1	0	0
	B/N	0	0	0
	Acid	0	0	0
	P/P	0	0	0
Soil/Sed.	VOA	5	0	0
	B/N	5	0	0
	Acid	0	0	0
	P/P	0	0	0
Waste:	VOA	0	0	0
	B/N	0	0	0
	Acid	0	0	0
	P/P	0	0	0

Individual sample flagging criteria.

None - All original or re-analyzed surrogates meet criteria.

J - Two or more surrogates are out if B/N or Acid; one if VOA, Pest., or PCB.

R - Any surrogate with <10% recovery. (J positive results; R non-detects.)

Remarks: All criteria met.

VII. Matrix Spike Results (Form III, % Recovery)

		No. Comp.	No. Out	No <10% Rec.
Water:	VOA	0	0	0
	B/N	0	0	0
	Acid	0	0	0
	Pest.	0	0	0
	PCB	0	0	0
Soil/Sed.	VOA	0	0	0
	B/N	0	0	0
	Acid	0	0	0
	Pest.	0	0	0
	PCB	0	0	0
Waste:	VOA	0	0	0
	B/N	0	0	0
	Acid	0	0	0
	Pest.	0	0	0
	PCB	0	0	0

Remarks: See comments below.

VIII. Matrix Spike Duplicate Results
(Form III, Relative Percent Difference)

		No. Comp.	No. Out
Water:	VOA	0	0
	B/N	0	0
	Acid	0	0
	Pest.	0	8
	PCB	0	0
Soil/Sed.	VOA	0	0
	B/N	0	0
	Acid	0	0
	Pest.	0	0
	PCB	0	0
Waste:	VOA	0	0
	B/N	0	0
	Acid	0	0
	Pest.	0	0
	PCB	0	0

Remarks: An MS/MSD sample was not analyzed for this sample set.

IX. Blind Spike Results

Water:
VOA ____ B/N ____ Acid ____ Pest. ____ PCB ____

Soil/Sed.:
VOA ____ B/N ____ Acid ____ Pest. ____ PCB ____

No spike submitted __X__
Spike submitted - See Attached _____

A - Acceptable - All compounds reported and results within criteria.
P - Provisional - Data useable; some criteria not met.
U - Unacceptable - As received, data was unacceptable. Useable data was gleaned by data reviewer.
R - Rejected - No useful data could be obtained. Entire fraction rejected.

Remarks: _____
_____
_____

X. Blind Spike Results

Water:
VOA ____ B/N ____ Acid ____ Pest. ____ PCB ____

Soil/Sed.:
VOA ____ B/N ____ Acid ____ Pest. ____ PCB ____

No blank submitted __X__
Blank submitted - See Remarks _____

A - Acceptable - No compounds found, minor contaminants found and also identified in lab blanks.
P - Provisional - Minor contaminants found inconsistent with lab blanks and also found in samples.
U - Unacceptable - Gross contamination inconsistent with lab blanks and also found in samples.

Remarks: _____
_____
_____

XI. Internal Standards Performance

A. Area Counts

		No. Samples	No. Outside Criteria
VOA:	Water:	1	0
	Soil/Sed.	5	0
	Waste	0	0
BNA:	Water:	0	0
	Soil/Sed.	5	0
	Waste	0	0

B. Retention Times

		No. Samples	No. Outside Criteria
VOA:	Water:	1	0
	Soil/Sed.	5	0
	Waste	0	0
BNA:	Water:	0	0
	Soil/Sed.	5	0
	Waste	0	0

Note: Samples are flagged on an individual basis. See Section XIV for affected samples and for flags assigned.

Remarks: All quality control criteria met.

XII. Tentatively Identified Compounds (TICs)

Water:	VOA	A	BNA	-
Soil/Sed.:	VOA	A	BNA	A[1]
Waste:	VOA	-	BNA	-

A - Acceptable - All TICs correctly reported.

P - Provisional - Some improper identifications made; data useable.

U - Unacceptable - As received, data was unacceptable. Useable data was gleaned by data reviewer.

R - Rejected - No useful data could be obtained. Data rejected.

Remarks: [1] Several TICs found in samples which weren't found in lab or field QC blanks.

XII. Split Sample Results

Water:	VOA __	B/N __	Acid __	Pest. __	PCB __
Soil/Sed.:	VOA __	B/N __	Acid __	Pest. __	PCB __
Waste:	VOA __	B/N __	Acid __	Pest. __	PCB __

No split sample X
Split sample - See Attached _____

A - Acceptable - At a concentration of greater than 10 times the minimum detection limit, the same compounds were identified by the contract lab and the reference lab with minor differences in concentration.

P - Provisional - At a concentration of greater than 10 times the minimum detection limit, the same compounds were identified by the contract lab and the reference lab with major differences in concentration. These discrepancies could cause the data to be useful only for limited purposes.

U - Unacceptable - At a concentration of greater than 10 times the minimum detection limit, differences were found in compound identifications by the contract lab and regional lab. These discrepancies could cause the results for this fraction to used for limited purposes or to be considered unusable.

Remarks: _____

XIV. FLAG SUMMARY

Based on a review of the quality control information, the following is a summary of qualifiers used in reporting the data.

Note: The R flag takes precedence over any other flag on the same compound.

Water:	No. Samples	Soil/Sed.:	No. Samples	Waste:	No. Samples
VOA	1	VOA	5	VOA	0
B/N	0	B/N	5	B/N	0
Acid	0	Acid	5	Acid	0
Pest.	0	Pest.	0	Pest.	0
PCB	0	PCB	0	PCB	0

Remarks: Several BNA CC %Ds out but no qualifications because no affected positives. TICs found in blanks but not in samples; TICs found in samples which aren't attributable to blank contamination.

