Appendix L

Data Validation Reports

Project No. 21-02
Former Gulf States Creosoting Site
Hattiesburg, Mississippi

ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

May 21, 1997

Mr. David Upthegrove
Michael Pisani & Associates
1430 Energy Center
1100 Poydras Street
New Orleans, LA 70163

Dear Mr. Upthegrove:

Enclosed is the quality assurance review for the samples collected on March 12, 1997, as part of the Gulf States Creosoting project. The samples were grouped by the laboratory into sample delivery group (SDG) HMS02 and were collectively analyzed for volatile organic compounds, semivolatile organic compounds, organochlorine pesticides and polychlorinated biphenyls (PCBs), metals, and cyanide.

Overall, the data quality is acceptable. However, a portion of the organic data has been qualified due to calibration issues, low surrogate recoveries, internal standard performance, gas chromatography (GC) column agreement, and results reported at concentrations below the quantitation limit. The inorganic data has been qualified due to blank contamination, laboratory and field duplicate precision, inductively coupled plasma (ICP) serial dilution results, post digestion spike recoveries low matrix spike/matrix spike duplicate recoveries, and results below the reporting limit.

If you have any questions/comments, or if I can be of further assistance, please feel free to call.

Sincerely,

for KB

Kathleen A. Blaine
Quality Assurance Specialist/Principal

KAB:cr/ko

Enc.

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ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

QUALITY ASSURANCE REVIEW OF SAMPLES COLLECTED FOR GULF STATES CREOSOTING

May 21, 1997

Prepared for:

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Introduction

This quality assurance (QA) review is based upon a rigorous examination of the data generated from the samples collected on March 12, 1997, as part of the Gulf States Creosoting project. The samples that have undergone the QA review are presented on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Organic Data Review" (United States Environmental Protection Agency [US EPA], 2/94) and the "National Functional Guidelines for Inorganic Data Review" (US EPA, 2/94).

The reported analytical results are presented in Section 2. Data were examined to determine the usability of the analytical results and compliance relative to requirements specified in the analytical methods. Qualifier codes have been placed next to the results so the data user can quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data end-user to best understand the usability of the analytical results. It should be understood that data that have not been qualified in this report should be considered valid based on the quality control (QC) criteria that have been reviewed. Details of this QA review are presented in the narrative section of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
MW-03	2677529	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-04	2677530	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-04 (Laboratory Duplicate)	2677531	HMS02	3/12/97	M, CN
MW-04 (Matrix Spike)	2677532MS	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-04 (Matrix Spike Duplicate)	2677533MSD	HMS02	3/12/97	VOA, SVOA, P, M, CN
TB-1 (Trip Blank)	2677534	HMS02	3/12/97	VOA
MW-05	2677535	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-01	2677536	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-3	2677537	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-23 (Field Duplicate of MW-3)	2677538	HMS02	3/12/97	VOA, SVOA, P, M, CN
MW-4	2677539	HMS02	3/12/97	VOA, SVOA, P, M, CN
RB-1 (Rinsate Blank)	2677540	HMS02	3/12/97	VOA, SVOA, P, M, CN

TABLE 1 (Cont.)

NOTES:

CN	-	Total cyanide by SW-846 Method 9012.
M	-	Metals by SW-846 Methods 6010A and 7470A.
P	-	Organochlorine Pesticides by SW-846 Method 8081.
SVOA	-	Semivolatile organic compounds by SW-846 Method 8270B.
VOA	-	Volatile organic compounds by SW-846 Method 8240B.

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 11 aqueous samples (including one field duplicate, one matrix spike/matrix spike duplicate, one trip blank, and one rinsate blank) were performed by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. These 11 aqueous samples were analyzed for volatile organic compounds by SW-846 Method 8240B, semivolatile organic compounds by SW-846 Method 8270B, and organochlorine pesticides and polychlorinated biphenyls (PCBs) by SW-846 Method 8081, as indicated on Table 1. The analytical results are presented in Section 2 of this report.

The findings in this report are based upon a rigorous review of sample holding times, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike and matrix spike duplicate recoveries, surrogate recoveries, gas chromatography/mass spectroscopy (GC/MS) instrument mass tuning, calibrations, field duplicate results, sample preparation, internal standard performance, analytical sequence, 4'-DDT and endrin breakdown, surrogate retention time shifts, GC column agreement, and the quantitation of positive results. A few deficiencies were identified during the validation of this data set.

In the Data Support Documentation (Section 3) of this report, the data reviewer has included copies of all relevant raw data, QC forms, and other documentation needed to support any changes made to the data package. It should be emphasized that the following items do not necessarily affect data usability. Usability issues are addressed in a subsequent section. This report has been prepared according to sections that provide information that applies to specific analyses performed on the project samples.

Comments

1. As noted in the Laboratory Case Narrative, the volatile quantitation limits for sample MW-3 and MW-23 were raised due to the dilutions performed that were necessary due to the high concentrations of non-target compounds.

2. Semivolatile sample MW-3 and its reanalysis had high recoveries, 256% and 335%, respectively, for the surrogate nitrobenzene-d_5. In association with this, the internal standard naphthalene-d_8 had a low instrument response. The nitrobenzne-d_5 concentration is calculated using the napthalene-d_8 response; therefore, a low internal standard response will result in elevated compound concentrations and, therefore, elevated surrogate recoveries.

3. The pesticide fraction of sample MW-3 required numerous cleanup attempts. These attempts were not completely successful, and interfering peaks remained in the sample chromatogram. As a result, quantitation limits were elevated.

4. The data usability results for the LCS and matrix spike/matrix spike duplicate analyses were evaluated utilizing the laboratory-generated precision and accuracy limits.

5. The laboratory reported "not-detected" results down the method detection limits (MDLs). In addition, positive results less than the quantitation limit, but greater than the MDL, were qualified by the laboratory as estimated ("J").

6. All results are reported on a wet-weight basis on the data tables according to instructions from Michael Pisani & Associates personnel.

With regard to data usability, the principal areas of concern are calibration issues, low surrogate recoveries, internal standard performance, GC column agreement, and results reported at concentrations below the quantitation limit. Based upon a review of the data package provided, the following data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- The analyses for the compounds in the samples listed below are unusable, and the "not-detected" results have been flagged "R" on the data tables. In addition, the reported positive results for the compounds in the samples listed below should be considered estimated and have been flagged "J" on the data tables. Very low (<0.050) relative response factors (RRFs) were observed for these compounds in the associated initial multipoint calibration standards.

Compound	Samples with Unusable Quantitation Limits ("R)
vinyl acetate	MW-03, MW-04, MW-05, TB-1, MW-01, MW-3, MW-23, and MW-4, and RB-1
4,6-dinitro-2-methylphenol	MW-04, MW-03, MW-05, MW-01, MW-3, MW-23, MW-4, and RB-1

- The analyses for vinyl acetate in the samples MW-03, MW-04, MW-05, MW-01, MW-3, MW-23, and MW-4 should be considered unreliable, and the "not-detected" results have been flagged "R" on the data tables. Very low (<0.050) average RRFs were observed for this compound in the associated continuing calibration standards.

- The actual reporting limits for the semivolatile compounds quantitated with internal standard, naphthalene-d_8, in the sample MW-3 may be biased low, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results have been flagged "J" on the data tables. Low area counts (<50% of the area of the internal standard in the associated continuing calibration standards) were obtained for the associated internal standards in the semivolatile analyses of the aforementioned samples.

- The actual reporting limits for the following compounds in the associated samples may be higher than reported, and the "not-detected" results for these compounds have been flagged "UJ" on the data tables. High percent differences ($25.0\% < \%D \leq 90.0\%$) were obtained between the average RRFs of the associated initial calibrations and the RRFs in the associated continuing calibrations.

Compound	Sample(s) With Biased Reporting Limits ("UJ")
2-hexanone	MW-4 and RB-1
4-chloroaniline	MW-03, MW-05, MW-01, MW-3, and MW-23

- The actual detection limits for the pesticide/Aroclor compounds in the samples MW-01, MW-03, MW-04, MW-05, MW-3, and MW-23 may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results for pesticide/Aroclor compounds in these samples should be considered estimated and have been flagged "J" on the data tables. Low recoveries were observed for one or more of the surrogate compounds on both GC columns used for sample analysis.

- Although there is no direct reason to question the reported positive results for the following compounds in the samples listed below, these compounds are very common laboratory and field contaminants. In addition, the reported result for these compounds in these samples represent a low-level, on-column detection. Accordingly, extreme caution should be exercised if the results are to be used in a decision-making process, such as risk assessment.

Compound	Sample Results To Be Used With Extreme Caution
di-*n*-butylphthalate	MW-01
bis(2-ethylhexyl)phthalate	MW-4

- The reported positive results for the compounds in the samples listed below should be considered estimated and have been flagged "J" on the data tables. High percent differences (>25.0%) were observed between the results obtained from the two chromatographic columns used in the analysis of these samples.

Sample	Compound(s) With Estimated Positive Results ("J")
MW-05	heptachlor epoxide
MW-01	γ-BHC and 4,4-DDE
MW-3	endrin
MW-23	4,4-DDE, endrin aldehyde, and endosulfan sulfate

- According to reporting conventions, all positive results reported below the sample-specific quantitation limits should be considered estimated and have been flagged "J" on the data tables.

A complete support documentation of this organic data QA review is presented in Section 3 of this report.

B. Inorganic Data

The inorganic analyses of 11 aqueous samples (including one field duplicate, one matrix spike, one laboratory duplicate, and one rinsate blank) were performed by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. These 11 aqueous samples were analyzed for the target analyte list of metals by SW-846 Methods 6010A and 7470A and total cyanide SW-846 Method 9012, as indicated on Table 1. The analytical results are presented in Section 2 of this report.

The findings in this report are based upon a rigorous review of sample holding times, blank analysis results, LCS recoveries, matrix spike and matrix spike duplicate results, serial dilution results, laboratory and field duplicate results, inductively coupled plasma (ICP)

interference check samples, instrument sensitivity, instrument detection limits, calibrations, duplicate analyses, sample preparation, and the quantitation of positive results.

In the Data Support Documentation (Section 4) of this report, the data reviewer has included copies of all relevant raw data, QC forms, and other documentation needed to support any changes made to the data package. It should be emphasized that the following items do not necessarily affect data usability. Usability issues are addressed in a subsequent section. This report has been prepared according to sections that provide information that applies to specific analyses performed on the project samples.

Comments

1. As noted in the Laboratory Case Narrative, the matrix spike/matrix spike duplicate recoveries for aluminum, calcium, iron, magnesium, and sodium were not evaluated for quality due to concentrations of these elements in the unspiked sample at levels greater than 4 times the spike concentration added.

2. All results are reported on a wet-weight basis on the data tables according to instructions from Michael Pisani & Associates personnel.

3. The laboratory reported positive results down to their instrument detection limit (IDL). Positive results greater than the IDL but less than the reporting limit have been flagged "J", estimated by the laboratory.

With regard to data usability, the principal areas of concern are blank contamination, laboratory and field duplicate precision, ICP serial dilution results, post digestion spike recoveries, low matrix spike/matrix spike duplicate recoveries, and results below the reporting limit. Based upon a review of the data package provided, the following data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Inorganic Data Qualifiers

- Due to the trace-level presence of the following analytes in the associated laboratory method and/or rinsate blank, the positive results for these analytes in the samples listed below should be considered "not-detected" and have been flagged "U*" on the data tables. It should be noted that dilution factors and sample volume were taken into consideration when evaluating blank contamination.

Analyte	SDG	Sample(s) With Positive Results Qualified as "Not-Detected" ("U")
copper	HMS02	MW-03, MW-04, MW-01, MW-3, and MW-23
zinc	HMS02	MW-03, MW-3, and MW-4
lead	HMS02	MW-01, MW-3, and MW-4
mercury	HMS02	MW-03, MW-04, MW-05, MW-3, and MW-4

- The analysis for antimony in all samples should be considered unreliable and the "not-detected" result has been flagged "R" on the data tables. A very low recovery (<40%) was observed for this analyte in the associated post-digestion spike analysis.

- The actual detection limits for manganese and potassium in the sample RB-1 may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, the positive results for all other samples should be considered estimated and have been flagged "J" on the data tables. Low recoveries (30% ≤%R <75%) were observed for these analytes in the associated matrix spike analyses.

- The reported positive result for manganese in all samples should be considered estimated and has been flagged "J" on the data tables. In addition, the actual detection limits for manganese in sample RB-1 may be higher than reported and has been flagged "UJ" on the data tables. A low recovery (40% ≤%R <85%) was observed for this analyte in the associated post-digestion spike analysis.

- The reported positive results for iron in all samples should be considered estimated and have been flagged "J" on the data tables. High percent differences were obtained between the results for this analyte in the associated laboratory duplicate analyses.

- The reported positive results for sodium and calcium in all samples (except sodium in sample RB-1) should be considered estimated and have been flagged "J" on the data tables.

High percent differences (>10%) were observed for these analytes in the associated ICP serial dilution.

- The positive results for aluminum, barium, calcium, chromium, iron, lead, magnesium, manganese, mercury, nickel, potassium, vanadium, and zinc in samples MW-3 and MW-23 (field duplicate of sample MW-3) should be considered estimated and have been flagged "J" (unless previously flagged "U*") on the data tables. High percent differences (>20% RPD) were obtained between the results for these analytes in this field duplicate pair.

C. Conclusions

This QA review has identified several aspects of the analytical data that required qualification. The majority of the data are acceptable. However, a portion of the organic data has been qualified due to calibration issues, low surrogate recoveries, internal standard performance, GC column agreement, and results reported at concentrations below the quantitation limit. The inorganic data has been qualified due to blank contamination, laboratory and field duplicate precision, ICP serial dilution results, post digestion spike recoveries, low matrix spike/matrix spike duplicate recoveries, and quantitation of results below the reporting limit. To confidently use any of the analytical data within these sample sets, the data user should understand the qualifications and limitations of the results.

Report prepared by:

for KB

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Organic Qualifiers

U Compound was not detected.

J Quantitation is approximate due to limitations identified during the quality assurance review (data validation).

R Unusable result; analyte may or may not be present in the sample.

UJ This compound was not detected, but the detection limit may or may not be higher due to a bias identified during the quality assurance review.

Inorganic Qualifiers

U* This analyte should be considered "not-detected" since it was detected in a field, trip, and/or laboratory blank at a similar level.

U Analyte was not detected.

J Quantitation is approximate due to limitations identified during the quality assurance review (data validation).

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	2	R	2	2	R	2	2	R	2
1	Chloromethane	74-87-3	3	U	3	3	U	3	3	U	3
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	1	U	1	1	U	1	1	U	1
6	Acetone	67-64-1	6	U	6	6	U	6	6	U	6
7	Carbon Disulfide	75-15-0	57		3	23		3	27		3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	2	U	2	2	U	2	2	U	2
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	3	U	3	3	U	3	3	U	3
14	Chloroform	67-66-3	6		1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	1	U	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	1	U	1	1	U	1	1	U	1
21	Bromodichloromethane	75-27-4	1	U	1	1	U	1	1	U	1
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	5	U	5	5	U	5	5	U	5
24	Toluene	108-88-3	2	U	2	2	U	2	2	U	2
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	7	U	7	7	U	7	7	U	7
29	Dibromochloromethane	124-48-1	2	U	2	2	U	2	2	U	2
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	2	U	2	2	U	2	2	U	2
33	Xylene (total)	1330-20-7	1	U	1	1	U	1	1	U	1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	2	U	2	2	U	2	2	U	2

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	2	R	2	40	R	40	40	R	40
1	Chloromethane	74-87-3	3	U	3	60	U	60	60	U	60
2	Vinyl Chloride	75-01-4	2	U	2	40	U	40	40	U	40
3	Bromomethane	74-83-9	3	U	3	60	U	60	60	U	60
4	Chloroethane	75-00-3	3	U	3	60	U	60	60	U	60
5	1,1-Dichloroethene	75-35-4	1	U	1	20	U	20	20	U	20
6	Acetone	67-64-1	6	U	6	120	U	120	120	U	120
7	Carbon Disulfide	75-15-0	3	U	3	60	U	60	60	U	60
8	Methylene Chloride	75-09-2	2	U	2	40	U	40	40	U	40
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	40	U	40	40	U	40
10	1,1-Dichloroethane	75-34-3	2	U	2	40	U	40	40	U	40
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	40	U	40	40	U	40
12	2-Butanone	78-93-3	3	U	3	60	U	60	60	U	60
14	Chloroform	67-66-3	2	J	1	20	U	20	20	U	20
15	1,1,1-Trichloroethane	71-55-6	1	U	1	20	U	20	20	U	20
16	Carbon Tetrachloride	56-23-5	1	U	1	20	U	20	20	U	20
17	Benzene	71-43-2	1	U	1	790		20	810		20
18	1,2-Dichloroethane	107-06-2	2	U	2	40	U	40	40	U	40
19	Trichloroethene	79-01-6	1	U	1	20	U	20	20	U	20
20	1,2-Dichloropropane	78-87-5	1	U	1	20	U	20	20	U	20
21	Bromodichloromethane	75-27-4	1	U	1	20	U	20	20	U	20
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	20	U	20	20	U	20