XV. Final Remarks/Summary

Affected Samples	Fraction/ Compound	Flag	Reason
none	N/A	N/A	N/A

APPENDIX

QUALIFIED FORM I
DATA REPORTS

A0601

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0601

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503504.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 14 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

A0602

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0602

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503505.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 18 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	76	
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

A0603

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0603

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503506.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 10 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

A0604

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0604

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0510611.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 10 Data Analyzed: 05/10/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

A0605

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0605

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0510612.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 16 Data Analyzed: 05/11/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

A0606

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) WATER Lab Sample ID: A0606

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: U504710.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. _____ Data Analyzed: 05/04/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0601

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0601

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 0520410.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 14 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3801	U
111-44-4	bis(2-Chloroethyl)ether	3801	U
95-57-8	2-Chlorophenol	3801	U
541-73-1	1,3-Dichlorobenzene	3801	U
106-46-7	1,4-Dichlorobenzene	3801	U
95-50-1	1,2-Dichlorobenzene	3801	U
95-48-7	2-Methylphenol	3801	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3801	U
106-44-5	4-Methylphenol	3801	U
621-64-7	N-Nitroso-di-n-propylamine	3801	U
67-72-1	Hexachloroethane	3801	U
98-95-3	Nitrobenzene	3801	U
78-59-1	Isophorone	3801	U
88-75-5	2-Nitrophenol	3801	U
105-67-9	2,4-Dimethylphenol	3801	U
111-91-1	bis(2-Chloroethoxy)methane	3801	U
120-83-2	2,4-Dichlorophenol	3801	U
120-82-1	1,2,4-Trichlorobenzene	3801	U
91-20-3	Naphthalene	3801	U
106-47-8	4-Chloroaniline	3801	U
87-68-3	Hexachlorobutadiene	3801	U
59-50-7	4-Chloro-3-methylphenol	3801	U
91-57-6	2-Methylnaphthalene	3801	U
77-47-4	Hexachlorocyclopentadiene	3801	U
88-06-2	2,4,6-Trichlorophenol	3801	U
95-95-4	2,4,5-Trichlorophenol	9201	U
91-58-7	2-Chloronaphthalene	3801	U
88-74-4	2-Nitroaniline	9201	U
131-11-3	Dimethylphthalate	3801	U
208-96-8	Acenaphthylene	3801	U
606-20-2	2,6-Dinitrotoluene	3801	U
99-09-2	3-Nitroaniline	9201	U
83-32-9	Acenaphthene	3801	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0601

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0601

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 0520410.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 14 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9200	U
100-02-7	4-Nitrophenol	9200	U
132-64-9	Dibenzofuran	3800	U
121-4-2	2,4-Dinitrotoluene	3800	U
84-66-2	Diethylphthalate	3800	U
7005-72-3	4-Chlorophenyl-phenylether	3800	U
86-73-7	Fluorene	3800	U
100-01-6	4-Nitroaniline	9200	U
534-52-1	4,6-Dinitro-2-methylphenol	9200	U
86-30-6	N-Nitrosodiphenylamine (1)	3800	U
101-55-3	4-Bromophenyl-phenylether	3800	U
108-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	9200	U
85-01-8	Phenanthrene	3800	U
120-12-7	Anthracene	3800	U
86-74-8	Carbazole	3800	U
84-74-2	Di-n-butylphthalate	3800	U
206-44-0	Fluoranthene	3800	U
129-00-0	Pyrene	3800	U
85-68-7	Butylbenzylphthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo(a)anthracene	3800	U
218-01-9	Chrysene	3800	U
117-81-7	bis(2-Ethylhexyl)phthalate	3800	U
117-84-0	Di-n-octylphthalate	3800	U
205-99-2	Benzo(b)fluoranthene	3800	U
207-08-9	Benzo(k)fluoranthene	3800	U
50-32-8	Benzo(a)pyrene	3800	U
193-39-5	Indeno(1,2,3-cd)pyrene	3800	U
53-70-3	Dibenz(a,h)anthracene	3800	U
191-24-2	Benzo(g,h,i)perylene	3800	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0602

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0602

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 0520D03.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 18 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3901	U
111-44-4	bis(2-Chloroethyl)ether	3901	U
95-57-8	2-Chlorophenol	3901	U
541-73-1	1,3-Dichlorobenzene	3901	U
106-46-7	1,4-Dichlorobenzene	3901	U
95-50-1	1,2-Dichlorobenzene	3901	U
95-48-7	2-Methylphenol	3901	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3901	U
106-44-5	4-Methylphenol	3901	U
621-64-7	N-Nitroso-di-n-propylamine	3901	U
67-72-1	Hexachloroethane	3901	U
98-95-3	Nitrobenzene	3901	U
78-59-1	Isophorone	3901	U
88-75-5	2-Nitrophenol	3901	U
105-67-9	2,4-Dimethylphenol	3901	U
111-91-1	bis(2-Chloroethoxy)methane	3901	U
120-83-2	2,4-Dichlorophenol	3901	U
120-82-1	1,2,4-Trichlorobenzene	3901	U
91-20-3	Naphthalene	3901	U
106-47-8	4-Chloroaniline	3901	U
87-68-3	Hexachlorobutadiene	3901	U
59-50-7	4-Chloro-3-methylphenol	3901	U
91-57-6	2-Methylnaphthalene	3901	U
77-47-4	Hexachlorocyclopentadiene	3901	U
88-06-2	2,4,6-Trichlorophenol	3901	U
95-95-4	2,4,5-Trichlorophenol	9401	U
91-58-7	2-Chloronaphthalene	3901	U
88-74-4	2-Nitroaniline	9401	U
131-11-3	Dimethylphthalate	3901	U
208-96-8	Acenaphthylene	3901	U
606-20-2	2,6-Dinitrotoluene	3901	U
99-09-2	3-Nitroaniline	9401	U
83-32-9	Acenaphthene	3901	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0602

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0602

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 0520D03.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 18 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9401	U
100-02-7	4-Nitrophenol	9401	U
132-64-9	Dibenzofuran	3901	U
121-4-2	2,4-Dinitrotoluene	3901	U
84-66-2	Diethylphthalate	3901	U
7005-72-3	4-Chlorophenyl-phenylether	3901	U
86-73-7	Fluorene	3901	U
100-01-6	4-Nitroaniline	9401	U
534-52-1	4,6-Dinitro-2-methylphenol	9401	U
86-30-6	N-Nitrosodiphenylamine (1)	3901	U
101-55-3	4-Bromophenyl-phenylether	3901	U
108-74-1	Hexachlorobenzene	3901	U
87-86-5	Pentachlorophenol	9401	U
85-01-8	Phenanthrene	3901	U
120-12-7	Anthracene	3901	U
86-74-8	Carbazole	3901	U
84-74-2	Di-n-butylphthalate	3901	U
206-44-0	Fluoranthene	3901	U
129-00-0	Pyrene	3901	U
85-68-7	Butylbenzylphthalate	3901	U
91-94-1	3,3'-Dichlorobenzidine	3901	U
56-55-3	Benzo(a)anthracene	3901	U
218-01-9	Chrysene	3901	U
117-81-7	bis(2-Ethylhexyl)phthalate	3901	U
117-84-0	Di-n-octylphthalate	3901	U
205-99-2	Benzo(b)fluoranthene	3901	U
207-08-9	Benzo(k)fluoranthene	3901	U
50-32-8	Benzo(a)pyrene	3901	U
193-39-5	Indeno(1,2,3-cd)pyrene	3901	U
53-70-3	Dibenz(a,h)anthracene	3901	U
191-24-2	Benzo(g,h,i)perylene	3901	U

A0603

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0603

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 052000Z.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360U	U
111-44-4	bis(2-Chloroethyl)ether	360U	U
95-57-8	2-Chlorophenol	360U	U
541-73-1	1,3-Dichlorobenzene	360U	U
106-46-7	1,4-Dichlorobenzene	360U	U
95-50-1	1,2-Dichlorobenzene	360U	U
95-48-7	2-Methylphenol	360U	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360U	U
106-44-5	4-Methylphenol	360U	U
621-64-7	N-Nitroso-di-n-propylamine	360U	U
67-72-1	Hexachloroethane	360U	U
98-95-3	Nitrobenzene	360U	U
78-59-1	Isophorone	360U	U
88-75-5	2-Nitrophenol	360U	U
105-67-9	2,4-Dimethylphenol	360U	U
111-91-1	bis(2-Chloroethoxy)methane	360U	U
120-83-2	2,4-Dichlorophenol	360U	U
120-82-1	1,2,4-Trichlorobenzene	360U	U
91-20-3	Naphthalene	360U	U
106-47-8	4-Chloroaniline	360U	U
87-68-3	Hexachlorobutadiene	360U	U
59-50-7	4-Chloro-3-methylphenol	360U	U
91-57-6	2-Methylnaphthalene	360U	U
77-47-4	Hexachlorocyclopentadiene	360U	U
88-06-2	2,4,6-Trichlorophenol	360U	U
95-95-4	2,4,5-Trichlorophenol	870U	U
91-58-7	2-Chloronaphthalene	360U	U
88-74-4	2-Nitroaniline	870U	U
131-11-3	Dimethylphthalate	360U	U
208-96-8	Acenaphthylene	360U	U
606-20-2	2,6-Dinitrotoluene	360U	U
99-09-2	3-Nitroaniline	870U	U
83-32-9	Acenaphthene	360U	U

A0603

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0603

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 0520002.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	8700	U
100-02-7	4-Nitrophenol	8700	U
132-64-9	Dibenzofuran	3600	U
121-14-2	2,4-Dinitrotoluene	3600	U
84-66-2	Diethylphthalate	3600	U
7005-72-3	4-Chlorophenyl-phenylether	3600	U
86-73-7	Fluorene	3600	U
100-01-6	4-Nitroaniline	8700	U
534-52-1	4,6-Dinitro-2-methylphenol	8700	U
86-30-6	N-Nitrosodiphenylamine (1)	3600	U
101-55-3	4-Bromophenyl-phenylether	3600	U
118-74-1	Hexachlorobenzene	3600	U
87-86-5	Pentachlorophenol	8700	U
85-01-8	Phenanthrene	3600	U
120-12-7	Anthracene	3600	U
86-74-8	Carbazole	3600	U
84-74-2	Di-n-butylphthalate	3600	U
206-44-0	Fluoranthene	3600	U
129-00-0	Pyrene	3600	-U
85-68-7	Butylbenzylphthalate	3600	U
91-94-1	3,3'-Dichlorobenzidine	3600	U
56-55-3	Benzo(a)anthracene	3600	U
218-01-9	Chrysene	3600	U
117-81-7	bis(2-Ethylhexyl)phthalate	3600	U
117-84-0	Di-n-octylphthalate	3600	U
205-99-2	Benzo(b)fluoranthene	3600	U
207-08-9	Benzo(k)fluoranthene	3600	U
50-32-8	Benzo(a)pyrene	3600	U
193-39-5	Indeno(1,2,3-cd)pyrene	3600	U
53-70-3	Dibenz(a,h)anthracene	3600	U
191-24-2	Benzo(g,h,i)perylene	3600	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0604

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-1c SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0604