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	5	U	5	100	U	100	100	U	100
24	Toluene	108-88-3	2	U	2	430		40	440		40
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	20	U	20	20	U	20
26	1,1,2-Trichloroethane	79-00-5	2	U	2	40	U	40	40	U	40
27	Tetrachloroethene	127-18-4	1	U	1	20	U	20	20	U	20
28	2-Hexanone	591-78-6	7	U	7	140	U	140	140	U	140
29	Dibromochloromethane	124-48-1	2	U	2	40	U	40	40	U	40
31	Chlorobenzene	108-90-7	1	U	1	20	U	20	20	U	20
32	Ethylbenzene	100-41-4	2	U	2	60	J	40	62	J	40
33	Xylene (total)	1330-20-7	1	U	1	370		20	380		20
35	Styrene	100-42-5	1	U	1	77	J	20	85	J	20
36	Bromoform	75-25-2	1	U	1	20	U	20	20	U	20
37	1,1,2,2-Tetrachloroethane	79-34-5	2	U	2	40	U	40	40	U	40

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl			TB-1 Trip Blank Water Sample		
			2677539			2677540			2677534		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	2	R	2	2	R	2	2	R	2
1	Chloromethane	74-87-3	3	U	3	3	U	3	3	U	3
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	1	U	1	1	U	1	1	U	1
6	Acetone	67-64-1	6	U	6	6	U	6	6	U	6
7	Carbon Disulfide	75-15-0	3	U	3	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	2	U	2	2	U	2	2	U	2
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	3	U	3	3	U	3	3	U	3
14	Chloroform	67-66-3	1	U	1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	1	U	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	1	U	1	1	U	1	1	U	1
21	Bromodichloromethane	75-27-4	1	U	1	1	U	1	1	U	1
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl			TB-1 Trip Blank Water Sample		
			2677539			2677540			2677534		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	5	U	5	5	U	5	5	U	5
24	Toluene	108-88-3	2	U	2	2	U	2	2	U	2
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	7	UJ	7	7	UJ	7	7	U	7
29	Dibromochloromethane	124-48-1	2	U	2	2	U	2	2	U	2
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	2	U	2	2	U	2	2	U	2
33	Xylene (total)	1330-20-7	1	U	1	1	U	1	1	U	1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	2	U	2	2	U	2	2	U	2

Kerr McGee Corp, Final

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	1	U	1	1	U	1	1	U	1
2	bis (2-chloroethyl) ether	111-44-4	1	U	1	1	U	1	1	U	1
3	2-chlorophenol	95-57-8	1	U	1	1	U	1	1	U	1
4	1,3-dichlorobenzene	541-73-1	1	U	1	1	U	1	1	U	1
5	1,4-dichlorobenzene	106-46-7	1	U	1	1	U	1	1	U	1
6	1,2-dichlorobenzene	95-50-1	1	U	1	1	U	1	1	U	1
7	2-methylphenol	95-48-7	2	U	2	2	U	2	2	U	2
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2	2	U	2	2	U	2
9	4-methylphenol	106-44-5	2	U	2	2	U	2	2	U	2
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2	2	U	2	2	U	2
11	hexachloroethane	67-72-1	2	U	2	2	U	2	2	U	2
12	nitrobenzene	98-95-3	1	U	1	1	U	1	1	U	1
13	isophorone	78-59-1	1	U	1	1	U	1	1	U	1
14	2-nitrophenol	88-75-5	2	U	2	2	U	2	2	U	2
15	2,4-dimethylphenol	105-67-9	1	U	1	1	U	1	1	U	1
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1	1	U	1	1	U	1
17	2,4-dichlorophenol	120-83-2	2	U	2	2	U	2	2	U	2
18	1,2,4-trichlorobenzene	120-82-1	3	J	1	1	U	1	1	U	1
19	naphthalene	91-20-3	1	U	1	1	U	1	1	U	1
20	4-chloroaniline	106-47-8	2	UJ	2	2	UJ	2	2	U	2
21	hexachlorobutadiene	87-68-3	1	U	1	1	U	1	1	U	1
22	4-chloro-3-methylphenol	59-50-7	2	U	2	2	U	2	2	U	2

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1	1	U	1	1	U	1
24	hexachlorocyclopentadiene	77-47-4	3	U	3	3	U	3	3	U	3
25	2,4,6-trichlorophenol	88-06-2	1	U	1	1	U	1	1	U	1
26	2,4,5-trichlorophenol	95-95-4	1	U	1	1	U	1	1	U	1
27	2-chloronaphthalene	91-58-7	1	U	1	1	U	1	1	U	1
28	2-nitroaniline	88-74-4	1	U	1	1	U	1	1	U	1
29	dimethyl phthalate	131-11-3	3	U	3	3	U	3	3	U	3
30	2,6-dinitrotoluene	606-20-2	1	U	1	1	U	1	1	U	1
31	acenaphthylene	208-96-8	1	U	1	1	U	1	1	U	1
32	3-nitroaniline	99-09-2	1	U	1	1	U	1	1	U	1
33	acenaphthene	83-32-9	1	U	1	1	U	1	1	U	1
34	2,4-dinitrophenol	51-28-5	5	U	5	5	U	5	5	U	5
35	4-nitrophenol	100-02-7	5	U	5	5	U	5	5	U	5
36	dibenzofuran	132-64-9	1	U	1	1	U	1	1	U	1
37	2,4-dinitrotoluene	121-14-2	2	U	2	2	U	2	2	U	2
38	diethyl phthalate	84-66-2	2	U	2	2	U	2	2	U	2
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2	2	U	2	2	U	2
40	fluorene	86-73-7	1	U	1	1	U	1	1	U	1
41	4-nitroaniline	100-01-6	2	U	2	2	U	2	2	U	2
42	4,6-dinitro-2-methylphenol	534-52-1	5	R	5	5	R	5	5	R	5
43	N-nitrosodiphenylamine	86-30-6	2	U	2	2	U	2	2	U	2
44	4-bromophenyl phenyl ether	101-55-3	2	U	2	2	U	2	2	U	2

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1	1	U	1	1	U	1
46	pentachlorophenol	87-86-5	1	U	1	1	U	1	1	U	1
47	phenanthrene	85-01-8	1	U	1	2	J	1	1	U	1
48	anthracene	120-12-7	1	U	1	1	U	1	1	U	1
49	carbazole	86-74-8	1	U	1	1	U	1	1	U	1
50	di-n-butyl phthalate	84-74-2	1	J	1	1	U	1	1	U	1
51	fluoranthene	206-44-0	1	U	1	1	U	1	1	U	1
52	pyrene	129-00-0	1	U	1	1	U	1	1	U	1
53	butyl benzyl phthalate	85-68-7	2	U	2	2	U	2	2	U	2
54	3,3'-dichlorobenzidine	91-94-1	2	U	2	2	U	2	2	U	2
55	benzo (a) anthracene	56-55-3	1	U	1	1	U	1	1	U	1
56	chrysene	218-01-9	1	U	1	1	U	1	1	U	1
57	bis (2-ethylhexyl) phthalate	117-81-7	2	U	2	2	U	2	2	U	2
58	di-n-octyl phthalate	117-84-0	2	U	2	2	U	2	2	U	2
59	benzo (b) fluoranthene	205-99-2	2	U	2	2	U	2	2	U	2
60	benzo (k) fluoranthene	207-08-9	2	U	2	2	U	2	2	U	2
61	benzo (a) pyrene	50-32-8	2	U	2	2	U	2	2	U	2
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2	2	U	2	2	U	2
63	dibenz (a,h) anthracene	53-70-3	2	U	2	2	U	2	2	U	2
64	benzo (ghi) perylene	191-24-2	2	U	2	2	U	2	2	U	2

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	1	U	1	360		10	320	J	40
2	bis (2-chloroethyl) ether	111-44-4	1	U	1	1	U	1	1	U	1
3	2-chlorophenol	95-57-8	1	U	1	1	U	1	1	U	1
4	1,3-dichlorobenzene	541-73-1	1	U	1	1	U	1	1	U	1
5	1,4-dichlorobenzene	106-46-7	1	U	1	1	U	1	1	U	1
6	1,2-dichlorobenzene	95-50-1	1	U	1	1	U	1	1	U	1
7	2-methylphenol	95-48-7	2	U	2	1,200		20	1,300		80
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2	2	U	2	2	U	2
9	4-methylphenol	106-44-5	2	U	2	2,000		160	1,800		80
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2	2	U	2	2	U	2
11	hexachloroethane	67-72-1	2	U	2	2	U	2	2	U	2
12	nitrobenzene	98-95-3	1	U	1	1	U	1	1	UJ	1
13	isophorone	78-59-1	1	U	1	1	U	1	1	UJ	1
14	2-nitrophenol	88-75-5	2	U	2	2	U	2	2	UJ	2
15	2,4-dimethylphenol	105-67-9	1	U	1	5,200		80	4,500	J	40
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1	1	U	1	1	UJ	1
17	2,4-dichlorophenol	120-83-2	2	U	2	2	U	2	2	UJ	2
18	1,2,4-trichlorobenzene	120-82-1	1	U	1	1	U	1	1	UJ	1
19	naphthalene	91-20-3	1	U	1	11,000		80	5,800	J	40
20	4-chloroaniline	106-47-8	2	UJ	2	2	UJ	2	2	UJ	2
21	hexachlorobutadiene	87-68-3	1	U	1	1	U	1	1	UJ	1
22	4-chloro-3-methylphenol	59-50-7	2	U	2	2	U	2	2	UJ	2

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1	990		10	1,100	J	40
24	hexachlorocyclopentadiene	77-47-4	3	U	3	3	U	3	3	U	3
25	2,4,6-trichlorophenol	88-06-2	1	U	1	1	U	1	1	U	1
26	2,4,5-trichlorophenol	95-95-4	1	U	1	1	U	1	1	U	1
27	2-chloronaphthalene	91-58-7	1	U	1	1	U	1	1	U	1
28	2-nitroaniline	88-74-4	1	U	1	1	U	1	1	U	1
29	dimethyl phthalate	131-11-3	3	U	3	3	U	3	3	U	3
30	2,6-dinitrotoluene	606-20-2	1	U	1	1	U	1	1	U	1
31	acenaphthylene	208-96-8	1	U	1	20		1	19		1
32	3-nitroaniline	99-09-2	1	U	1	1	U	1	1	U	1
33	acenaphthene	83-32-9	1	U	1	310		10	300	J	40
34	2,4-dinitrophenol	51-28-5	5	U	5	5	U	5	5	U	5
35	4-nitrophenol	100-02-7	5	U	5	5	U	5	5	U	5
36	dibenzofuran	132-64-9	1	U	1	150		1	150		1
37	2,4-dinitrotoluene	121-14-2	2	U	2	2	U	2	2	U	2
38	diethyl phthalate	84-66-2	2	U	2	2	U	2	2	U	2
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2	2	U	2	2	U	2
40	fluorene	86-73-7	1	U	1	140		1	140		1
41	4-nitroaniline	100-01-6	2	U	2	2	U	2	2	U	2
42	4,6-dinitro-2-methylphenol	534-52-1	5	R	5	5	R	5	5	R	5
43	N-nitrosodiphenylamine	86-30-6	2	U	2	2	U	2	2	U	2
44	4-bromophenyl phenyl ether	101-55-3	2	U	2	2	U	2	2	U	2

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1	1	U	1	1	U	1
46	pentachlorophenol	87-86-5	1	U	1	1	U	1	1	U	1
47	phenanthrene	85-01-8	1	U	1	120		1	130		1
48	anthracene	120-12-7	1	U	1	17		1	20		1
49	carbazole	86-74-8	1	U	1	390		10	380	J	40
50	di-n-butyl phthalate	84-74-2	1	U	1	1	U	1	1	U	1
51	fluoranthene	206-44-0	1	U	1	20		1	34		1
52	pyrene	129-00-0	1	U	1	14		1	23		1
53	butyl benzyl phthalate	85-68-7	2	U	2	2	U	2	2	U	2
54	3,3'-dichlorobenzidine	91-94-1	2	U	2	2	U	2	2	U	2
55	benzo (a) anthracene	56-55-3	1	U	1	4	J	1	7	J	1
56	chrysene	218-01-9	1	U	1	4	J	1	7	J	1
57	bis (2-ethylhexyl) phthalate	117-81-7	2	U	2	4	J	2	7	J	2
58	di-n-octyl phthalate	117-84-0	2	U	2	2	U	2	2	U	2
59	benzo (b) fluoranthene	205-99-2	2	U	2	3	J	2	5	J	2
60	benzo (k) fluoranthene	207-08-9	2	U	2	2	U	2	2	U	2
61	benzo (a) pyrene	50-32-8	2	U	2	2	U	2	3	J	2
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2	2	U	2	2	U	2
63	dibenz (a,h) anthracene	53-70-3	2	U	2	2	U	2	2	U	2
64	benzo (ghi) perylene	191-24-2	2	U	2	2	U	2	2	U	2

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl		
			2677539			2677540		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	1	U	1	1	U	1
2	bis (2-chloroethyl) ether	111-44-4	1	U	1	1	U	1
3	2-chlorophenol	95-57-8	1	U	1	1	U	1
4	1,3-dichlorobenzene	541-73-1	1	U	1	1	U	1
5	1,4-dichlorobenzene	106-46-7	1	U	1	1	U	1
6	1,2-dichlorobenzene	95-50-1	1	U	1	1	U	1
7	2-methylphenol	95-48-7	2	U	2	2	U	2
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2	2	U	2
9	4-methylphenol	106-44-5	2	U	2	2	U	2
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2	2	U	2
11	hexachloroethane	67-72-1	2	U	2	2	U	2
12	nitrobenzene	98-95-3	1	U	1	1	U	1
13	isophorone	78-59-1	1	U	1	1	U	1
14	2-nitrophenol	88-75-5	2	U	2	2	U	2
15	2,4-dimethylphenol	105-67-9	1	U	1	1	U	1
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1	1	U	1
17	2,4-dichlorophenol	120-83-2	2	U	2	2	U	2
18	1,2,4-trichlorobenzene	120-82-1	1	U	1	1	U	1
19	naphthalene	91-20-3	18		1	1	U	1
20	4-chloroaniline	106-47-8	2	U	2	2	U	2
21	hexachlorobutadiene	87-68-3	1	U	1	1	U	1
22	4-chloro-3-methylphenol	59-50-7	2	U	2	2	U	2

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl		
			2677539			2677540		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1	1	U	1
24	hexachlorocyclopentadiene	77-47-4	3	U	3	3	U	3
25	2,4,6-trichlorophenol	88-06-2	1	U	1	1	U	1
26	2,4,5-trichlorophenol	95-95-4	1	U	1	1	U	1
27	2-chloronaphthalene	91-58-7	1	U	1	1	U	1
28	2-nitroaniline	88-74-4	1	U	1	1	U	1
29	dimethyl phthalate	131-11-3	3	U	3	3	U	3
30	2,6-dinitrotoluene	606-20-2	1	U	1	1	U	1
31	acenaphthylene	208-96-8	1	U	1	1	U	1
32	3-nitroaniline	99-09-2	1	U	1	1	U	1
33	acenaphthene	83-32-9	1	U	1	1	U	1
34	2,4-dinitrophenol	51-28-5	5	U	5	5	U	5
35	4-nitrophenol	100-02-7	5	U	5	5	U	5
36	dibenzofuran	132-64-9	4	J	1	1	U	1
37	2,4-dinitrotoluene	121-14-2	2	U	2	2	U	2
38	diethyl phthalate	84-66-2	2	U	2	2	U	2
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2	2	U	2
40	fluorene	86-73-7	1	U	1	1	U	1
41	4-nitroaniline	100-01-6	2	U	2	2	U	2
42	4,6-dinitro-2-methylphenol	534-52-1	5	R	5	5	R	5
43	N-nitrosodiphenylamine	86-30-6	2	U	2	2	U	2
44	4-bromophenyl phenyl ether	101-55-3	2	U	2	2	U	2

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl		
			2677539			2677540		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1	1	U	1
46	pentachlorophenol	87-86-5	1	U	1	1	U	1
47	phenanthrene	85-01-8	1	U	1	1	U	1
48	anthracene	120-12-7	1	U	1	1	U	1
49	carbazole	86-74-8	1	U	1	1	U	1
50	di-n-butyl phthalate	84-74-2	1	U	1	1	U	1
51	fluoranthene	206-44-0	1	U	1	1	U	1
52	pyrene	129-00-0	1	U	1	1	U	1
53	butyl benzyl phthalate	85-68-7	2	U	2	2	U	2
54	3,3'-dichlorobenzidine	91-94-1	2	U	2	2	U	2
55	benzo (a) anthracene	56-55-3	1	U	1	1	U	1
56	chrysene	218-01-9	1	U	1	1	U	1
57	bis (2-ethylhexyl) phthalate	117-81-7	19		2	2	U	2
58	di-n-octyl phthalate	117-84-0	2	U	2	2	U	2
59	benzo (b) fluoranthene	205-99-2	2	U	2	2	U	2
60	benzo (k) fluoranthene	207-08-9	2	U	2	2	U	2
61	benzo (a) pyrene	50-32-8	2	U	2	2	U	2
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2	2	U	2
63	dibenz (a,h) anthracene	53-70-3	2	U	2	2	U	2
64	benzo (ghi) perylene	191-24-2	2	U	2	2	U	2