Sample wt/vol: 31.4 (g/mL) G Lab File ID: 0520004.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3501	U
111-44-4	bis(2-Chloroethyl)ether	3501	U
95-57-8	2-Chlorophenol	3501	U
541-73-1	1,3-Dichlorobenzene	3501	U
106-46-7	1,4-Dichlorobenzene	3501	U
95-50-1	1,2-Dichlorobenzene	3501	U
95-48-7	2-Methylphenol	3501	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3501	U
106-44-5	4-Methylphenol	3501	U
621-64-7	N-Nitroso-di-n-propylamine	3501	U
67-72-1	Hexachloroethane	3501	U
98-95-3	Nitrobenzene	3501	U
78-59-1	Isophorone	3501	U
88-75-5	2-Nitrophenol	3501	U
105-67-9	2,4-Dimethylphenol	3501	U
111-91-1	bis(2-Chloroethoxy)methane	3501	U
120-83-2	2,4-Dichlorophenol	3501	U
120-82-1	1,2,4-Trichlorobenzene	3501	U
91-20-3	Naphthalene	3501	U
106-47-8	4-Chloroaniline	3501	U
87-68-3	Hexachlorobutadiene	3501	U
59-50-7	4-Chloro-3-methylphenol	3501	U
91-57-6	2-Methylnaphthalene	3501	U
77-47-4	Hexachlorocyclopentadiene	3501	U
88-06-2	2,4,6-Trichlorophenol	3501	U
95-95-4	2,4,5-Trichlorophenol	8501	U
91-58-7	2-Chloronaphthalene	3501	U
88-74-4	2-Nitroaniline	8501	U
131-11-3	Dimethylphthalate	3501	U
208-96-8	Acenaphthylene	3501	U
606-20-2	2,6-Dinitrotoluene	3501	U
99-09-2	3-Nitroaniline	8501	U
83-32-9	Acenaphthene	3501	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0604

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-1o SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0604

Sample wt/vol: 31.4 (g/mL) G Lab File ID: 0520D04.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	8501	U
100-02-7	4-Nitrophenol	8501	U
132-64-9	Dibenzofuran	3501	U
121-4-2	2,4-Dinitrotoluene	3501	U
84-66-2	Diethylphthalate	3501	U
7005-72-3	4-Chlorophenyl-phenylether	3501	U
86-73-7	Fluorene	3501	U
100-01-6	4-Nitroaniline	8501	U
534-52-1	4,6-Dinitro-2-methylphenol	8501	U
86-30-6	N-Nitrosodiphenylamine (1)	3501	U
101-55-3	4-Bromophenyl-phenylether	3501	U
108-74-1	Hexachlorobenzene	3501	U
87-86-5	Pentachlorophenol	8501	U
85-01-8	Phenanthrene	3501	U
120-12-7	Anthracene	3501	U
86-74-8	Carbazole	3501	U
84-74-2	Di-n-butylphthalate	3501	U
206-44-0	Fluoranthene	3501	U
129-00-0	Pyrene	3501	U
85-68-7	Butylbenzylphthalate	3501	U
91-94-1	3,3'-Dichlorobenzidine	3501	U
56-55-3	Benzo(a)anthracene	3501	U
218-01-9	Chrysene	3501	U
117-81-7	bis(2-Ethylhexyl)phthalate	3501	U
117-84-0	Di-n-octylphthalate	3501	U
205-99-2	Benzo(b)fluoranthene	3501	U
207-08-9	Benzo(k)fluoranthene	3501	U
50-32-8	Benzo(a)pyrene	3501	U
193-39-5	Indeno(1,2,3-cd)pyrene	3501	U
53-70-3	Dibenz(a,h)anthracene	3501	U
191-24-2	Benzo(g,h,i)perylene	3501	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0605

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0520005.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4001	U
111-44-4	bis(2-Chloroethyl)ether	4001	U
95-57-8	2-Chlorophenol	4001	U
541-73-1	1,3-Dichlorobenzene	4001	U
106-46-7	1,4-Dichlorobenzene	4001	U
95-50-1	1,2-Dichlorobenzene	4001	U
95-48-7	2-Methylphenol	4001	U
108-60-1	2,2'-oxybis(1-Chloropropane)	4001	U
106-44-5	4-Methylphenol	4001	U
621-64-7	N-Nitroso-di-n-propylamine	4001	U
67-72-1	Hexachloroethane	4001	U
98-95-3	Nitrobenzene	4001	U
78-59-1	Isophorone	4001	U
88-75-5	2-Nitrophenol	4001	U
105-67-9	2,4-Dimethylphenol	4001	U
111-91-1	bis(2-Chloroethoxy)methane	4001	U
120-83-2	2,4-Dichlorophenol	4001	U
120-82-1	1,2,4-Trichlorobenzene	4001	U
91-20-3	Naphthalene	4001	U
106-47-8	4-Chloroaniline	4001	U
87-68-3	Hexachlorobutadiene	4001	U
59-50-7	4-Chloro-3-methylphenol	4001	U
91-57-6	2-Methylnaphthalene	4001	U
77-47-4	Hexachlorocyclopentadiene	4001	U
88-06-2	2,4,6-Trichlorophenol	4001	U
95-95-4	2,4,5-Trichlorophenol	9501	U
91-58-7	2-Chloronaphthalene	4001	U
88-74-4	2-Nitroaniline	9501	U
131-11-3	Dimethylphthalate	4001	U
208-96-8	Acenaphthylene	4001	U
606-20-2	2,6-Dinitrotoluene	4001	U
99-09-2	3-Nitroaniline	9501	U
83-32-9	Acenaphthene	4001	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A0605

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0520U005.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9501	U
100-02-7	4-Nitrophenol	9501	U
132-64-9	Dibenzofuran	4001	U
121-4-2	2,4-Dinitrotoluene	4001	U
84-66-2	Diethylphthalate	4001	U
7005-72-3	4-Chlorophenyl-phenylether	4001	U
86-73-7	Fluorene	4001	U
100-01-6	4-Nitroaniline	9501	U
534-52-1	4,6-Dinitro-2-methylphenol	9501	U
86-30-6	N-Nitrosodiphenylamine (1)	4001	U
101-55-3	4-Bromophenyl-phenylether	4001	U
108-74-1	Hexachlorobenzene	4001	U
87-86-5	Pentachlorophenol	9501	U
85-01-8	Phenanthrene	4001	U
120-12-7	Anthracene	4001	U
86-74-8	Carbazole	4001	U
84-74-2	Di-n-butylphthalate	4001	U
206-44-0	Fluoranthene	4001	U
129-00-0	Pyrene	4001	U
85-68-7	Butylbenzylphthalate	4001	U
91-94-1	3,3'-Dichlorobenzidine	4001	U
56-55-3	Benzo(a)anthracene	4001	U
218-01-9	Chrysene	4001	U
117-81-7	bis(2-Ethylhexyl)phthalate	4001	U
117-84-0	Di-n-octylphthalate	4001	U
205-99-2	Benzo(b)fluoranthene	4001	U
207-08-9	Benzo(k)fluoranthene	4001	U
50-32-8	Benzo(a)pyrene	4001	U
193-39-5	Indeno(1,2,3-cd)pyrene	4001	U
53-70-3	Dibenz(a,h)anthracene	4001	U
191-24-2	Benzo(g,h,i)perylene	4001	U

TENTATIVELY IDENTIFIED COMPOUNDS

A0601

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0601

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503504.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 14 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC 3/90

TENTATIVELY IDENTIFIED COMPOUNDS

A0602

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0602

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503505.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 18 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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TENTATIVELY IDENTIFIED COMPOUNDS

A0603

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0603

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503506.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 10 Data Analyzed: 05/03/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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TENTATIVELY IDENTIFIED COMPOUNDS

A0604

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0604

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0510611.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 10 Data Analyzed: 05/10/91

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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TENTATIVELY IDENTIFIED COMPOUNDS

A0605

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0605

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0510612.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. 16 Data Analyzed: 05/11/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

A0606

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) WATER Lab Sample ID: A0606

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0504210.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: not dec. _____ Data Analyzed: 05/04/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

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

Number TICs found: 1

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	556672	Cyclotetrasiloxane, octameth	21.790	6	Y JN
2.					
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TENTATIVELY IDENTIFIED COMPOUNDS

VBLK01

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: AU501

Matrix: (soil/water) SOIL Lab Sample ID: VBLK01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0503503.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 05/03/91

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLK61

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: VBLK61

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0510610.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 05/10/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLK80

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) WATER Lab Sample ID: VBLK80

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0504702.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 05/04/91

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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TENTATIVELY IDENTIFIED COMPOUNDS

A0601

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0601

Matrix: (soil/water) SOIL Lab Sample ID: A0601

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 0520410.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 14 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.1

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	8.450	96	JN
~~2. 110134~~	~~2,5 Hexanedione~~	~~8.817~~	~~92~~	~~JNB~~
3.	Unknown	8.920	370	JN
~~4. 4436753~~	~~3 Hexene 2,5 dione~~	~~9.300~~	~~1500~~	~~JNB~~
5.	Unknown Ketone	11.130	120	JN
~~6.~~	~~Unknown~~	~~27.670~~	~~1400~~	~~JNB~~
~~7.~~	~~Unknown~~	~~31.200~~	~~340~~	~~JNB~~
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TENTATIVELY IDENTIFIED COMPOUNDS

A0602

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0602

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 0520003.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

Number TICs found: 9

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN KETONE	8.900	410	JN
~~2.~~	~~4436253~~	~~3-Hexene-2,5-dione~~	~~9.283~~	~~950~~	~~JNB~~
3.		UNKNOWN PHTHALATE	22.833	81	JN
4.		UNKNOWN AMIDE	23.867	110	JN
5.		UNKNOWN	25.783	100	JN
~~6.~~		~~UNKNOWN AMIDE~~	~~25.950~~	~~120~~	~~JNB~~
~~7.~~		~~UNKNOWN~~	~~27.667~~	~~1200~~	~~JNB~~
8.		UNKNOWN AMIDE	27.867	79	JN
~~9.~~		~~UNKNOWN~~	~~31.217~~	~~410~~	~~JNB~~
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TENTATIVELY IDENTIFIED COMPOUNDS

A0603

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0603

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 0520002.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 19 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 9

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	7.870	89	JN
~~2.~~	~~110134~~	~~2,5-Hexanedione~~	~~8.820~~	~~46~~	~~JN~~
3.		UNKNOWN	8.917	200	JN
~~4.~~	~~4436753~~	~~3-Hexene-2,5-diene~~	~~9.267~~	~~270~~	~~JN~~
5.		UNKNOWN ALCOHOL	10.517	79	JN
~~6.~~		~~UNKNOWN AMIDE~~	~~25.950~~	~~81~~	~~JN~~
~~7.~~		~~UNKNOWN~~	~~27.667~~	~~1600~~	~~JN~~
~~8.~~		~~UNKNOWN~~	~~29.483~~	~~130~~	~~JN~~
~~9.~~		~~UNKNOWN~~	~~31.217~~	~~200~~	~~JN~~
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TENTATIVELY IDENTIFIED COMPOUNDS

A0604

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0604

Sample wt/vol: 31.4 (g/mL) G Lab File ID: 0520004.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.0

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 110134~~	~~2,5 Hexanedione~~	~~6.817~~	~~771~~	~~JNAB~~
2.	UNKNOWN KETONE	8.920	360	JN
~~3. 4436753~~	~~3 Hexene 2,5 dione~~	~~9.270~~	~~690~~	~~JNAB~~
4.	UNKNOWN	10.517	75	JN
~~5.~~	~~UNKNOWN~~	~~27.647~~	~~600~~	~~JNB~~
~~6.~~	~~UNKNOWN~~	~~29.450~~	~~220~~	~~JNB~~
~~7.~~	~~UNKNOWN~~	~~31.240~~	~~320~~	~~JNB~~
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TENTATIVELY IDENTIFIED COMPOUNDS