Kerr McGee Corp, Final

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8081			SW-846 8081			SW-846 8081		
			WATER			WATER			WATER		
			PEST			PEST			PEST		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	Alpha BHC	319-84-6	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
2	Beta BHC	319-85-7	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
3	Delta BHC	319-86-8	0.003	UJ	0.003	0.003	UJ	0.003	0.003	UJ	0.003
4	Gamma BHC - Lindane	58-89-9	0.002	J	0.001	0.001	UJ	0.001	0.001	UJ	0.001
5	Heptachlor	76-44-8	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
6	Aldrin	309-00-2	0.006	UJ	0.006	0.006	UJ	0.006	0.006	UJ	0.006
7	Heptachlor Epoxide	1024-57-3	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
8	Endosulfan I	959-98-8	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
9	Dieldrin	60-57-1	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
10	DDE	72-55-9	0.002	J	0.001	0.001	UJ	0.001	0.001	UJ	0.001
11	Endrin	72-20-8	0.007	UJ	0.007	0.007	UJ	0.007	0.007	UJ	0.007
12	Endosulfan II	33213-65-9	0.005	UJ	0.005	0.005	UJ	0.005	0.005	UJ	0.005
13	DDD	72-54-8	0.005	UJ	0.005	0.005	UJ	0.005	0.005	UJ	0.005
14	Endosulfan Sulfate	1031-07-8	0.003	UJ	0.003	0.003	UJ	0.003	0.003	UJ	0.003
15	DDT	50-29-3	0.009	UJ	0.009	0.009	UJ	0.009	0.009	UJ	0.009
16	Methoxychlor	72-43-5	0.02	UJ	0.02	0.02	UJ	0.02	0.02	UJ	0.02
17	Endrin Ketone	53494-70-5	0.004	UJ	0.004	0.004	UJ	0.004	0.004	UJ	0.004
18	Endrin Aldehyde	7421-93-4	0.005	UJ	0.005	0.005	UJ	0.005	0.005	UJ	0.005
19	Alpha Chlordane	5103-71-9	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
20	Gamma Chlordane	5103-74-2	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
21	Toxaphene	8001-35-2	0.4	UJ	0.4	0.4	UJ	0.4	0.4	UJ	0.4
22	PCB-1016	12674-11-2	0.04	UJ	0.04	0.04	UJ	0.04	0.04	UJ	0.04

			HMS02								
			MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Sample		
			2677536			2677529			2677530		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8081			SW-846 8081			SW-846 8081		
			WATER			WATER			WATER		
			PEST			PEST			PEST		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	PCB-1221	11104-28-2	0.1	UJ	0.1	0.1	UJ	0.1	0.1	UJ	0.1
24	PCB-1232	11141-16-5	0.05	UJ	0.05	0.05	UJ	0.05	0.05	UJ	0.05
25	PCB-1242	53469-21-9	0.1	UJ	0.1	0.1	UJ	0.1	0.1	UJ	0.1
26	PCB-1248	12672-29-6	0.04	UJ	0.04	0.04	UJ	0.04	0.04	UJ	0.04
27	PCB-1254	11097-69-1	0.1	UJ	0.1	0.1	UJ	0.1	0.1	UJ	0.1
28	PCB-1260	11096-82-5	0.04	UJ	0.04	0.04	UJ	0.04	0.04	UJ	0.04

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8081			SW-846 8081			SW-846 8081		
			WATER			WATER			WATER		
			PEST			PEST			PEST		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	Alpha BHC	319-84-6	0.001	UJ	0.001	0.001	UJ	0.001	0.03	UJ	0.03
2	Beta BHC	319-85-7	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
3	Delta BHC	319-86-8	0.003	UJ	0.003	0.003	UJ	0.003	0.004	UJ	0.004
4	Gamma BHC - Lindane	58-89-9	0.002	J	0.001	0.001	UJ	0.001	0.001	UJ	0.001
5	Heptachlor	76-44-8	0.002	UJ	0.002	0.002	UJ	0.002	0.002	UJ	0.002
6	Aldrin	309-00-2	0.006	UJ	0.006	0.006	UJ	0.006	0.008	UJ	0.008
7	Heptachlor Epoxide	1024-57-3	0.002	J	0.001	0.001	UJ	0.001	0.001	UJ	0.001
8	Endosulfan I	959-98-8	0.002	UJ	0.002	0.002	UJ	0.002	0.003	UJ	0.003
9	Dieldrin	60-57-1	0.001	UJ	0.001	0.02	UJ	0.02	0.001	UJ	0.001
10	DDE	72-55-9	0.001	UJ	0.001	0.02	J	0.001	0.003	UJ	0.003
11	Endrin	72-20-8	0.007	UJ	0.007	0.007	UJ	0.007	0.04	J	0.009
12	Endosulfan II	33213-65-9	0.005	UJ	0.005	0.009	J	0.005	0.006	UJ	0.006
13	DDD	72-54-8	0.005	UJ	0.005	0.005	UJ	0.005	0.006	UJ	0.006
14	Endosulfan Sulfate	1031-07-8	0.003	UJ	0.003	0.024	J	0.003	0.004	UJ	0.004
15	DDT	50-29-3	0.009	UJ	0.009	0.01	J	0.009	0.01	UJ	0.01
16	Methoxychlor	72-43-5	0.02	UJ	0.02	0.02	UJ	0.02	0.02	UJ	0.02
17	Endrin Ketone	53494-70-5	0.004	UJ	0.004	0.004	UJ	0.004	0.005	UJ	0.005
18	Endrin Aldehyde	7421-93-4	0.005	UJ	0.005	0.024	J	0.005	0.006	UJ	0.006
19	Alpha Chlordane	5103-71-9	0.001	UJ	0.001	0.001	UJ	0.001	0.001	UJ	0.001
20	Gamma Chlordane	5103-74-2	0.001	UJ	0.001	0.001	UJ	0.001	0.002	UJ	0.002
21	Toxaphene	8001-35-2	0.4	UJ	0.4	0.4	UJ	0.4	0.5	UJ	0.5
22	PCB-1016	12674-11-2	0.04	UJ	0.04	0.04	UJ	0.04	0.05	UJ	0.05

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2677434
Collected: 3/13/97 at 16:45 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-02 SDG#: HMS01-01RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	
4678	TCL Semivolatiles				See Page 2
4679	TCL Semivolatiles cont'd				See Page 3

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:33:04 D 0002 14 129915 556869
412 0.00 00029700 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles

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2425 New Holland Pike
PO Box 12425
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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2677434
Collected: 3/13/97 at 16:45 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-02 SDG#: HMS01-01RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	1.	ug/l
3858	acenaphthylene	N.D.	3.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2677434
Collected: 3/13/97 at 16:45 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-02 SDG#: HMS01-01RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

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Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS

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Lancaster Laboratories
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LLI Sample No. WW 2677434
Collected: 3/13/97 at 16:45 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-02 SDG#: HMS01-01RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

MEMBER ACIL
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PO Box 12425
Lancaster, PA 17605-2425
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&&&

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2677434
Collected: 03/13/97 at 16:45 by DA

Submitted: 03/14/97

RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-02 SDG#: HMS01-01RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 2316	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 2316	Deb Gifford

Lancaster Laboratories
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LLI Sample No. 2677434
RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

	Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4678 TCL SW846 Semivolatiles/Waters			Batch: 97076WAE026									
3918 phenol	1.	ug/l	N.D.		43	41	3	43			5	112
3867 bis (2-chloroethyl) ether	1.	ug/l	N.D.		88	90	3	89			12	158
3874 2-chlorophenol	1.	ug/l	N.D.		88	90	3	88			23	134
3883 1,3-dichlorobenzene	1.	ug/l	N.D.		84	92	9	70			1	172
3884 1,4-dichlorobenzene	1.	ug/l	N.D.		86	89	3	74			20	124
3882 1,2-dichlorobenzene	1.	ug/l	N.D.		86	89	4	77			32	129
4680 2-methylphenol	2.	ug/l	N.D.		78	80	3	80			46	123
4681 2,2'oxybis (1-chloropropane)	2.	ug/l	N.D.		69	72	5	71			36	166
82 4-methylphenol	2.	ug/l	N.D.		76	78	3	77			5	152
915 N-nitrosodi-n-propylamine	2.	ug/l	N.D.		94	100	6	99			1	230
3902 hexachloroethane	2.	ug/l	N.D.		76	80	5	54			40	113
3910 nitrobenzene	1.	ug/l	N.D.		96	98	2	97			35	180
3904 isophorone	1.	ug/l	N.D.		94	93	0	94			21	196
3911 2-nitrophenol	2.	ug/l	N.D.		91	94	3	90			29	182
3890 2,4-dimethylphenol	1.	ug/l	N.D.		75	71	5	78			32	119
3866 bis (2-chloroethoxy) methane	1.	ug/l	N.D.		88	90	2	88			33	184
3886 2,4-dichlorophenol	2.	ug/l	N.D.		85	85	1	83			39	135
3921 1,2,4-trichlorobenzene	1.	ug/l	N.D.		83	83	1	72			44	142
3906 naphthalene	1.	ug/l	N.D.		84	86	2	81			21	133
3871 4-chloroaniline	2.	ug/l	N.D.		47	55	16	43			17	116
3900 hexachlorobutadiene	1.	ug/l	N.D.		83	85	3	52			24	116
3872 4-chloro-3-methylphenol	2.	ug/l	N.D.		88	91	4	87			22	147
3905 2-methylnaphthalene	1.	ug/l	N.D.		86	87	1	80			28	123

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See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 2677434
RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

	Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
3901	hexachlorocyclopentadiene											
	3.	ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol											
	1.	ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol											
	1.	ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene											
	1.	ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline											
	1.	ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate											
	3.	ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene											
	1.	ug/l	N.D.		88	90	2	86			33	145
4679	TCL SW846 Semivolatiles/Waters		Batch: 97076WAE026									
3908	3-nitroaniline											
	1.	ug/l	N.D.		61	67	9	57			7	143
57	acenaphthene											
	1.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol											
	5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol											
	5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran											
	1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene											
	2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene											
	1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate											
	2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether											
	2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene											
	1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline											
	2.	ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol											
	5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine											
	2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether											
	2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene											
	1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol											
	1.	ug/l	N.D.		86	85	2	89			14	176

QUALITY CONTROL REPORT

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 2677434
RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

	Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3917	phenanthrene											
	1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene											
	1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole											
	1.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate											
	1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene											
	1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene											
	1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate											
	2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine											
	2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene											
	1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate											
	2.	ug/l	N.D.		93	96	2	90			8	158
3876	chrysene											
	1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate											
	2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene											
	2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene											
	2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene											
	2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene											
	2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene											
	2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene											
	2.	ug/l	N.D.		88	89	1	89			1	219

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LLI Sample No. 2677434
RB-2 Rinseate Blank Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
4678 TCL SW846 Semivolatiles/Waters	2-Flphenol	58	21	100
	Phenol-d6	39	10	94
	2,4,6-TBP	79	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	83	35	114
	2-Fbiphnyl	81	43	116
	Tphenyld14	86	33	141

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LLI Sample No. SW 2677435
Collected: 3/13/97 at 13:20 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-11 SDG#: HMS01-02

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles			See Page 2		
4689	TCL Semivolatiles cont'd			See Page 3		
0111	Moisture	16.2	0.080	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:34:32 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles

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CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	80.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	80.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	80.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	80.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	67.	ug/kg	N.D.	80.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	80.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	80.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	80.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	80.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

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LLI Sample No. SW 2677435
Collected: 3/13/97 at 13:20 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-11 SDG#: HMS01-02

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil								
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.		80.
1191	acenaphthene	N.D.		33.	ug/kg	N.D.		40.
3750	2,4-dinitrophenol	N.D.		170.	ug/kg	N.D.		200.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.		200.
4698	dibenzofuran	N.D.		33.	ug/kg	N.D.		40.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.		80.
4699	2,6-dinitrotoluene	N.D.		67.	ug/kg	N.D.		80.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.		80.
3769	4-chlorophenyl phenyl ether	N.D.		67.	ug/kg	N.D.		80.
3768	fluorene	N.D.		33.	ug/kg	N.D.		40.
4700	4-nitroaniline	N.D.		100.	ug/kg	N.D.		120.
4701	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.		200.
3772	N-nitrosodiphenylamine	N.D.		67.	ug/kg	N.D.		80.
3773	4-bromophenyl phenyl ether	N.D.		100.	ug/kg	N.D.		120.
3774	hexachlorobenzene	N.D.		100.	ug/kg	N.D.		120.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.		200.
3775	phenanthrene	N.D.		33.	ug/kg	N.D.		40.
3776	anthracene	N.D.		33.	ug/kg	N.D.		40.
4702	carbazole	N.D.		33.	ug/kg	N.D.		40.
3777	di-n-butyl phthalate	N.D.		33.	ug/kg	N.D.		40.
3778	fluoranthene	120.	J	33.	ug/kg	140.	J	40.
1195	pyrene	160.	J	67.	ug/kg	200.	J	80.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.		80.
3783	3,3'-dichlorobenzidine	N.D.		130.	ug/kg	N.D.		160.
3781	benzo (a) anthracene	67.	J	33.	ug/kg	80.	J	40.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.		80.
3782	chrysene	110.	J	33.	ug/kg	130.	J	40.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.		80.
3786	benzo (b) fluoranthene	180.	J	67.	ug/kg	220.	J	80.
3787	benzo (k) fluoranthene	N.D.		130.	ug/kg	N.D.		160.
3788	benzo (a) pyrene	84.	J	67.	ug/kg	100.	J	80.
3789	indeno (1,2,3-cd) pyrene	N.D.		67.	ug/kg	N.D.		80.
3790	dibenz (a,h) anthracene	N.D.		67.	ug/kg	N.D.		80.
3791	benzo (ghi) perylene	N.D.		67.	ug/kg	N.D.		80.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

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LLI Sample No. SW 2677435
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SS-11 0-12" Composite Soil Sample

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SS-11 SDG#: HMS01-02

Account No: 07802
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CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

			MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
			2677535			2677538			2677537		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A			A		
			SW-846 8081			SW-846 8081			SW-846 8081		
			WATER			WATER			WATER		
			PEST			PEST			PEST		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	PCB-1221	11104-28-2	0.1	UJ	0.1	0.6	UJ	0.6	0.8	UJ	0.8
24	PCB-1232	11141-16-5	0.05	UJ	0.05	0.05	UJ	0.05	0.06	UJ	0.06
25	PCB-1242	53469-21-9	0.1	UJ	0.1	0.1	UJ	0.1	0.1	UJ	0.1
26	PCB-1248	12672-29-6	0.04	UJ	0.04	0.04	UJ	0.04	0.05	UJ	0.05
27	PCB-1254	11097-69-1	0.1	UJ	0.1	0.1	UJ	0.1	0.2	UJ	0.2
28	PCB-1260	11096-82-5	0.04	UJ	0.04	0.04	UJ	0.04	0.05	UJ	0.05

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl		
			2677539			2677540		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A		
			SW-846 8081			SW-846 8081		
			WATER			WATER		
			PEST			PEST		
			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit
1	Alpha BHC	319-84-6	0.001	U	0.001	0.001	U	0.001
2	Beta BHC	319-85-7	0.001	U	0.001	0.001	U	0.001
3	Delta BHC	319-86-8	0.003	U	0.003	0.003	U	0.003
4	Gamma BHC - Lindane	58-89-9	0.001	U	0.001	0.001	U	0.001
5	Heptachlor	76-44-8	0.002	U	0.002	0.002	U	0.002
6	Aldrin	309-00-2	0.006	U	0.006	0.006	U	0.006
7	Heptachlor Epoxide	1024-57-3	0.001	U	0.001	0.001	U	0.001
8	Endosulfan I	959-98-8	0.002	U	0.002	0.002	U	0.002
9	Dieldrin	60-57-1	0.001	U	0.001	0.001	U	0.001
10	DDE	72-55-9	0.001	U	0.001	0.001	U	0.001
11	Endrin	72-20-8	0.007	U	0.007	0.007	U	0.007
12	Endosulfan II	33213-65-9	0.005	U	0.005	0.005	U	0.005
13	DDD	72-54-8	0.005	U	0.005	0.005	U	0.005
14	Endosulfan Sulfate	1031-07-8	0.003	U	0.003	0.003	U	0.003
15	DDT	50-29-3	0.009	U	0.009	0.009	U	0.009
16	Methoxychlor	72-43-5	0.02	U	0.02	0.02	U	0.02
17	Endrin Ketone	53494-70-5	0.004	U	0.004	0.004	U	0.004
18	Endrin Aldehyde	7421-93-4	0.005	U	0.005	0.005	U	0.005
19	Alpha Chlordane	5103-71-9	0.001	U	0.001	0.001	U	0.001
20	Gamma Chlordane	5103-74-2	0.001	U	0.001	0.001	U	0.001
21	Toxaphene	8001-35-2	0.4	U	0.4	0.4	U	0.4
22	PCB-1016	12674-11-2	0.04	U	0.04	0.04	U	0.04