A0605

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Matrix: (soil/water) SOIL Lab Sample ID: A0605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0520D005.D

Level: (low/med) LOW Date Received: 05/01/91

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/21/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8

Number TICs found: 13

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	110134	~~2,5-Hexanedione~~	~~8.817~~	~~88~~	~~JNPB~~
2.		UNKNOWN KETONE	8.917	260	JN
3.	4436263	~~3-Hexene-2,5-dione~~	~~9.267~~	~~230~~	~~JNPB~~
4.		UNKNOWN KETONE	9.500	240	JN
5.		UNKNOWN	10.500	200	JN
6.	719222	2,5-Cyclohexadiene-1,4-dione	18.033	84	JN
7.		UNKNOWN PHTHALATE	22.817	140	JN
8.		UNKNOWN	23.700	110	JN
9.		UNKNOWN AMIDE	23.8[illegible]7	140	JN
10.		UNKNOWN	25.783	120	JN
11.		~~UNKNOWN AMIDE~~	~~25.950~~	~~150~~	~~JNB~~
12.		~~UNKNOWN~~	~~27.683~~	~~2800~~	~~JNB~~
13.		~~UNKNOWN~~	~~31.200~~	~~630~~	~~JNB~~
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VALIDATOR'S NOTES

SUPPORT DOCUMENTATION

TENTATIVELY IDENTIFIED COMPOUNDS

SBLK30

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: AU501

Matrix: (soil/water) SOIL Lab Sample ID: SBLK30

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0520405.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/02/91

Concentrated Extract Volume: 500(uL) Date Analyzed: 05/20/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 7

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	110134	2,5-Hexanedione	8.817	70	JNA
2.	4436753	3-Hexene-2,5-dione	9.267	450	JNA
3.		UNKNOWN	13.000	96	JN
4.		UNKNOWN AMIDE	25.950	77	JN
5.		UNKNOWN	27.667	1600	JN
6.		UNKNOWN	29.467	68	JN
7.		UNKNOWN	31.200	200	JN
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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Lab File ID: 05204DFT.D DFTPP Injection Date: 05/20/91

Instrument ID: EXTR4 DFTPP Injection Time: 1149

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	32.6
68	Less than 2.0% of mass 69	0.6 (1.0)1
69	Area 69 relative abundance	54.9
70	Less than 2.0% of mass 69	0.6 (1.1)1
127	25.0 - 75.0% of mass 198	45.8
197	Less than 1.0% of mass 198	0.4
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	5.9
275	10.0 - 30.0% of mass 198	18.9
365	Greater than 0.75% of mass 198	1.1
441	Present, but less than mass 443	7.9
442	40.0 - 110.0% of mass 198	68.0
443	15.0 - 24.0% of mass 442	13.5 (19.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	0520401.D	05/20/91	1337
02	SBLK28RE	SBLK28RE	0520402.D	05/20/91	1420
03	A0503MS	A0503MS	0520403.D	05/20/91	1521
04	A0503MSD	A0503MSD	0520404.D	05/20/91	1612
05	SBLK30	SBLK30	0520405.D	05/20/91	1705
06	A0505	A0505	0520406.D	05/20/91	1756
07	A0506	A0506	0520407.D	05/20/91	1847
08	A0505MS	A0505MS	0520408.D	05/20/91	1938
09	A0505MSD	A0505MSD	0520409.D	05/20/91	2029
10	A0501	A0501	0520410.D	05/20/91	2120
11					
12					
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CC % D > 25 2,4-dinitrophenol
4-nitrophenol
Hexachlorobenzene
(no action, no affected positives)

2 013

FORM V SV

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Instrument ID: EXTR4 Calibration Date: 05/20/91 Time: 1[illegible]

Lab File ID: 0520401.D Init. Calibration Date(s): 05/14/91 .

Init. Calibration Times: 1215 1609

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	13.068	13.493	0.800	-13.9	25.0
bis(2-Chloroethyl)ether	12.550	12.656	0.700	-4.2	25.0
2-Chlorophenol	12.052	12.279	0.800	-11.0	25.0
1,3-Dichlorobenzene	11.741	11.804	0.600	-3.6	25.0
1,4-Dichlorobenzene	11.817	11.898	0.500	-4.5	25.0
1,2-Dichlorobenzene	11.717	11.788	0.400	-4.1	25.0
2-Methylphenol	12.465	12.840	0.700	-15.7	25.0
2,2'-oxybis(1-Chloropropane)	11.809	11.363		24.7	
4-Methylphenol	12.440	12.729	0.600	-11.9	25.0
N-Nitroso-di-n-propylamine	11.519	11.592	0.500	-5.1	25.0
Hexachloroethane	11.012	11.005	0.300	0.6	25.0
Nitrobenzene	10.552	10.523	0.200	5.2	25.0
Isophorone	11.057	11.110	0.400	-5.0	25.0
2-Nitrophenol	10.231	10.252	0.100	-9.0	25.0
2,4-Dimethylphenol	10.479	10.397	0.200	17.1	25.0
bis(2-Chloroethoxy)methane	10.755	10.751	0.300	0.4	25.0
2,4-Dichlorophenol	10.291	10.291	0.200	0.0	25.0
1,2,4-Trichlorobenzene	10.295	10.302	0.200	-2.4	25.0
Naphthalene	11.334	11.342	0.700	-0.7	25.0
4-Chloroaniline	10.547	10.497		9.2	
Hexachlorobutadiene	10.137	10.152		-11.2	
4-Chloro-3-methylphenol	10.428	10.449	0.200	-5.0	25.0
2-Methylnaphthalene	10.724	10.761	0.400	-5.1	25.0
Hexachlorocyclopentadiene	10.350	10.334		4.5	
2,4,6-Trichlorophenol	10.405	10.405	0.200	-0.1	25.0
2,4,5-Trichlorophenol	10.489	10.441	0.200	9.2	25.0
2-Chloronaphthalene	11.252	11.176	0.800	6.1	25.0
2-Nitroaniline	10.640	10.544		17.6	
Dimethylphthalate	11.405	11.312		6.6	
Acenaphthylene	12.094	11.921	1.300	7.9	25.0
2,6-Dinitrotoluene	10.348	10.328	0.200	5.8	25.0
3-Nitroaniline	10.515	10.509		1.2	
Acenaphthene	11.292	11.164	0.800	9.9	25.0
2,4-Dinitrophenol	10.224	10.157		34.2	
4-Nitrophenol	10.330	10.196		40.6	
Dibenzofuran	11.828	11.790	0.800	1.7	25.0
2,4-Dinitrotoluene	10.483	10.462	0.200	4.5	25.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Instrument ID: EXIR4 Calibration Date: 05/20/91 Time: 1337