			MW-4 Water Sample			RB-1 Rinseate Blank Water Sampl		
			2677539			2677540		
			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
			A			A		
			SW-846 8081			SW-846 8081		
			WATER			WATER		
			PEST			PEST		
			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit
23	PCB-1221	11104-28-2	0.1	U	0.1	0.1	U	0.1
24	PCB-1232	11141-16-5	0.05	U	0.05	0.05	U	0.05
25	PCB-1242	53469-21-9	0.1	U	0.1	0.1	U	0.1
26	PCB-1248	12672-29-6	0.04	U	0.04	0.04	U	0.04
27	PCB-1254	11097-69-1	0.1	U	0.1	0.1	U	0.1
28	PCB-1260	11096-82-5	0.04	U	0.04	0.04	U	0.04

Kerr McGee Corp, Final

				HMS02								
				MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Samp		
				2677536			2677529			2677530		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A			A		
				WATER			WATER			WATER		
				MET			MET			MET		
				MG/L			MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	Aluminum	7429-90-5	SW-846 60	9.03		0.057	11.1		0.057	16.6		0.057
2	Antimony	7440-36-0	SW-846 60	0.015	R	0.015	0.015	R	0.015	0.015	R	0.015
3	Arsenic TR	7440-38-2	SW-846 60	0.047		0.0027	0.067		0.0027	0.012		0.0027
4	Barium	7440-39-3	SW-846 60	0.27		0.0022	0.25		0.0022	0.49		0.0022
5	Beryllium	7440-41-7	SW-846 60	0.0017	J	0.0013	0.0043	J	0.0013	0.0042	J	0.0013
6	Cadmium	7440-43-9	SW-846 60	0.0027	U	0.0027	0.0027	U	0.0027	0.0027	U	0.0027
7	Calcium	7440-70-2	SW-846 60	12.7	J	0.03	17.7	J	0.03	42.6	J	0.03
8	Chromium	7440-47-3	SW-846 60	0.042		0.0043	0.028	J	0.0043	0.0185	J	0.0043
9	Cobalt	7440-48-4	SW-846 60	0.0121	J	0.0055	0.0132	J	0.0055	0.0156	J	0.0055
10	Copper	7440-50-8	SW-846 60	0.0117	U*	0.0038	0.0184	U*	0.0038	0.0218	U*	0.0038
11	Iron	7439-89-6	SW-846 60	13.2	J	0.0059	26.3	J	0.0059	21.9	J	0.0059
12	Lead TR	7439-92-1	SW-846 60	0.0168	U*	0.002	0.0207		0.002	0.0262		0.002
13	Magnesium	7439-95-4	SW-846 60	4.18		0.024	4.67		0.024	20.6		0.024
14	Manganese	7439-96-5	SW-846 60	0.343	J	0.0029	0.5	J	0.0029	1.22	J	0.0029
15	Mercury	7439-97-6	SW-846 74	0.00023		0.00004	0.00019	U*	0.00004	0.00012	U*	0.00004
16	Nickel	7440-02-0	SW-846 60	0.0124	J	0.0054	0.0163	J	0.0054	0.0305	J	0.0054
17	Potassium	7440-09-7	SW-846 60	2.21	J	0.15	2.92	J	0.15	5.67	J	0.15
18	Selenium TR	7782-49-2	SW-846 60	0.0044	J	0.0027	0.0027	U	0.0027	0.0027	U	0.0027
19	Silver	7440-22-4	SW-846 60	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036
20	Sodium	7440-23-5	SW-846 60	15.5	J	0.2	19.5	J	0.2	53.4	J	1
21	Thallium TR	7440-28-0	SW-846 60	0.0045	U	0.0045	0.0045	U	0.0045	0.0045	U	0.0045
22	Vanadium	7440-62-2	SW-846 60	0.051		0.007	0.047		0.007	0.048		0.007

Kerr McGee Corp, Final

				HMS02								
				MW-01 Water Sample			MW-03 Water Sample			MW-04 Unspiked Water Samp		
				2677536			2677529			2677530		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A			A		
				WATER			WATER			WATER		
				MET			MET			MET		
				MG/L			MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	Zinc	7440-66-6	SW-846 60	0.075		0.012	0.058	U*	0.012	0.085	U*	0.012
24	Total Cyanide (water)	57-12-5	SW-846 90	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004

				MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
				2677535			2677538			2677537		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A			A		
				WATER			WATER			WATER		
				MET			MET			MET		
				MG/L			MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	Aluminum	7429-90-5	SW-846 60	47.8		0.057	14.8	J	0.057	7.32	J	0.057
2	Antimony	7440-36-0	SW-846 60	0.015	R	0.015	0.015	R	0.015	0.015	R	0.015
3	Arsenic TR	7440-38-2	SW-846 60	0.057		0.0027	0.07		0.0027	0.068		0.0027
4	Barium	7440-39-3	SW-846 60	0.61		0.0022	0.16	J	0.0022	0.11	J	0.0022
5	Beryllium	7440-41-7	SW-846 60	0.0071	J	0.0013	0.0026	J	0.0013	0.0037	J	0.0013
6	Cadmium	7440-43-9	SW-846 60	0.0027	U	0.0027	0.0027	U	0.0027	0.0027	U	0.0027
7	Calcium	7440-70-2	SW-846 60	19.2	J	0.03	3.67	J	0.03	2.84	J	0.03
8	Chromium	7440-47-3	SW-846 60	0.071		0.0043	0.038	J	0.0043	0.0197	J	0.0043
9	Cobalt	7440-48-4	SW-846 60	0.0403	J	0.0055	0.0086	J	0.0055	0.0055	U	0.0055
10	Copper	7440-50-8	SW-846 60	0.047		0.0038	0.0234	U*	0.0038	0.0129	U*	0.0038
11	Iron	7439-89-6	SW-846 60	79.3	J	0.0059	15.3	J	0.0059	9.84	J	0.0059
12	Lead TR	7439-92-1	SW-846 60	0.0669		0.002	0.0225	J	0.002	0.0118	U*	0.002
13	Magnesium	7439-95-4	SW-846 60	10.3		0.024	2.39	J	0.024	1.8	J	0.024
14	Manganese	7439-96-5	SW-846 60	1.09	J	0.0029	0.088	J	0.0029	0.061	J	0.0029
15	Mercury	7439-97-6	SW-846 74	0.00019	U*	0.00004	0.00026		0.00004	0.00017	U*	0.00004
16	Nickel	7440-02-0	SW-846 60	0.0407	J	0.0054	0.0112	J	0.0054	0.0068	J	0.0054
17	Potassium	7440-09-7	SW-846 60	5.64	J	0.15	1.59	J	0.15	1.15	J	0.15
18	Selenium TR	7782-49-2	SW-846 60	0.0027	U	0.0027	0.0027	U	0.0027	0.0027	U	0.0027
19	Silver	7440-22-4	SW-846 60	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036
20	Sodium	7440-23-5	SW-846 60	19.6	J	0.2	14.2	J	0.2	13.7	J	0.2
21	Thallium TR	7440-28-0	SW-846 60	0.0045	U	0.0045	0.0045	U	0.0045	0.0045	U	0.0045
22	Vanadium	7440-62-2	SW-846 60	0.109		0.007	0.063	J	0.007	0.035	J	0.007

				MW-05 Water Sample			MW-23 Water Sample			MW-3 Water Sample		
				2677535			2677538			2677537		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A			A		
				WATER			WATER			WATER		
				MET			MET			MET		
				MG/L			MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	Zinc	7440-66-6	SW-846 60	0.135		0.012	0.093	J	0.012	0.054	U*	0.012
24	Total Cyanide (water)	57-12-5	SW-846 90	0.004	U	0.004	0.004	U	0.004	0.004	U	0.004

				MW-4 Water Sample			RB-1 Rinseate Blank Water S		
				2677539			2677540		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A		
				WATER			WATER		
				MET			MET		
				MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit
1	Aluminum	7429-90-5	SW-846 60	1.77		0.057	0.064	J	0.057
2	Antimony	7440-36-0	SW-846 60	0.015	R	0.015	0.015	R	0.015
3	Arsenic TR	7440-38-2	SW-846 60	0.025		0.0027	0.0027	U	0.0027
4	Barium	7440-39-3	SW-846 60	0.0917	J	0.0022	0.0022	U	0.0022
5	Beryllium	7440-41-7	SW-846 60	0.0013	U	0.0013	0.0013	U	0.0013
6	Cadmium	7440-43-9	SW-846 60	0.0027	U	0.0027	0.0027	U	0.0027
7	Calcium	7440-70-2	SW-846 60	5.85	J	0.03	0.052	J	0.03
8	Chromium	7440-47-3	SW-846 60	0.0043	U	0.0043	0.0043	U	0.0043
9	Cobalt	7440-48-4	SW-846 60	0.0055	U	0.0055	0.0055	U	0.0055
10	Copper	7440-50-8	SW-846 60	0.0038	U	0.0038	0.0052	J	0.0038
11	Iron	7439-89-6	SW-846 60	2.3	J	0.0059	0.0059	U	0.0059
12	Lead TR	7439-92-1	SW-846 60	0.0043	U*	0.002	0.0037	J	0.002
13	Magnesium	7439-95-4	SW-846 60	1.93		0.024	0.024	U	0.024
14	Manganese	7439-96-5	SW-846 60	0.128	J	0.0029	0.0029	UJ	0.0029
15	Mercury	7439-97-6	SW-846 74	0.00005	U*	0.00004	0.00005	J	0.00004
16	Nickel	7440-02-0	SW-846 60	0.0054	U	0.0054	0.0054	U	0.0054
17	Potassium	7440-09-7	SW-846 60	1.73	J	0.15	0.15	UJ	0.15
18	Selenium TR	7782-49-2	SW-846 60	0.0027	U	0.0027	0.0027	U	0.0027
19	Silver	7440-22-4	SW-846 60	0.0036	U	0.0036	0.0036	U	0.0036
20	Sodium	7440-23-5	SW-846 60	7.18	J	0.2	0.2	U	0.2
21	Thallium TR	7440-28-0	SW-846 60	0.011	J	0.0045	0.0045	U	0.0045
22	Vanadium	7440-62-2	SW-846 60	0.007	U	0.007	0.007	U	0.007

				MW-4 Water Sample			RB-1 Rinseate Blank Water S		
				2677539			2677540		
				3/12/1997 12:00:00 AM			3/12/1997 12:00:00 AM		
				A			A		
				WATER			WATER		
				MET			MET		
				MG/L			MG/L		
				Result	Qual	Limit	Result	Qual	Limit
23	Zinc	7440-66-6	SW-846 60	0.031		0.012	0.014	J	0.012
24	Total Cyanide (water)	57-12-5	SW-846 90	0.004	U	0.004	0.004	U	0.004

SECTION 3

ORGANIC DATA SUPPORT DOCUMENTATION

Organic Analyses Support Documentation

Environmental Standards Project Name: Gulf States
Sample Collection Dates: 3-12-97
Job Number: 970405L5
Project Manager: K. Blaine
Laboratory: Lancaster

Reviewed By: K. Blaine
Approved By: [signature]
Completion Date: 5/97

Applicable Sample No's.: ☒ Refer to Table 1 in the Quality Assurance Review

Sample No.	Lab. Control No.
SB6 Hmsd	

Deliverables:
- CLP ☒
- Tier I ☐
- Tier II ☐
- Limited ☐
- Other ____

The following table indicates criteria which were examined, the identified problems, and support documentation attachments.

	Criteria Examined in Detail				Problems Identified				Support Documentation Attachments			
	Check (✓) If Yes or Footnote Letter for Comments Below				Check (✓) If Yes or Footnote Number for Comments Below				Check (✓) If Yes -- or Identify Attachment No.			
	VOA Method 8240	BNA Method 8270	PEST / PCB 8081	Other Method(s)	VOA Method 8240	BNA Method 8270	PEST / PCB 8081	Other Method(s)	VOA Method 8240	BNA Method 8270	PEST / PCB 8081	Other Method(s)
Holding Times	✓	✓	✓						✓	✓	✓	
Blank Analysis Results: Target Compounds	✓	✓	✓						✓	✓	✓	
Blank Analysis Results: TICs												
System Mntr. Cmpds. &/or Surrogate Spike Rslts.	✓	✓	✓			✓	✓		✓	✓	✓	
Matrix Spike / Matrix Spike Duplicate Results	✓	✓	✓						✓	✓	✓	
Blank Spike Results		✓								✓		
Duplicate Analysis Results ☐ Field ☐ Lab												
Qualitative Identification: Target Compounds	✓	✓	✓									
Qualitative Identification: TICs												
DFTPP & BFB Mass Tuning	✓	✓							✓	✓		
GC Instrument Performance												
Initial Calibrations	✓	✓	✓		✓	✓			✓	✓	✓	
Continuing Calibrations	✓	✓	✓		✓	✓			✓	✓	✓	
Quantitation of Results	✓	✓	✓									
DDT / Endrin Breakdown			✓								✓	
Surrogate Retention Time Shifts			✓								✓	
Internal Standards Performance	✓	✓				✓			✓	✓		
Resolution Check Standards			✓									
Analytical Sequence	✓	✓	✓						✓	✓	✓	
Florisil Cartridge Check & GPC Calibration			✓									
GC Column Agreement			✓				✓				✓	
Others:												

Comments: ____

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
V	Aq	EB	LB-1	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

* = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

\+ = Contaminant observed on one column only.

Notes: _____

WATER VOLATILE SURROGATE RECOVERY

2A

Lab Name: LANCASTER LABS SDG No: HMS02

	EPA SAMPLE NO.	S1 (DCA) #	S2 (TOL) #	S3 (BFB) #	OTHER	TOT OUT
01	KMMW3	101	104	108		
02	KMMW4	101	104	110		
03	KMMW4MS	99	106	108		
04	KMMW4MSD	95	102	105		
05	KM-TB	101	105	109		
06	KMMW5	104	107	109		
07	KMMW1	102	103	108		
08	KMW-3	104	104	111		
09	KMW23	101	102	110		
10	KMW-4	102	104	109		
11	RB--1	101	102	108		
12						
13	LAB QC					
14	VBLKK42	100	104	109		
15	VBLKK43	103	106	109		
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

				QC LIMITS
S1	(DCA)	=	1,2-Dichloroethane-d4	76 - 114
S2	(TOL)	=	Toluene-d8	88 - 110
S3	(BFB)	=	4-Bromofluorobenzene	86 - 115

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

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4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMJB2 Lab Sample ID: VBLKK42

Date Analyzed: 03/19/97 Time Analyzed: 15:20

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: HP03973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	KMMW3	2677529	>KMJ22	18:11
02	KMMW4	2677530	>KMJ23	19:29
03	KMMW4MS	2677532	>KMJ24	20:16
04	KMMW4MSD	2677533	>KMJ25	20:54
05	KMMW5	2677535	>KMJ27	22:06
06	KM-TB	2677534	>KMJ28	22:41
07	KMMW1	2677536	>KMJ29	23:38
08	KMW-3	2677537	>KMJ30	00:12
09	KMW23	2677538	>KMJ31	00:59
10				
11				
12				
13				
14				
15				
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25				
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27				
28				
29				
30				

COMMENTS: _____.

_____.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK42

Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK42

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMJB2

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

% Moisture: not dec. _____ Date Analyzed: 03/19/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
74-87-3	Chloromethane		3	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-69-4	Trichlorofluoromethane		2	U
107-02-8	Acrolein		40	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		6	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		2	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		2	U
78-93-3	2-Butanone		3	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		1	U
75-27-4	Bromodichloromethane		1	U
110-75-8	2-Chloroethyl Vinyl Ether		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		2	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		5	U
108-88-3	Toluene		2	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		7	U
108-90-7	Chlorobenzene		1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK42

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK42

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMJB2

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

% Moisture: not dec. _____ Date Analyzed: 03/19/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
100-41-4	Ethylbenzene		2	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		2	U

4A
VOLATILE METHOD BLANK SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKB1 Lab Sample ID: VBLKK43

Date Analyzed: 03/20/97 Time Analyzed: 04:15

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: HP03973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	KMW-4	2677539	>KMK01	05:07
02	RB--1	2677540	>KMK02	05:42
03	RB-4-	2679085	>KMK03	06:17
04	RB-5-	2679086	>KMK04	06:52
05	FB-1-	2679087	>KMK05	07:28
06	TB-2-	2677695	>KMK06	08:28
07				
08				
09				
10				
11				
12				
13				
14				
15				
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28				
29				
30				

COMMENTS: _____.