Lab File ID: 0520401.D Init. Calibration Date(s): 05/14/91

Init. Calibration Times: 1215 1609

COMPOUND	RT	RRT50	MIN RRF	%	MAX %
Diethylphthalate	11.558	11.452		8.1	
4-Chlorophenyl-phenylether	10.699	10.711	10.4001	-1.7	25.0
Fluorene	11.489	11.452	10.9001	2.5	25.0
4-Nitroaniline	10.562	10.483		14.1	
4,6-Dinitro-2-methylphenol	10.173	10.150		17.1	
N-Nitrosodiphenylamine (1)	10.631	10.602		4.6	
4-Bromophenyl-phenylether	10.206	10.226	10.1001	-10.1	25.0
Hexachlorobenzene	10.241	10.310	10.1001	-28.7	25.0
Pentachlorophenol	10.162	10.165	10.0501	-1.4	25.0
Phenanthrene	11.324	11.257	10.7001	5.0	25.0
Anthracene	11.325	11.218	10.7001	8.1	25.0
Carbazole	11.210	11.121		7.3	
Di-n-butylphthalate	11.782	11.521		14.7	
Fluoranthene	11.304	11.256	10.6001	3.6	25.0
Pyrene	11.259	11.334	10.6001	-6.9	25.0
Butylbenzylphthalate	10.680	10.640		5.8	
3,3'-Dichlorobenzidine	10.369	10.407		-19.4	
Benzo(a)anthracene	11.154	11.197	10.8001	-3.7	25.0
Chrysene	11.192	11.164	10.7001	2.4	25.0
bis(2-Ethylhexyl)phthalate	11.046	10.919		12.1	
Di-n-octylphthalate	12.402	12.274		6.1	
Benzo(b)fluoranthene	11.785	11.748	10.7001	2.1	25.0
Benzo(k)fluoranthene	11.620	11.485	10.7001	8.3	25.0
Benzo(a)pyrene	11.595	11.456	10.7001	8.8	25.0
Indeno(1,2,3-cd)pyrene	11.217	11.369	10.5001	-12.4	25.0
Dibenz(a,h)anthracene	11.328	11.093	10.4001	17.7	25.0
Benzo(g,h,i)perylene	11.446	11.210	10.5001	17.3	25.0
Nitrobenzene-d5	10.637	10.599	10.2001	7.5	25.0
2-Fluorobiphenyl	11.567	11.458	10.7001	6.9	25.0
Terphenyl-d14	10.725	10.829	10.5001	-14.4	25.0
Phenol-d5	13.083	13.392	10.8001	-10.0	25.0
2-Fluorophenol	12.445	12.553	10.6001	-4.4	25.0
2,4,6-Tribromophenol	10.140	10.230		-64.0	
2-Chlorophenol-d4	11.996	12.186	10.8001	-9.5	25.0
1,2-Dichlorobenzene-d4	11.054	11.133	10.4001	-7.4	25.0

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: AU601

Lab File ID: 0520DDFT.D DFTPP Injection Date: 05/20/91

Instrument ID: EXIR4 DFTPP Injection Time: 2211

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.1 (0.1)1
69	Area 69 relative abundance	58.9
70	Less than 2.0% of mass 69	0.5 (0.9)1
127	25.0 - 75.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.4
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	19.4
365	Greater than 0.75% of mass 198	1.3
441	Present, but less than mass 443	10.9
442	40.0 - 110.0% of mass 198	82.9
443	15.0 - 24.0% of mass 442	14.8 (17.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	0520D01.D	05/20/91	2222
02	AU603	AU603	0520D02.D	05/20/91	2311
03	AU602	AU602	0520D03.D	05/21/91	0024
04	AU604	AU604	0520D04.D	05/21/91	0115
05	AU605	AU605	0520D05.D	05/21/91	0205
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

CC % D > 25% 2,4-dinitrophenol
4 nitrotoluene
Hexachlorobenzene

2 014

FORM V SV

(reactim, no affected positives)

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEA Case No.: 1041-16 SAS No.: SDG No.: A0501