_____.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
74-87-3	Chloromethane		3	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-69-4	Trichlorofluoromethane		2	U
107-02-8	Acrolein		40	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		6	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		2	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		2	U
78-93-3	2-Butanone		3	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		1	U
75-27-4	Bromodichloromethane		1	U
110-75-8	2-Chloroethyl Vinyl Ether		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		2	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		5	U
108-88-3	Toluene		2	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		7	U
108-90-7	Chlorobenzene		1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
100-41-4	Ethylbenzene		2	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		2	U

QC Limits for Scan #4592 Generated May, 1996

#	Name	MS/MSD	LCS/LCSD
1258	Chloromethane	40-148	23-157
1257	Bromomethane	50-142	48-132
3492	Vinyl Chloride	53-141	56-122
3494	Chloroethane	42-145	47-127
3497	Methylene Chloride	76-128	65-131
3498	Acetone	48-140	53-126
3499	Carbon Disulfide	9-197	8-171
3500	1,1-Dichloroethene	51-159	47-159
3501	1,1-Dichloroethane	79-133	76-128
3503	Chloroform	75-137	79-130
3504	1,2-Dichloroethane	69-139	72-130
0316	2-Butanone	11-191	52-133
3505	1,1,1-Trichloroethane	78-140	88-122
3506	Carbon Tetrachloride	66-152	78-136
3507	Vinyl Acetate	39-150	55-135
3508	Bromodichloromethane	83-125	88-118
3509	1,2-Dichloropropane	82-122	84-118
3516	cis-1,3-Dichloropropene	80-116	81-114
3511	Trichloroethene	28-186	78-122
3512	Dibromochloromethane	77-125	88-114
3513	1,1,2-Trichloroethane	76-126	82-116
3515	Benzene	68-136	71-126
3510	trans-1,3-Dichloroethene	78-119	83-111
3518	Bromoform	64-131	79-115
3521	4-Methyl-2-pentanone	50-138	60-120
3520	2-Hexanone	42-144	54-124
3522	Tetrachloroethene	60-152	72-140
3523	1,1,2,2-Tetrachloroethane	68-127	70-120
3524	Toluene	78-128	79-121
3525	Chlorobenzene	36-176	84-120
3526	Ethylbenzene	81-133	84-124
3528	Styrene	82-130	85-123
3529	Xylene (total)	77-137	84-124
5780	trans-1,2-Dichloroethene	61-149	55-147
6268	cis-1,2-Dichloroethene	80-130	77-125

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: ^KMJ23
KMMW4 2677530
Method: 4592
Instrument: HP03973

Matrix spike: ^KMJ24
KMMW4MS 2677532
Matrix/Level: WL
Dilution Factor: 1.0

Spike Duplicate: ^KMJ25
KMMW4MSD 2677533
Batch: K970781AA

COMPOUND NAME	SPIKE LEVEL	US CONC UG/L	MS CONC UG/L	MSD CONC UG/L	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
Chloromethane	20.00	0.00	18.21	17.30	91	86	6	1-273	YES
Vinyl Chloride	20.00	0.00	19.70	19.50	98	97	1	1-251	YES
Bromomethane	20.00	0.00	19.75	19.54	99	98	1	1-242	YES
Chloroethane	20.00	0.00	19.74	19.50	99	97	2	14-230	YES
1,1-Dichloroethene	20.00	0.00	19.86	19.10	99	96	3	1-234	YES
Acetone	150.00	0.00	127.80	129.71	85	86	-1	19-150	YES
Carbon Disulfide	150.00	27.15	177.51	168.61	100	94	6	29-183	YES
Methylene Chloride	20.00	0.00	18.96	18.44	95	92	3	1-221	YES
trans-1,2-Dichloroethene	20.00	0.00	19.48	18.72	97	94	3	54-156	YES
1,1-Dichloroethane	20.00	0.00	19.82	19.20	99	96	3	59-155	YES
cis-1,2-Dichloroethene	20.00	0.00	19.97	19.56	100	98	2	54-156	YES
Chloroform	20.00	0.00	19.96	19.18	100	96	4	51-138	YES
1,2-Dichloroethane	20.00	0.00	19.58	19.45	98	97	1	49-155	YES
Vinyl Acetate	100.00	0.00	124.54	121.36	124	121	2	19-190	YES
2-Butanone	150.00	0.00	145.87	140.29	97	94	3	22-167	YES
1,1,1-Trichloroethane	20.00	0.00	21.21	20.53	106	103	3	52-162	YES
Carbon Tetrachloride	20.00	0.00	20.28	19.60	101	98	3	70-140	YES
Benzene	20.00	0.00	20.19	19.76	101	99	2	37-151	YES
Trichloroethene	20.00	0.00	20.53	20.09	103	100	3	71-157	YES
1,2-Dichloropropane	20.00	0.00	18.69	19.08	93	95	-2	1-210	YES
Bromodichloromethane	20.00	0.00	20.16	19.81	101	99	2	35-155	YES
cis-1,3-Dichloropropene	20.00	0.00	19.41	19.39	97	97	0	1-227	YES
trans-1,3-Dichloropropene	20.00	0.00	19.20	19.81	96	99	-3	17-183	YES
1,1,2-Trichloroethane	20.00	0.00	20.47	20.83	102	104	-2	52-150	YES
Dibromochloromethane	20.00	0.00	20.69	20.64	103	103	0	53-149	YES
Bromoform	20.00	0.00	19.58	19.89	98	99	-1	45-169	YES
4-Methyl-2-Pentanone	100.00	0.00	84.88	83.81	85	84	1	50-124	YES
Toluene	20.00	0.00	21.19	20.35	106	102	4	47-150	YES
Tetrachloroethene	20.00	0.00	21.23	20.35	106	102	4	64-148	YES
2-Hexanone	100.00	0.00	93.42	90.75	93	91	2	52-140	YES
Chlorobenzene	20.00	0.00	21.27	20.50	106	102	4	37-160	YES
Ethylbenzene	20.00	0.00	21.14	20.24	106	101	5	37-162	YES
Xylene (total)	60.00	0.00	64.48	61.63	107	103	4	61-165	YES
Styrene	20.00	0.00	21.47	20.80	107	104	3	74-136	YES
1,1,2,2-Tetrachloroethane	20.00	0.00	19.14	19.00	96	95	1	46-157	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

* The %RPD for this compound exceeds requirements.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMIT4 BFB Injection Date: 03/18/97

Instrument ID: HP03973 BFB Injection Time: 12:52

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.9
75	30.0 - 60.0% of mass 95	46.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	60.6
175	5.0 - 9.0% of mass 174	4.6 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	59.0 (97.2)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)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
01	VSTD004	004 PPB IC	>KMII1	03/18/97	13:17
02	VSTD020	020 PPB IC	>KMII2	03/18/97	13:54
03	VSTD050	050 PPB IC	>KMII3	03/18/97	14:31
04	VSTD100	100 PPB IC	>KMII4	03/18/97	15:07
05	VSTD300	300 PPB IC	>KMII5	03/18/97	15:44
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE ORGANICS INITIAL CALIBRATION DATA

.ame: LANCASTER LABS Contract: _____.

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

I trument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

M..rix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

___.

M RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >KMII1 RRF 20= >KMII2
RRF 50= >KMII3 RRF100= >KMII4 RRF300= >KMII5

	COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
	chlorodifluoromethane	1.210	1.299	1.400	1.505	1.520	1.387	9.6	AVG	
	...loromethane	# .958	1.072	1.094	1.125	1.084	1.067	6.0	AVG	#
	Vinyl Chloride	* .997	1.116	1.215	1.266	1.226	1.164	9.3	AVG	*
	omomethane	1.040	1.198	1.200	1.205	1.058	1.140	7.3	AVG	
	loroethane	.696	.762	.801	.836	.784	.776	6.7	AVG	
	richlorofluoromethane	.932	1.017	1.134	1.218	1.268	1.114	12.5	AVG	
	Ethyl Ether	1.044	1.096	1.145	1.139	1.118	1.108	3.7	AVG	
	rolein	.234	.250	.230	.207	.228	.230	6.7	AVG	
	1-Dichloroethene	* 1.253	1.146	1.393	1.408	1.402	1.321	8.8	AVG	*
	113	2.759	2.063	2.479	2.466	2.463	2.446	10.1	AVG	
	...one	.385	.324	.298	.269	.291	.313	14.3	AVG	
	thyl Iodide	2.844	2.788	3.185	3.239	3.216	3.054	7.2	AVG	
	...rbon Disulfide	3.146	2.903	3.543	3.716	3.801	3.422	11.2	AVG	
	2-Propanol	.062	.062	.066	.063	.068	.064	4.0	AVG	
	...lyl Chloride	.853	.824	.847	.893	.893	.862	3.5	AVG	
	thylene Chloride	1.570	1.412	1.528	1.548	1.528	1.517	4.0	AVG	
	t-Butyl Alcohol	.177	.159	.167	.154	.160	.163	5.5	AVG	
	Acrylonitrile	.326	.395	.369	.335	.362	.357	7.7	AVG	
	thyl t-Butyl Ether	4.005	3.855	4.013	3.979	3.782	3.927	2.6	AVG	
	ans-1,2-Dichloroethene	1.388	1.289	1.497	1.528	1.494	1.439	6.9	AVG	
	n-Hexane	1.799	1.607	2.040	1.985	2.049	1.896	10.0	AVG	
	1,1-Dichloroethane	# 2.608	2.468	2.793	2.839	2.790	2.700	5.8	AVG	#
	Propanol	.007	.013	.017	.018	.020	.015	32.4	2NDDEG	← RRF out of control, but not compd. of interest
	Chloro-1,3-Butadiene	1.819	1.770	2.164	2.235	2.210	2.039	11.1	AVG	
	2,2-Dichloropropane	1.487	1.430	1.645	1.641	1.544	1.549	6.1	AVG	
	s-1,2-Dichloroethene	1.457	1.413	1.588	1.621	1.587	1.533	6.0	AVG	
	opionitrile	.146	.120	.141	.143	.150	.140	8.3	AVG	
	ethacrylonitrile	.534	.453	.496	.503	.512	.500	5.9	AVG	
	Tetrahydrofuran	.349	.423	.430	.448	.453	.421	10.0	AVG	
	loroform	* 2.707	2.500	2.801	2.815	2.721	2.709	4.7	AVG	*
	clohexane	2.230	2.023	2.437	2.398	2.359	2.290	7.3	AVG	
	1,1-Dichloropropene	1.927	1.772	2.130	2.114	2.027	1.994	7.4	AVG	
	1,2-Dichloroethane	1.711	1.700	1.816	1.772	1.630	1.726	4.1	AVG	
	nyl Acetate	.018	.035	.053	.055	.060	.044	40.1	2NDDEG	MD, JFD

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

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

I trument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

M rix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF 4= >KMI11 RRF 20= >KMII2
RRF 50= >KMII3 RRF100= >KMII4 RRF300= >KMII5

COMPOUND		RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Butanone		.131	.138	.129	.121	.136	.131	5.1	AVG	
1,1-Trichloroethane		.397	.362	.439	.439	.431	.414	8.2	AVG	
Carbon Tetrachloride		.329	.301	.363	.368	.357	.344	8.2	AVG	
Isobutyl Alcohol		.010	.005	.007	.007	.008	.008	20.7	2NDDEG	←
nzene		.926	.848	.981	.981	.943	.936	5.9	AVG	
Heptane		.234	.214	.267	.265	.271	.250	10.1	AVG	
n-Butanol		.005	.003	.005	.006	.007	.005	23.8	2NDDEG	←
Trichloroethene		.322	.301	.363	.365	.365	.343	8.7	AVG	
2-Dichloropropane	*	.433	.379	.418	.420	.416	.413	4.9	AVG	*
l Methacrylate		.291	.258	.285	.283	.272	.278	4.7	AVG	
romethane		.312	.302	.334	.332	.321	.320	4.3	AVG	
-Dioxane		.003	.003	.003	.003	.003	.003	10.2	AVG	←
Propyl Acetate		.163	.155	.162	.162	.165	.162	2.3	AVG	
Bromodichloromethane		.549	.524	.586	.587	.565	.562	4.7	AVG	
2-Nitropropane		.104	.113	.093	.085	.089	.097	12.1	AVG	
Chloroethyl Vinyl Ether		.257	.297	.282	.254	.270	.272	6.6	AVG	
s-1,3-Dichloropropene		.515	.512	.574	.571	.565	.547	5.7	AVG	
trans-1,3-Dichloropropene		.408	.448	.489	.491	.483	.464	7.8	AVG	
1,1,2-Trichloroethane		.356	.346	.366	.361	.345	.355	2.6	AVG	
bromochloromethane		.464	.474	.513	.511	.485	.489	4.5	AVG	
omoform	#	.334	.331	.367	.366	.344	.348	4.9	AVG	#
trans-1,4-Dichloro-2-Butene		.150	.134	.144	.138	.117	.137	9.2	AVG	
Methyl-2-Pentanone		.762	.654	.622	.574	.597	.642	11.5	AVG	
luene	*	1.184	1.207	1.392	1.405	1.362	1.310	8.1	AVG	*
thyl Methacrylate		.591	.681	.756	.752	.744	.705	10.0	AVG	
Tetrachloroethene		.300	.315	.379	.380	.377	.350	11.3	AVG	
3-Dichloropropane		.672	.702	.752	.733	.676	.707	4.9	AVG	
Hexanone		.260	.338	.378	.344	.374	.339	14.0	AVG	
1,2-Dibromoethane		.546	.594	.652	.644	.619	.611	7.0	AVG	
Chlorobenzene	#	.840	.873	.989	.997	.975	.935	7.8	AVG	#
1,1,2-Tetrachloroethane		.370	.399	.448	.450	.431	.420	8.2	AVG	
hylbenzene	*	.380	.375	.451	.448	.416	.414	8.7	AVG	*
m+p-Xylene		.491	.511	.590	.592	.551	.547	8.4	AVG	
-Xylene		.490	.484	.564	.571	.536	.529	7.7	AVG	

RRFs out of control but not compds of interest

VOLATILE ORGANICS INITIAL CALIBRATION DATA

ne: LANCASTER LABS Contract: _____.

.ab Code: LANCAS Case No.: _____. SAS No. _____. SDG No.: _____.

Ir :rument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

4(·ix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

___.

4in RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

I I FILE ID:	RRF 4= >KMI11		RRF 20= >KMI12					
kRF 50= >KMI13	RRF100= >KMI14		RRF300= >KMI15					
COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Styrene	.760	.892	1.009	1.003	.933	.920	11.1	AVG
›propylbenzene	1.379	1.395	1.626	1.626	1.501	1.505	7.9	AVG
(:lohexanone	.025	.032	.036	.023	.022	.028	22.8	2NDDEG
1,1,2,2-Tetrachloroethane	# .842	.811	.834	.810	.703	.800	7.0	AVG #
P-·mobenzene	.375	.419	.470	.470	.428	.432	9.2	AVG
' ',3-Trichloropropane	.174	.171	.177	.169	.146	.167	7.5	AVG
n. ·ropylbenzene	1.909	1.707	1.990	1.976	1.621	1.841	9.1	AVG
2-Chlorotoluene	.321	.313	.354	.356	.316	.332	6.3	AVG
' ',5-Trimethylbenzene	1.142	1.122	1.299	1.292	1.005	1.172	10.6	AVG
4 ·hlorotoluene	.354	.366	.398	.395	.338	.370	7.0	AVG
utylbenzene	1.308	1.353	1.532	1.520	1.119	1.367	12.4	AVG
·chloroethane	.215	.265	.269	.279	.206	.247	13.7	AVG
1 ',4-Trimethylbenzene	1.061	1.132	1.289	1.266	.927	1.135	13.2	AVG
s :-Butylbenzene	1.400	1.424	1.816	1.794	1.329	1.553	15.0	AVG
1,3-Dichlorobenzene	.546	.597	.715	.703	.562	.624	12.7	AVG
p-'sopropyltoluene	1.179	1.194	1.400	1.371	.926	1.214	15.6	2NDDEG
1 ›-Dichlorobenzene	.800	.809	.871	.884	.660	.805	11.1	AVG
n. Jutylbenzene	1.198	1.217	1.480	1.446	1.000	1.268	15.6	2NDDEG
1,2-Dichlorobenzene	.688	.684	.743	.731	.532	.676	12.5	AVG
' ?-Dibromo-3-Chloropropane	.139	.131	.144	.143	.106	.133	12.1	AVG
' ',4-Trichlorobenzene	.418	.445	.501	.481	.421	.453	8.1	AVG
Hexachlorobutadiene	.187	.180	.218	.200	.183	.194	8.2	AVG
Naphthalene	.980	.964	1.063	.997	.864	.974	7.4	AVG
1 ',3-Trichlorobenzene	.367	.382	.424	.384	.358	.383	6.6	AVG
1,2-Dichloroethane-d4	1.457	1.533	1.567	1.543	1.499	1.520	2.8	AVG
Tc·luene-d8	1.043	1.125	1.236	1.250	1.258	1.182	8.0	AVG
4 ·romofluorobenzene	.552	.623	.679	.685	.629	.634	8.5	AVG

- RRFs out of control, but not compds. of interest

Calibration Report

Supporting Data for 4/24/97

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Files: >KMII1 >KMII2 >KMII3 >KMII4 >KMII5