Instrument ID: EXIP4 Calibration Date: 05/20/91 Time: 2022

Lab File ID: 0520D01.D Init. Calibration Date(s): 05/14/91

Init. Calibration Times: 1215 1609

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	13.068	13.369	0.800	-9.8	25.0
bis(2-Chloroethyl)ether	12.550	12.771	0.700	-8.7	25.0
2-Chlorophenol	12.052	12.208	0.800	-7.6	25.0
1,3-Dichlorobenzene	11.741	11.829	0.600	-5.0	25.0
1,4-Dichlorobenzene	11.817	11.932	0.500	-6.4	25.0
1,2-Dichlorobenzene	11.717	11.801	0.400	-4.9	25.0
2-Methylphenol	12.455	12.524	0.700	-2.8	25.0
2,2'-oxybis(1-Chloropropane)	11.809	11.417		21.7	
4-Methylphenol	12.440	12.840	0.600	-16.4	25.0
N-Nitroso-di-n-propylamine	11.519	11.676	0.500	-10.3	25.0
Hexachloroethane	11.012	11.050	0.300	-3.7	25.0
Nitrobenzene	10.552	10.560	0.200	-1.5	25.0
Isophorone	11.057	11.158	0.400	-9.5	25.0
2-Nitrophenol	10.231	10.227	0.100	1.7	25.0
2,4-Dimethylphenol	10.479	10.413	0.200	13.7	25.0
bis(2-Chloroethoxy)methane	10.755	10.785	0.300	-4.1	25.0
2,4-Dichlorophenol	10.291	10.295	0.200	-1.3	25.0
1,2,4-Trichlorobenzene	10.295	10.515	0.200	-6.7	25.0
Naphthalene	11.334	11.339	0.700	-0.4	25.0
4-Chloroaniline	10.547	10.517		5.5	
Hexachlorobutadiene	10.137	10.150		-9.5	
4-Chloro-3-methylphenol	10.428	10.471	0.200	-10.0	25.0
2-Methylnaphthalene	10.724	10.799	0.400	-10.3	25.0
Hexachlorocyclopentadiene	10.350	10.349		-5.6	
2,4,6-Trichlorophenol	10.405	10.445	0.200	-9.5	25.0
2,4,5-Trichlorophenol	10.489	10.499	0.200	0.1	25.0
2-Chloronaphthalene	11.252	11.268	0.800	-1.3	25.0
2-Nitroaniline	10.650	10.615		3.3	
Dimethylphthalate	11.405	11.454		-3.5	
Acenaphthylene	12.054	12.053	0.900	1.5	25.0
2,6-Dinitrotoluene	10.548	10.552	0.200	-2.7	25.0
3-Nitroaniline	10.515	10.574		-2.8	
Acenaphthene	11.292	11.313	0.800	-1.6	25.0
2,4-Dinitrophenol	10.254	10.154		34.2	
4-Nitrophenol	10.340	10.235		28.6	
Dibenzofuran	11.820	12.017	0.900	-10.9	25.0
2,4-Dinitrotoluene	10.493	10.520	0.200	-7.6	25.0

All other compounds must meet a minimum RRF of 0.010.

FORM VIII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: 68-D0-0156

Lab Code: IEP Case No.: 1041-16 SAS No.: SDG No.: A0401

Instrument ID: EXTR4 Calibration Date: 05/20/91 Time: 2222

Lab File ID: 0520001.D Init. Calibration Date(s): 05/14/91

Init. Calibration Times: 1215 1509

COMPOUND	RRF	RRF50	MIN RRF	%	MAX %
Diethylphthalate	11.558	11.5[illegible]		-1.1	
4-Chlorophenyl-phenylether	10.699	10.738	10.400	-5.6	25.0
Fluorene	11.489	11.546	10.900	-[illegible].8	25.0
4-Nitroaniline	10.562	10.553		1.6	
4,6-Dinitro-2-methylphenol	10.1[illegible]	10.142		1[illegible].0	
N-Nitrosodiphenylamine (1)	10.631	10.595		5.8	
4-Bromophenyl-phenylether	10.296	10.227	10.100	-10.5	25.0
Hexachlorobenzene	10.241	10.309	10.100	-28.0	25.0
Pentachlorophenol	10.162	10.165	10.050	-1.7	25.0
Phenanthrene	11.324	11.232	10.700	6.9	25.0
Anthracene	11.325	11.194	10.700	9.9	25.0
Carbazole	11.210	11.136		6.1	
Di-n-butylphthalate	11.782	11.5[illegible]		11.4	
Fluoranthene	11.304	11.294	10.600	0.8	25.0
Pyrene	11.259	11.242	10.600	1.4	25.0
Butylbenzylphthalate	10.680	10.651		4.2	
3,3'-Dichlorobenzidine	10.369	10.404		-[illegible].5	
Benzo(a)anthracene	11.154	11.179	10.800	-2.1	25.0
Chrysene	11.192	11.162	10.700	2.5	25.0
bis(2-Ethylhexyl)phthalate	11.046	10.961		8.1	
Di-n-octylphthalate	12.422	12.2[illegible]		8.9	
Benzo(b)fluoranthene	11.785	11.538	10.700	13.9	25.0
Benzo(k)fluoranthene	11.620	11.413	10.700	12.8	25.0
Benzo(a)pyrene	11.595	11.446	10.700	9.4	25.0
Indeno(1,2,3-cd)pyrene	11.217	11.463	10.500	-20.2	25.0
Dibenz(a,h)anthracene	11.328	11.160	10.400	12.6	25.0
Benzo(g,h,i)perylene	11.395	11.2[illegible]2	10.500	8.8	25.0
Nitrobenzene-d5	10.6[illegible]	10.634	10.200	[illegible].6	25.0
2-Fluorobiphenyl	11.567	11.555	10.700	0.8	25.0
Terphenyl-d14	10.726	10.8[illegible]	10.500	-1[illegible].4	25.0
Phenol-d5	13.083	13.354	10.800	-8.8	25.0
2-Chlorophenol-d4	12.445	12.4[illegible]	10.600	-2.2	25.0
2,4,6-Tribromophenol	10.140	10.258		-83.9	
2-Chlorophenol-d4	11.9[illegible]	12.0[illegible]	10.800	-[illegible]	25.0
1,2-Dichlorobenzene-d4	11.054	11.076	10.400	-2.1	25.0

All other compounds must meet a minimum RRF of 0.010.

FORM VIII SV-2 [illegible]