Comp No.	Compound	RF 4.00	RF 20.00	RF 50.00	RF 100.00	RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
1)	Dichlorodifluoromethane	1.20983	1.29948	1.39979	1.50509	1.52011	1.38686	9.598	.999941	.999943	2.48	2.18	
2)	Freon 114/114a	-	-	-	-	-	-	-	-	-	-	-	(Conc
3)	Chloromethane	.95832	1.07170	1.09391	1.12487	1.08396	1.06655	5.966	.999895	.999986	-.593	1.24	
4)	Vinyl Chloride	.99650	1.11628	1.21518	1.26614	1.22555	1.16393	9.330	.999881	.999968	.338	2.08	
5)	Bromomethane	1.04020	1.19806	1.20017	1.20516	1.05750	1.14022	7.338	.998813	.999978	-5.15	1.49	
6)	Chloroethane	.69579	.76193	.80072	.83645	.78387	.77575	6.747	.999678	.999956	-1.18	1.97	
7)	Dichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	-	
8)	Trichlorofluoromethane	.93225	1.01725	1.13418	1.21845	1.26831	1.11409	12.496	.999888	.999951	3.82	2.37	
9)	n-Pentane	-	-	-	-	-	-	-	-	-	-	-	
10)	Ethyl Ether	1.04387	1.09577	1.14516	1.13901	1.11825	1.10841	3.695	.999966	.999997	-.455	.639	
11)	Furfuran	-	-	-	-	-	-	-	-	-	-	-	
12)	Acrolein	.23422	.24983	.22995	.20708	.22809	.22983	6.668	.999318	.999750	11.32	-33.29	(Conc
13)	1,1-Dichloroethene	1.25279	1.14637	1.39289	1.40846	1.40230	1.32056	8.845	.999925	.999941	1.34	2.09	
14)	Freon 113	2.75856	2.06322	2.47853	2.46648	2.46293	2.44594	10.139	.999921	.999926	.777	1.22	
15)	Freon 113/113a	-	-	-	-	-	-	-	-	-	-	-	(Conc
16)	Acetone	.38516	.32362	.29755	.26867	.29060	.31312	14.306	.999465	.999821	.0684	-8.23	(Conc
17)	Methyl Iodide	2.84375	2.78824	3.18542	3.23860	3.21611	3.05442	7.181	.999956	.999971	1.02	1.72	
18)	Carbon Disulfide	3.14593	2.90264	3.54268	3.71625	3.80137	3.42177	11.234	.999919	.999927	3.11	2.59	
19)	2-Propanol	.06154	.06232	.06577	.06306	.06766	.06407	4.001	.999769	.999948	13.87	-2.59	(Conc
20)	Acetonitrile	-	-	-	-	-	-	-	-	-	-	-	(Conc
21)	Allyl Chloride	.85331	.82391	.84750	.89290	.89276	.86207	3.498	.999964	.999964	1.25	1.19	
22)	3-Chloro-1-Propene	-	-	-	-	-	-	-	-	-	-	-	
23)	Methylene Chloride	1.56966	1.41163	1.52818	1.54775	1.52781	1.51700	4.045	.999967	.999982	.205	.938	
)	t-Butyl Alcohol	.17694	.15894	.16696	.15397	.15969	.16330	5.464	.999821	.999898	-2.33	-13.90	(Conc
)	Acrylonitrile	.32583	.39473	.36887	.33540	.36235	.35743	7.700	.999535	.999781	8.32	-24.59	(Conc
26)	Methyl t-Butyl Ether	4.00474	3.85494	4.01263	3.97914	3.78196	3.92668	2.620	.999823	.999995	-2.01	.571	
27)	trans-1,2-Dichloroethene	1.38754	1.28947	1.49730	1.52806	1.49381	1.43924	6.891	.999899	.999956	.527	1.94	
28)	n-Hexane	1.79914	1.60722	2.04007	1.98475	2.04911	1.89606	10.036	.999888	.999897	2.23	1.65	
29)	Hexane	-	-	-	-	-	-	-	-	-	-	-	
30)	1,1-Dichloroethane	2.60839	2.46759	2.79295	2.83851	2.79023	2.69954	5.809	.999935	.999969	.502	1.61	
31)	di-Isopropyl Ether	-	-	-	-	-	-	-	-	-	-	-	
32)	1-Propanol	.00745	.01333	.01703	.01808	.01975	.01513	32.373	.999901	.999927	111.64	99.74	(Conc
33)	2-Chloro-1,3-Butadiene	1.81860	1.76954	2.16360	2.23485	2.21008	2.03934	11.083	.999902	.999934	1.61	2.65	
34)	2,2-Dichloropropane	1.48705	1.43033	1.64486	1.64101	1.54404	1.54946	6.089	.999658	.999964	-1.50	1.81	
35)	cis-1,2-Dichloroethene	1.45694	1.41272	1.58761	1.62103	1.58691	1.53304	6.004	.999925	.999971	.417	1.70	
36)	Propionitrile	.14579	.12023	.14145	.14275	.15021	.14008	8.281	.999869	.999942	16.42	6.32	(Conc
37)	Ethyl Acetate	-	-	-	-	-	-	-	-	-	-	-	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Cmp No.	Compound	Files: >KMI11 RF 4.00	>KMI12 RF 20.00	>KMI13 RF 50.00	>KMI14 RF 100.00	>KMI15 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
38)	Methyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
39)	Methacrylonitrile	.53357	.45324	.49587	.50340	.51210	.49964	5.910	.999950	.999960	3.31	1.33	(Conc
40)	Tetrahydrofuran	.34881	.42316	.42963	.44840	.45346	.42069	10.010	.999982	.999986	1.68	1.30	
41)	Chloroform	2.70716	2.49993	2.80106	2.81547	2.72133	2.70899	4.658	.999875	.999973	-.507	1.38	
42)	Cyclohexane	2.23020	2.02327	2.43695	2.39796	2.35915	2.28951	7.333	.999888	.999941	.249	1.62	
43)	1,1-Dichloropropene	1.92729	1.77200	2.12962	2.11402	2.02692	1.99397	7.422	.999763	.999944	-.589	1.94	
44)	1,2-Dichloroethane-d4	1.45694	1.53349	1.56744	1.54253	1.49879	1.51984	2.824	.999934	.999998	-1.28	.287	
45)	1,2-Dichloroethane	1.71065	1.69958	1.81570	1.77220	1.62957	1.72554	4.140	.999475	.999989	-3.50	.934	
46)	Vinyl Acetate	.01767	.03453	.05266	.05492	.06047	.04405	40.111	.999678	.999879	7.19	4.82	
47)	2-Butanone	.13141	.13807	.12945	.12083	.13564	.13108	5.081	.999218	.999868	5.57	-5.13	(Conc
48)	1,1,1-Trichloroethane	.39658	.36201	.43915	.43888	.43149	.41362	8.167	.999889	.999941	.599	1.96	
49)	Carbon Tetrachloride	.32885	.30073	.36276	.36814	.35729	.34355	8.248	.999839	.999939	.370	2.23	
50)	Isobutyl Alcohol	.00973	.00545	.00706	.00736	.00809	.00754	20.703	.999115	.999491	59.46	.286	(Conc
51)	Benzene	.92645	.84759	.98147	.98065	.94317	.93587	5.858	.999821	.999960	-.603	1.64	
52)	n-Heptane	.23350	.21408	.26730	.26519	.27133	.25028	10.082	.999923	.999925	2.19	1.90	
53)	Heptane	-	-	-	-	-	-	-	-	-	-	-	
54)	Isopropyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
55)	n-Butyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	(Conc
56)	n-Butanol	.00484	.00350	.00514	.00602	.00680	.00526	23.759	.999519	.999817	128.39	85.59	(Conc
57)	Trichloroethene	.32160	.30149	.36316	.36517	.36482	.34325	8.685	.999938	.999948	1.33	1.94	
58)	Freon 112/112a	-	-	-	-	-	-	-	-	-	-	-	(Conc
59)	1,2-Dichloropropane	.43291	.37880	.41819	.41984	.41563	.41307	4.912	.999965	.999977	.242	.911	
60)	Methyl Methacrylate	.29066	.25769	.28473	.28325	.27211	.27769	4.696	.999853	.999976	-1.14	1.00	
	Dibromomethane	.31165	.30204	.33437	.33235	.32104	.32029	4.282	.999876	.999981	-.796	1.18	
	1,4-Dioxane	.00334	.00281	.00322	.00284	.00262	.00296	10.244	.999326	.999780	-85.36	-14.54	(Conc
63)	Monochloroacetone	-	-	-	-	-	-	-	-	-	-	-	(Conc
64)	n-Propyl Acetate	.16338	.15531	.16243	.16183	.16529	.16165	2.339	.999976	.999995	1.05	.187	
65)	Bromodichloromethane	.54854	.52398	.58593	.58661	.56474	.56196	4.718	.999853	.999976	-.721	1.40	
66)	2-Nitropropane	.10425	.11299	.09299	.08463	.08853	.09668	12.115	.999590	.999722	-3.62	-8.75	(Conc
67)	2-Chloroethyl Vinyl Ether	.25707	.29711	.28217	.25437	.26989	.27212	6.553	.999647	.999777	-.0758	-4.87	(Conc
68)	Epichlorohydrin	-	-	-	-	-	-	-	-	-	-	-	
69)	cis-1,3-Dichloropropene	.51545	.51197	.57382	.57076	.56523	.54745	5.658	.999959	.999979	.342	1.21	
70)	trans-1,3-Dichloropropene	.40799	.44780	.48931	.49146	.48347	.46401	7.750	.999955	.999990	.220	1.36	
71)	1,1,2-Trichloroethane	.35616	.34617	.36613	.36147	.34501	.35499	2.615	.999836	.999993	-1.79	.664	
72)	Dibromochloromethane	.46353	.47375	.51314	.51064	.48492	.48920	4.511	.999781	.999988	-1.56	1.21	
73)	Bromoform	.33432	.33111	.36671	.36646	.34379	.34848	4.928	.999667	.999978	-1.83	1.54	
74)	2,3-Dichloro-1,3-Butadiene	-	-	-	-	-	-	-	-	-	-	-	(Conc

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

$\overline{F}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KMII1 RF 4.00	>KMII2 RF 20.00	>KMII3 RF 50.00	>KMII4 RF 100.00	>KMII5 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
75)	cis-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
76)	trans-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
77)	cis-1,4-Dichloro-2-Butene	-	-	-	-	-	-	-	-	-	-	-	
78)	trans-1,4-Dichloro-2-Butene	.15017	.13368	.14394	.13791	.11691	.13652	9.235	.998228	.999978	-22.71	4.34	(Conc
79)	4-Methyl-2-Pentanone	.76235	.65383	.62218	.57406	.59742	.64197	11.452	.999809	.999905	-1.56	-5.75	(Conc
80)	Toluene-d8	1.04298	1.12539	1.23550	1.25015	1.25825	1.18246	8.006	.999989	.999990	1.29	1.35	
81)	Toluene	1.18380	1.20687	1.39220	1.40511	1.36217	1.31003	8.104	.999866	.999968	.0379	1.93	
82)	Ethyl Methacrylate	.59120	.68066	.75578	.75213	.74418	.70479	10.002	.999959	.999987	.425	1.43	
83)	Tetrachloroethene	.30028	.31476	.37915	.38030	.37720	.35034	11.257	.999925	.999956	1.13	2.16	
84)	1,3-Dichloropropane	.67233	.70201	.75157	.73324	.67586	.70700	4.936	.999489	.999990	-3.31	1.04	
85)	2-Hexanone	.26007	.33771	.37789	.34350	.37401	.33864	14.000	.999588	.999781	5.08	-.375	(Conc
86)	Butyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
87)	1,2-Dibromoethane	.54648	.59432	.65245	.64434	.61880	.61128	7.004	.999836	.999987	-1.08	1.27	
88)	Chlorobenzene	.84028	.87276	.98934	.99696	.97485	.93484	7.792	.999916	.999977	.245	1.71	
89)	1,1,1,2-Tetrachloroethane	.36995	.39882	.44830	.45007	.43121	.41967	8.240	.999813	.999980	-.660	1.78	
90)	Ethylbenzene	.38010	.37500	.45149	.44769	.41590	.41404	8.720	.999464	.999946	-1.77	2.31	
91)	m+p-Xylene	.49073	.51079	.58986	.59231	.55073	.54688	8.370	.999527	.999963	-3.41	4.40	(Conc
92)	Isoamyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
93)	Butyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
94)	o-Xylene	.48976	.48423	.56402	.57116	.53649	.52913	7.679	.999630	.999954	-1.12	2.24	
95)	Styrene	.76020	.89216	1.00945	1.00332	.93271	.91957	11.065	.999524	.999980	-1.94	2.06	
96)	Cumene	-	-	-	-	-	-	-	-	-	-	-	
97)	Isopropylbenzene	1.37914	1.39497	1.62552	1.62622	1.50098	1.50537	7.942	.999433	.999958	-2.05	2.23	
)	Cyclohexanone	.02540	.03219	.03606	.02252	.02174	.02758	22.769	.994087	.995511	-168.44	-32.57	(Conc
)	4-Bromofluorobenzene	.55164	.62312	.67904	.68485	.62950	.63363	8.475	.999447	.999980	-2.42	1.95	
100)	1,1,2,2-Tetrachloroethane	.84221	.81132	.83425	.80989	.70290	.80011	7.017	.998590	.999990	-6.53	.912	
101)	Bromobenzene	.37511	.41901	.46975	.47028	.42830	.43249	9.182	.999290	.999974	-2.75	2.16	
102)	1,2,3-Trichloropropane	.17408	.17079	.17680	.16925	.14556	.16730	7.470	.998341	.999992	-7.19	.899	
103)	n-Propylbenzene	1.90917	1.70666	1.98973	1.97647	1.62067	1.84054	9.080	.996838	.999885	-7.33	3.07	
104)	2-Chlorotoluene	.32111	.31348	.35427	.35575	.31645	.33221	6.320	.998937	.999951	-3.78	2.24	
105)	1,3,5-Trimethylbenzene	1.14214	1.12162	1.29897	1.29219	1.00499	1.17198	10.613	.994713	.999824	-9.43	3.91	
106)	4-Chlorotoluene	.35367	.36649	.39804	.39481	.33778	.37016	7.042	.998161	.999960	-5.96	2.16	
107)	tert-Butylbenzene	1.30817	1.35300	1.53196	1.51995	1.11948	1.36651	12.437	.991864	.999723	-11.94	4.63	
108)	Pentachloroethane	.21521	.26512	.26893	.27924	.20555	.24681	13.706	.992200	.999606	-11.55	4.65	
109)	bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	
110)	1,2,4-Trimethylbenzene	1.06075	1.13208	1.28948	1.26603	.92694	1.13506	13.204	.991401	.999740	-12.37	4.68	
111)	sec-Butylbenzene	1.39971	1.42358	1.81636	1.79374	1.32939	1.55256	15.022	.991733	.999696	-10.62	5.39	

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

$\overline{RF}$ - Average Response Factor

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CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KH111 RF 4.00	>KH112 RF 20.00	>KH113 RF 50.00	>KH114 RF 100.00	>KH115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
112)	1,3-Dichlorobenzene	.54551	.59715	.71493	.70273	.56167	.62440	12.720	.995680	.999884	-8.10	3.82
113)	p-Isopropyltoluene	1.17899	1.19407	1.40006	1.37145	.92574	1.21406	15.635	.985172	.999380	-15.59	6.46
114)	1,4-Dichlorobenzene	.79994	.80883	.87123	.88373	.65992	.80473	11.058	.992939	.999704	-11.32	4.26
115)	1,2,3-Trichlorobutene-3	-	-	-	-	-	-	-	-	-	-	-
116)	Dicyclopentadiene	-	-	-	-	-	-	-	-	-	-	-
117)	Benzyl Chloride	-	-	-	-	-	-	-	-	-	-	-
118)	1,3-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
119)	1,4-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
120)	n-Butylbenzene	1.19842	1.21683	1.47975	1.44606	1.00023	1.26826	15.557	.987031	.999505	-14.24	6.16
121)	1,2-Dichlorobenzene	.68843	.68414	.74341	.73053	.53234	.67577	12.463	.991387	.999733	-13.23	4.27
122)	1,2-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
123)	1,2-Dibromo-3-Chloropropane	.13924	.13145	.14437	.14310	.10552	.13274	12.075	.992146	.999729	-12.45	4.19
124)	1,2,4-Trichlorobenzene	.41826	.44515	.50130	.48135	.42100	.45341	8.125	.998519	.999972	-5.46	1.84
125)	Hexachlorobutadiene	.18694	.17990	.21842	.20035	.18254	.19363	8.230	.999004	.999876	-4.33	1.35
126)	Naphthalene	.98014	.96420	1.06305	.99690	.86412	.97368	7.381	.998328	.999968	-6.76	1.18
127)	1,2,3-Trichlorobenzene	.36724	.38180	.42409	.38374	.35842	.38306	6.583	.999392	.999878	-4.23	.148

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMJT2 BFB Injection Date: 03/19/97

Instrument ID: HP03973 BFB Injection Time: 13:54

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.8
75	30.0 - 60.0% of mass 95	44.1
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	65.9
175	5.0 - 9.0% of mass 174	4.4 (6.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	63.2 (95.8)1
177	5.0 - 9.0% of mass 176	4.1 (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
01	VSTD050	50 PPB CC	>KMJS2	03/19/97	14:26
02	VBLKK42	VBLKK42	>KMJB2	03/19/97	15:20
03	KMMW3	2677529	>KMJ22	03/19/97	18:11
04	KMMW4	2677530	>KMJ23	03/19/97	19:29
05	KMMW4MS	2677532	>KMJ24	03/19/97	20:16
06	KMMW4MSD	2677533	>KMJ25	03/19/97	20:54
07	KMMW5	2677535	>KMJ27	03/19/97	22:06
08	KM-TB	2677534	>KMJ28	03/19/97	22:41
09	KMMW1	2677536	>KMJ29	03/19/97	23:38
10	KMW-3	2677537	>KMJ30	03/20/97	00:12
11	KMW23	2677538	>KMJ31	03/20/97	00:59
12					
13					
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22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Lab Code: LANCAS · Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03973 Calibration Date: 03/19/97 Time: 1426

Lab File ID: >KMJS2 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Chloromethane	#	1.067	.873	40.92	50.0	18.2#	
Vinyl Chloride	*	1.164	.955	41.01	50.0	18.0*	
Bromomethane		1.140	1.057	46.35	50.0	7.3	
Chloroethane		.776	.704	45.36	50.0	9.3	
Trichlorofluoromethane		1.114	1.043	46.82	50.0	6.4	
Acrolein		.230	.203	441.46	500.0	11.7	
1,1-Dichloroethene	*	1.321	1.205	45.61	50.0	8.8*	
Acetone		.313	.259	82.79	100.0	17.2	
Carbon Disulfide		3.422	3.120	45.59	50.0	8.8	
Methylene Chloride		1.517	1.388	45.76	50.0	8.5	
Acrylonitrile		.357	.332	464.45	500.0	7.1	
trans-1,2-Dichloroethene		1.439	1.348	46.83	50.0	6.3	
1,1-Dichloroethane	#	2.700	2.446	45.31	50.0	9.4#	
cis-1,2-Dichloroethene		1.533	1.461	47.64	50.0	4.7	
Chloroform	*	2.709	2.528	46.65	50.0	6.7*	
1,2-Dichloroethane		1.726	1.632	47.28	50.0	5.4	
Vinyl Acetate		.044	.041	40.73	50.0	18.5	RO, JD
2-Butanone		.131	.123	93.98	100.0	6.0	
1,1,1-Trichloroethane		.414	.382	46.16	50.0	7.7	
Carbon Tetrachloride		.344	.330	48.02	50.0	4.0	
Benzene		.936	.871	46.52	50.0	7.0	
Trichloroethene		.343	.325	47.32	50.0	5.4	
1,2-Dichloropropane	*	.413	.364	44.02	50.0	12.0*	
Bromodichloromethane		.562	.538	47.86	50.0	4.3	
2-Chloroethyl Vinyl Ether		.272	.258	94.74	100.0	5.3	
cis-1,3-Dichloropropene		.547	.516	47.16	50.0	5.7	
trans-1,3-Dichloropropene		.464	.438	47.16	50.0	5.7	
1,1,2-Trichloroethane		.355	.340	47.95	50.0	4.1	
Dibromochloromethane		.489	.481	49.12	50.0	1.8	
Bromoform	#	.348	.335	48.08	50.0	3.8#	
4-Methyl-2-Pentanone		.642	.550	85.60	100.0	14.4	
Toluene	*	1.310	1.266	48.33	50.0	3.3*	
Tetrachloroethene		.350	.344	49.10	50.0	1.8	
2-Hexanone		.339	.335	98.89	100.0	1.1	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/19/97 Time: 1426

Lab File ID: >KMJS2 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chlorobenzene	#	.935	.916	48.98	50.0	2.0#
Ethylbenzene	*	.414	.407	49.16	50.0	1.7*
m+p-Xylene		.547	.540	98.82	100.0	1.2
o-Xylene		.529	.522	49.28	50.0	1.4
Styrene		.920	.933	50.72	50.0	-1.4
1,1,2,2-Tetrachloroethane	#	.800	.727	45.42	50.0	9.2#
1,2-Dichloroethane-d4		1.520	1.497	49.26	50.0	1.5
Toluene-d8		1.182	1.217	51.44	50.0	-2.9
4-Bromofluorobenzene		.634	.666	52.59	50.0	-5.2

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >KMJS2 Date Analyzed: 03/19/97

Instrument ID: HP03973 Time Analyzed: 14:26

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	38554	8.65	179644	10.26	141279	14.54
	UPPER LIMIT	77108		359288		282558	
	LOWER LIMIT	19277		89822		70640	
	EPA SAMPLE NO.						
01	VBLKK42	36823	8.67	171223	10.29	147419	14.56
02	KMMW3	36741	8.67	166259	10.27	145763	14.55
03	KMMW4	35766	8.68	163679	10.28	140631	14.56
04	KMMW4MS	36208	8.65	167837	10.26	132376	14.55
05	KMMW4MSD	37075	8.66	170034	10.28	137743	14.55
06	KMMW5	34643	8.68	164517	10.28	141542	14.55
07	KM-TB	35827	8.67	161358	10.28	143672	14.54
08	KMMW1	35045	8.66	166935	10.28	142816	14.55
09	KMW-3	34824	8.68	164029	10.28	142877	14.55
10	KMW23	34932	8.67	165576	10.28	144763	14.55
11							
12							
13							
14							
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18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKT1 BFB Injection Date: 03/20/97

Instrument ID: HP03973 BFB Injection Time: 03:07

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	46.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	64.4
175	5.0 - 9.0% of mass 174	4.4 (6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	62.3 (96.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.8)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
01	VSTD050	050 PPB CC	>KMKS1	03/20/97	03:29
02	VBLKK43	VBLKK43	>KMKB1	03/20/97	04:15
03	KMW-4	2677539	>KMK01	03/20/97	05:07
04	RB--1	2677540	>KMK02	03/20/97	05:42
05	RB-4-	2679085	>KMK03	03/20/97	06:17
06	RB-5-	2679086	>KMK04	03/20/97	06:52
07	FB-1-	2679087	>KMK05	03/20/97	07:28
08	TB-2-	2677695	>KMK06	03/20/97	08:28
09					
10					
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18					
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

Lab File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Chloromethane	#	1.067	.976	45.74	50.0	8.5#	
Vinyl Chloride	*	1.164	1.109	47.63	50.0	4.7*	
Bromomethane		1.140	1.170	51.30	50.0	-2.6	
Chloroethane		.776	.775	49.95	50.0	.1	
Trichlorofluoromethane		1.114	1.215	54.52	50.0	-9.0	
Acrolein		.230	.243	528.42	500.0	-5.7	
1,1-Dichloroethene	*	1.321	1.422	53.84	50.0	-7.7*	
Acetone		.313	.306	97.84	100.0	2.2	
Carbon Disulfide		3.422	3.814	55.73	50.0	-11.5	
Methylene Chloride		1.517	1.517	49.99	50.0	.0	
Acrylonitrile		.357	.381	532.67	500.0	-6.5	
trans-1,2-Dichloroethene		1.439	1.547	53.73	50.0	-7.5	
1,1-Dichloroethane	#	2.700	2.778	51.46	50.0	-2.9#	
cis-1,2-Dichloroethene		1.533	1.620	52.83	50.0	-5.7	
Chloroform	*	2.709	2.857	52.73	50.0	-5.5*	
1,2-Dichloroethane		1.726	1.793	51.95	50.0	-3.9	
Vinyl Acetate		.044	.046	44.80	50.0	10.4	LD, JD
2-Butanone		.131	.139	105.74	100.0	-5.7	
1,1,1-Trichloroethane		.414	.454	54.82	50.0	-9.6	
Carbon Tetrachloride		.344	.393	57.25	50.0	-14.5	
Benzene		.936	.984	52.58	50.0	-5.2	
Trichloroethene		.343	.379	55.25	50.0	-10.5	
1,2-Dichloropropane	*	.413	.415	50.20	50.0	-.4*	
Bromodichloromethane		.562	.605	53.82	50.0	-7.6	
2-Chloroethyl Vinyl Ether		.272	.317	116.65	100.0	-16.7	
cis-1,3-Dichloropropene		.547	.577	52.67	50.0	-5.3	
trans-1,3-Dichloropropene		.464	.489	52.69	50.0	-5.4	
1,1,2-Trichloroethane		.355	.375	52.88	50.0	-5.8	
Dibromochloromethane		.489	.532	54.33	50.0	-8.7	
Bromoform	#	.348	.380	54.55	50.0	-9.1#	
4-Methyl-2-Pentanone		.642	.712	110.85	100.0	-10.8	
Toluene	*	1.310	1.461	55.76	50.0	-11.5*	
Tetrachloroethene		.350	.406	58.01	50.0	-16.0	
2-Hexanone		.339	.456	134.77	100.0	-34.8	JD, UJC

7A

VOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

Lab File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chlorobenzene	#	.935	1.043	55.79	50.0	-11.6#
Ethylbenzene	*	.414	.471	56.82	50.0	-13.6*
m+p-Xylene		.547	.627	114.69	100.0	-14.7
o-Xylene		.529	.596	56.34	50.0	-12.7
Styrene		.920	1.058	57.53	50.0	-15.1
1,1,2,2-Tetrachloroethane	#	.800	.812	50.75	50.0	-1.5#
1,2-Dichloroethane-d4		1.520	1.639	53.90	50.0	-7.8
Toluene-d8		1.182	1.370	57.94	50.0	-15.9
4-Bromofluorobenzene		.634	.744	58.72	50.0	-17.4

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >KMKS1 Date Analyzed: 03/20/97

Instrument ID: HP03973 Time Analyzed: 03:29

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	35981	8.67	167504	10.29	132054	14.56
	UPPER LIMIT	71962		335008		264108	
	LOWER LIMIT	17991		83752		66027	
	EPA SAMPLE NO.						
01	VBLKK43	34883	8.67	166429	10.28	142756	14.56
02	KMW-4	35473	8.68	163250	10.28	141538	14.57
03	RB--1	35329	8.69	161143	10.29	142230	14.56
04	RB-4-	35599	8.70	161239	10.28	140313	14.56
05	RB-5-	35276	8.67	161121	10.28	141285	14.56
06	FB-1-	34421	8.68	163384	10.28	142092	14.55
07	TB-2-	34453	8.68	162037	10.28	139989	14.55
08							
09							
10							
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12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift TSS

8240B Waters Third Shift JRN

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMIT4	BFB	50nG BFB	03/18/97	12:52		0.00	
>KMII1	VSTD004	004 PPB IC	03/18/97	13:17		1.00	
>KMII2	VSTD020	020 PPB IC	03/18/97	13:54		1.00	
>KMII3	VSTD050	050 PPB IC	03/18/97	14:31		1.00	
>KMII4	VSTD100	100 PPB IC	03/18/97	15:07		1.00	
>KMII5	VSTD300	300 PPB IC	03/18/97	15:44		1.00	
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	
>KMI12	HYTZHMS	2675558	03/18/97	19:05	K0771	5.00	ANU
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	REPROCESSED!
>KMI14	HYTZHMSD	2675558	03/18/97	20:45	K0771	5.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	REPROCESSED!
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	REPROCESSED!
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	REPROCESSED!
>KMI15	EXBLKC	2678334	03/18/97	21:19	K0771	1.00	
>KMI16	A-28-	2676414	03/18/97	22:03	K0771	1.00	
>KMI17	A-28-MS	2676414	03/18/97	22:50	K0771	1.00	
>KMI18	77184	2677184	03/18/97	23:45	K0771	5.00	
>KMI19	CSBXZ	2678079	03/19/97	00:19	K0771	5.00	
>KMI20	ZH941	2675109	03/19/97	00:51	K0771	5.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift TSS

8240B waters Third Shift JH

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMJT2	BFB	50nG BFB	03/19/97	13:54		0.00	
>KMJS2	VSTD050	50 PPB CC	03/19/97	14:26	K0771	1.00	
>KMJB2	VBLKK42	VBLKK42	03/19/97	15:20	K0771	1.00	
>KMJ20	167--	2675539	03/19/97	16:21	K0771	1.00	
>KMJ21	169--	2675543	03/19/97	17:07	K0771	1.00	
>KMJ22	KMMW3	2677529	03/19/97	18:11	K0781	1.00	
>KMJB2	VBLKK42	VBLKK42	03/19/97	15:20	K0781	1.00	reprocessed.
>KMJX5	CLEAN	BLANK	03/19/97	18:48	K0781	1.00	NU suspected carryover
>KMJ23	KMMW4	2677530	03/19/97	19:29	K0781	1.00	
>KMJ24	KMMW4MS	2677532	03/19/97	20:16	K0781	1.00	
>KMJ25	KMMW4MSD	2677533	03/19/97	20:54	K0781	1.00	
>KMJ26	KM-TB	2677534	03/19/97	21:31	K0781	1.00	NU misspiked.
>KMJ27	KMMW5	2677535	03/19/97	22:06	K0781	1.00	
>KMJ28	KM-TB	2677534	03/19/97	22:41	K0781	1.00	
>KMJ29	KMMW1	2677536	03/19/97	23:38	K0781	1.00	
>KMJ30	KMW-3	2677537	03/20/97	00:12	K0781	20.00	
>KMJ31	KMW23	2677538	03/20/97	00:59	K0781	20.00	
>KMJX1	CLEANING	BLANK	03/20/97	01:50	K0781	1.00	NU suspected carryover
>KMJX2	CLEANING	BLANK	03/20/97	02:35	K0781	1.00	↓

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift —

Third Shift JCN

8240B waters

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMKT1	BFB	50nG BFB	03/20/97	03:07		0.00	
>KMKS1	VSTD050	050 PPB CC	03/20/97	03:29		1.00	
>KMKB1	VBLKK43	VBLKK43	03/20/97	04:15	K0781	1.00	
>KMK01	KMW-4	2677539	03/20/97	05:07	K0781	1.00	
>KMK02	RB--1	2677540	03/20/97	05:42	K0781	1.00	
>KMK03	RB-4-	2679085	03/20/97	06:17	K0781	1.00	
>KMK04	RB-5-	2679086	03/20/97	06:52	K0781	1.00	
>KMK05	FB-1-	2679087	03/20/97	07:28	K0781	1.00	
>KMK06	TB-2-	2677695	03/20/97	08:28	K0781	1.00	
>KMKX1	CLEAN BLK		03/20/97	10:22	K0781	1.00	IN In house
>KMKX2	0.125PPB	ACRYLON	03/20/97	10:58	K0781	1.00	↓ ↓

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Level	
						5x	10x
S	Aq	EB	RB-1	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

• = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

ab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKWE0764	88	76	69	40	61	80		0
02	076WELCS4	98	87	85	40	59	81		0
03	KMMW3	64	83	81	38	58	84		0
04	KMMW4	89	80	112	43	58	36		0
05	KMMW4MS	96	90	81	40	60	82		0
06	KMMW4MSD	99	89	65	41	60	86		0
07	KMMW5	88	84	72	23	23	42		0
08	KMMW1	88	85	81	39	58	83		0
09	KMW-3	256 *	89	86	35	60	90		1
10	KMW-3RE	335 *	83	90	36	54	82		1
11	KMW-3DL	74	103	96	39	59	77		0
12	KMW23	62	92	87	36	60	85		0
13	KMW23DL	99	108	104	44	69	98		0
14	KMW23DL2	60	101	98	33	47	48		0
15	KMW-4	95	83	77	39	57	93		0
16	RB--1	92	80	86	40	57	87		0
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d6	(10-94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

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

FORM II SV-1 1/87 Rev.

Water QC Windows

Compound Name	Water LCS	Water MS/MSD
Phenol	26.3 - 60.5	28.7 - 57.5
bis(2-Chloroethyl)ether	64.2 - 110.4	66.2 - 110.6
2-Chlorophenol	58.7 - 100.7	58.7 - 100.7
1,3-Dichlorobenzene	48.8 - 101	54.5 - 98.9
1,4-Dichlorobenzene	53.6 - 105.8	55.3 - 101.5
1,2-Dichlorobenzene	54.6 - 106.8	59.4 - 106.8
2-Methylphenol	41.7 - 104.1	45.8 - 106.4
2,2'-oxybis(1-Chloropropane)	41.2 - 97.9	48.0 - 92.9
4-Methylphenol	33.8 - 98.6	29.8 - 104.8
N-Nitroso-di-n-propylamine	59.2 - 125.8	64.3 - 123.7
Hexachloroethane	36.4 - 92.2	41.4 - 91.8
Nitrobenzene	64.9 - 108.1	65.8 - 107.8
Isophorone	63.3 - 103.6	63.5 - 104.3
2-Nitrophenol	60.5 - 116.9	60.3 - 119.1
2,4-Dimethylphenol	29.6 - 99.8	29.3 - 98.9
bis(2-chloroethoxy)methane	62.7 - 107.1	62.9 - 109.1
2,4-Dichlorophenol	63 - 100.2	0 - 267.6
1,2,4-Trichlorobenzene	29.1 - 125.1	57.1 - 100.9
Naphthalene	34 - 120.4	63.1 - 97.3
4-Chloroaniline	22.6 - 102	9.9 - 106.5
Hexachlorobutadiene	24.6 - 96	34.6 - 91.3
4-Chloro-3-methylphenol	62.7 - 104.7	61.2 - 105
2-Methylnaphthalene	48.9 - 108.1	63.7 - 98.5
Hexachlorocyclopentadiene	0 - 98.6	0 - 101.9
2,4,6-Trichlorophenol	49.3 - 121.3	43.2 - 124.8
2,4,5-Trichlorophenol	67.2 - 106.8	66.4 - 107.2
2-Chloronaphthalene	65.6 - 108.2	67.2 - 107.4
2-Nitroaniline	59.4 - 112.2	59.5 - 112.3
Dimethylphthalate	0 - 117.2	1.4 - 115.4
2,6-Dinitrotoluene	71.2 - 116.2	71.7 - 114.9
Acenaphthylene	35.1 - 121.5	65.6 - 96.2
3-Nitroaniline	37.5 - 104.9	35.6 - 107.4
Acenaphthene	35.5 - 122.5	64.3 - 98.5
2,4-Dinitrophenol	29.9 - 116.9	27.4 - 112.6

Compound Name	Water LCS	Water MS/MSD
4-Nitrophenol	18 - 63	13.3 - 62.5
Dibenzofuran	68 - 104.6	67.7 - 104.3
2,4-Dinitrotoluene	70.4 - 120.2	68.1 - 119.1
Diethylphthalate	38.3 - 122.3	41.6 - 119.6
4-Chlorophenyl phenylether	65.6 - 110.6	65.7 - 110.1
Fluorene	63.1 - 103.9	63.7 - 104.5
4-Nitroaniline	49.9 - 123.1	50 - 120.8
4,6-Dinitro-2-methylphenol	52.8 - 130.8	51.4 - 136.6
N-Nitrosodiphenylamine	64 - 114.4	63.6 - 115.2
4-Bromophenyl phenylether	64.9 - 117.7	66.9 - 116.1
Hexachlorobenzene	53.1 - 139.5	52.4 - 140.6
Pentachlorophenol	44.9 - 112.7	31.1 - 116.3
Phenanthrene	37.2 - 127.2	69 - 101.4
Anthracene	33.6 - 118.8	60.2 - 97.4
Carbazole	73.2 - 113.3	72.3 - 114.5
Di-n-butylphthalate	62.3 - 115.7	62.8 - 116.2
Fluoranthene	36.2 - 129.8	63.9 - 107.1
Pyrene	33.2 - 133.4	58.3 - 110.5
Butylbenzylphthalate	51.2 - 116.6	49.9 - 116.5
3,3'-Dichlorobenzidine	44.9 - 118.1	51.7 - 111.7
Benzo(a)anthracene	37 - 128.8	64.6 - 104.8
bis(2-ethylhexyl)phthalate	42 - 142.8	58.7 - 128.3
Chrysene	36.5 - 130.7	62 - 107.6
Di-n-octylphthalate	58.8 - 129.6	61.3 - 123.7
Benzo(b)fluoranthene	34.3 - 127.3	61.6 - 104.2
Benzo(k)fluoranthene	35.4 - 130.2	63.8 - 107
Benzo(a)pyrene	32.8 - 121	57.3 - 99.9
Indeno(1,2,3-cd)pyrene	34.2 - 133.8	56.3 - 116.3
Dibenz(a,h)anthracene	59.8 - 114.4	58.4 - 114.8
Benzo(g,h,i)perylene	31.1 - 136.1	55.2 - 116.4

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

b Name: LANCASTER LABS Lab Code: LANCAS Instrument: HP03301

[illegible]46 METHOD 8270 SPIKE LEVEL: 100 UG/ML AMT USED: 1000.

[illegible]MPLE SPIKE LEVEL: 100.UG/L % MOISTURE 0. DILUTION: 1

US SAMPLE: KMMW4 2677530 MS SAMPLE: KMMW4MS 2677532 MSD SAMPLE: KMMW4MSD 2677533

MPOUND NAME	US CONC UG/L	MS CONC UG/L	MSD CONC UG/L	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
enol	0.00	42.69	41.30	43	41	3.00		
s(2-Chloroethyl)ether	0.00	87.59	90.45	88	90	-3.00		
2-Chlorophenol	0.00	87.50	89.76	88	90	-3.00		
1,3-Dichlorobenzene	0.00	84.05	92.43	84	92	-10.00		
4-Dichlorobenzene	0.00	86.48	88.70	86	89	-3.00		
2-Dichlorobenzene	0.00	86.19	89.36	86	89	-4.00		
2-Methylphenol	0.00	77.55	80.09	78	80	-3.00		
2.2'-oxybis(1-Chloropropane)	0.00	68.69	72.06	69	72	-5.00		
Methylphenol	0.00	75.67	78.01	76	78	-3.00		
Nitroso-di-n-propylamine	0.00	94.32	99.74	94	100	-6.00		
Hexachloroethane	0.00	76.20	80.38	76	80	-5.00		
Nitrobenzene	0.00	96.10	98.07	96	98	-2.00		
ophorone	0.00	93.71	93.49	94	93	0.00		
Nitrophenol	0.00	90.55	93.50	90	94	-3.00		
2,4-Dimethylphenol	0.00	75.24	71.38	75	71	5.00		
his(2-Chloroethoxy)methane	0.00	87.91	89.91	88	90	-2.00		
4-Dichlorophenol	0.00	84.57	85.47	84	85	-1.00		
2,4-Trichlorobenzene	0.00	82.79	83.36	83	83	-1.00		
Naphthalene	0.00	84.37	85.81	84	86	-2.00		
4-Chloroaniline	0.00	46.78	54.91	47	55	-16.00		
xachlorobutadiene	0.00	83.17	85.39	83	85	-3.00		
loro-3-methylphenol	0.00	87.70	91.08	88	91	-4.00		
hylnaphthalene	0.00	85.61	86.88	86	87	-1.00		
xachlorocyclopentadiene	0.00	142.25	143.04	71	72	-1.00		
4,6-Trichlorophenol	0.00	92.97	94.58	93	94	-2.00		
,4,5-Trichlorophenol	0.00	89.51	94.68	90	95	-6.00		
2-Chloronaphthalene	0.00	89.78	90.64	90	91	-1.00		
Nitroaniline	0.00	84.08	90.45	84	90	-7.00		
methylphthalate	0.00	63.33	65.09	63	65	-3.00		
,6-Dinitrotoluene	0.00	89.63	95.10	90	95	-6.00		
Acenaphthylene	0.00	88.21	89.66	88	90	-2.00		
Nitroaniline	0.00	61.11	66.96	61	67	-9.00		
enaphthene	0.00	82.19	83.50	82	84	-2.00		
,4-Dinitrophenol	0.00	81.56	82.58	82	82	-1.00		
4-Nitrophenol	0.00	40.78	43.44	41	43	-6.00		
benzofuran	0.00	84.94	86.96	85	87	-2.00		
4-Dinitrotoluene	0.00	88.33	95.34	88	95	-8.00		
ethylphthalate	0.00	76.31	78.13	76	78	-2.00		
4-Chlorophenyl-phenylether	0.00	85.59	87.70	86	88	-2.00		

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

Lab Name: LANCASTER LABS Lab Code: LANCAS Instrument: HP03301

'46 METHOD 8270 SPIKE LEVEL: 100 UG/ML AMT USED: 1000.

SAMPLE SPIKE LEVEL: 100.UG/L % MOISTURE 0. DILUTION: 1

US SAMPLE: KMMW4 2677530 MS SAMPLE: KMMW4MS 2677532 MSD SAMPLE: KMMW4MSD 2677533

COMPOUND NAME	US CONC UG/L	MS CONC UG/L	MSD CONC UG/L	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
Fluorene	0.00	84.53	86.37	84	86	-2.00		
p-Nitroaniline	0.00	79.00	84.07	79	84	-6.00		
4,6-Dinitro-2-methylphenol	0.00	86.96	91.11	87	91	-5.00		
N-Nitrosodiphenylamine	0.00	84.62	86.12	85	86	-2.00		
4-Bromophenyl-phenylether	0.00	86.18	88.41	86	88	-3.00		
Hexachlorobenzene	0.00	85.28	86.24	85	86	-1.00		
Pentachlorophenol	0.00	86.42	84.93	86	85	2.00		
Phenanthrene	0.00	85.83	86.04	86	86	0.00		
Anthracene	0.00	85.05	85.01	85	85	0.00		
Carbazole	0.00	89.62	90.46	90	90	-1.00		
Di-n-butylphthalate	0.00	92.69	92.35	93	92	0.00		
Fluoranthene	0.00	87.33	87.64	87	88	0.00		
Pyrene	0.00	85.30	90.31	85	90	-6.00		
Butylbenzylphthalate	0.00	88.34	84.51	88	84	4.00		
3,3'-Dichlorobenzidine	0.00	59.69	70.65	60	71	-17.00		
Benzo(a)anthracene	0.00	84.99	91.21	85	91	-7.00		
Bis(2-Ethylhexyl)phthalate	0.00	93.35	95.70	93	96	-2.00		
Chrysene	0.00	88.86	89.43	89	89	-1.00		
Di-n-octylphthalate	0.00	87.14	88.93	87	89	-2.00		
Benzo(b)fluoranthene	0.00	79.38	83.48	79	83	-5.00		
Benzo(k)fluoranthene	0.00	87.25	89.19	87	89	-2.00		
Benzo(a)pyrene	0.00	81.31	82.97	81	83	-2.00		
Indeno(1,2,3-cd)pyrene	0.00	87.34	88.55	87	88	-1.00		
Dibenz(a,h)anthracene	0.00	91.27	92.64	91	93	-1.00		
Benzo(g,h,i)perylene	0.00	88.15	89.16	88	89	-1.00		

COMMENTS:

WATER SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03301

SW846 METHOD 8270 SPIKE LEVEL: 100 UG/L

SAMPLE NO: 076WELCS4 076WELCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
enol	43.21	43		
bis(2-Chloroethyl)ether	89.23	89		
-Chlorophenol	88.21	88		
,3-Dichlorobenzene	70.44	70		
,4-Dichlorobenzene	74.45	74		
1,2-Dichlorobenzene	77.35	77		
Methylphenol	80.41	80		
,2'-oxybis(1-Chloropropane)	71.34	71		
4-Methylphenol	77.14	77		
N-Nitroso-di-n-propylamine	99.30	99		
xachloroethane	54.46	54		
itrobenzene	96.83	97		
Isophorone	93.77	94		
2-Nitrophenol	90.01	90		
,4-Dimethylphenol	78.08	78		
is(2-Chloroethoxy)methane	88.11	88		
2,4-Dichlorophenol	82.98	83		
1,2,4-Trichlorobenzene	72.13	72		
phthalene	80.99	81		
Chloroaniline	43.47	43		
Hexachlorobutadiene	52.44	52		
4-Chloro-3-methylphenol	86.75	87		
Methylnaphthalene	79.95	80		
achlorocyclopentadiene	107.58	54		
i-Trichlorophenol	91.41	91		
,5-Trichlorophenol	88.10	88		
Chloronaphthalene	86.05	86		
Nitroaniline	85.66	86		
Dimethylphthalate	27.95	28		
2,6-Dinitrotoluene	91.56	92		
enaphthylene	85.73	86		
Nitroaniline	56.80	57		
Acenaphthene	78.47	78		
2,4-Dinitrophenol	87.48	87		
Nitrophenol	41.45	41		
benzofuran	82.55	82		
2,4-Dinitrotoluene	89.25	89		
iethylphthalate	60.54	60		
Chlorophenyl-phenylether	82.35	82		

WATER SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

AB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03301

6 METHOD 8270 SPIKE LEVEL: 100 UG/L

CS SAMPLE NO: 076WELCS4 076WELCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Fluorene	80.06	80		
-Nitroaniline	78.05	78		
,6-Dinitro-2-methylphenol	90.26	90		
-Nitrosodiphenylamine	82.83	83		
4-Bromophenyl-phenylether	85.61	86		
exachlorobenzene	84.39	84		
entachlorophenol	89.10	89		
henanthrene	83.14	83		
Anthracene	82.65	83		
arbazole	88.15	88		
i-n-butylphthalate	85.63	86		
luoranthene	86.25	86		
Pyrene	82.02	82		
utylbenzylphthalate	74.89	75		
,3'-Dichlorobenzidine	60.79	61		
Benzo(a)anthracene	84.75	85		
bis(2-Ethylhexyl)phthalate	89.85	90		
rysene	88.17	88		
i-n-octylphthalate	86.94	87		
Benzo(b)fluoranthene	79.91	80		
Benzo(k)fluoranthene	86.27	86		
nzo(a)pyrene	80.82	81		
eno(1,2,3-cd)pyrene	90.00	90		
z(a,h)anthracene	92.38	92		
o(g,h,i)perylene	89.06	89		

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC356 Lab Sample ID: SBLKWE076

Date Extracted: 03/17/97 Extraction: (SepF/Cont/Sonc/Sox) SEPF

Date Analyzed: 03/18/97 Time Analyzed: 16:42

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: HP03301

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	076WELCS4	076WELCS	>DC357	03/18/97
02	KMMW4	2677530	>DC358	03/18/97
03	KMMW4MS	2677532	>DC359	03/18/97
04	KMMW4MSD	2677533	>DC360	03/18/97
05	RB-02	2677434	>DC376	03/18/97
06	KMMW3	2677529	>DC377	03/19/97
07	KMMW5	2677535	>DC378	03/19/97
08	KMMW1	2677536	>DC379	03/19/97
09	KMW-3	2677537	>DC380	03/19/97
10	KMW23	2677538	>DC381	03/19/97
11	KMW-4	2677539	>DC396	03/19/97
12	RB--1	2677540	>DC397	03/19/97
13	RB-3-	2678205	>DC398	03/19/97
14	KMW23DL	2677538DL	>DC425	03/19/97
15	KMW-3DL	2677537DL	>DC426	03/19/97
16	KMW-3RE	2677537RE	>DC427	03/19/97
17	KMW23DL2	2677538DL2	>DC436	03/20/97

COMMENTS: _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWE0764

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWE076

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >DC356

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/18/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWE0764

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWE076

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >DC356

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/18/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

(1) - Cannot be separated from Diphenylamine

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC35A DFTPP Injection Date: 03/18/97

Instrument ID: HP03301 DFTPP Injection Time: 09:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.5
70	Less than 2.0% of mass 69	.2 (.5)1
127	40.0 - 60.0% of mass 198	41.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.06
441	Present, but less than mass 443	7.7
442	Greater than 40.0% of mass 198	50.1
443	17.0 - 23.0% of mass 442	9.6 (19.1)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
01	SSTD80	STD0737	>DC35Z	03/18/97	11:38
02	SSTD160	STD0737	>DC352	03/18/97	12:55
03	SSTD05	STD0737	>DC353	03/18/97	13:52
04	SSTD50	STD0737	>DC354	03/18/97	14:49
05	SSTD120	STD0737	>DC355	03/18/97	15:45
06	SBLKWE0764	SBLKWE076	>DC356	03/18/97	16:42
07	076WELCS4	076WELCS	>DC357	03/18/97	17:38
08	KMMW4	2677530	>DC358	03/18/97	18:35
09	KMMW4MS	2677532	>DC359	03/18/97	19:31
10	KMMW4MSD	2677533	>DC360	03/18/97	20:28
11					
12					
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19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

Min FILE ID: RRF5 = >DC353 RRF50 = >DC354
RRF80 = >DC352 RRF120= >DC355 RRF160= >DC352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.249	1.660	1.589	1.529	1.527	1.511	10.3	AVG	
N-Nitrosodimethylamine	.728	.928	.922	.886	.911	.875	9.6	AVG	
2-Picoline	1.470	1.560	1.528	1.473	1.470	1.500	2.8	AVG	
Phenol	1.708	1.702	1.623	1.500	1.438	1.594	7.6	AVG	*
Aniline	2.066	2.053	1.950	1.899	1.857	1.965	4.7	AVG	
bis(2-Chloroethyl)ether	1.414	1.376	1.372	1.284	1.210	1.331	6.2	AVG	
2-Chlorophenol	1.386	1.409	1.355	1.257	1.181	1.318	7.3	AVG	
1,3-Dichlorobenzene	1.611	1.579	1.535	1.394	1.316	1.487	8.5	AVG	
1,4-Dichlorobenzene	1.641	1.614	1.562	1.263	1.335	1.483	11.6	AVG	*
Benzyl alcohol	.800	.852	.813	.782	.756	.801	4.4	AVG	
1,2-Dichlorobenzene	1.570	1.502	1.456	1.278	1.218	1.405	10.7	AVG	
2-Methylphenol	1.186	1.170	1.118	1.097	1.060	1.126	4.6	AVG	
2,2'-oxybis(1-Chloropropane)	3.487	3.394	3.415	3.295	3.073	3.333	4.8	AVG	
bis(2-Chloroisopropyl)ether	3.487	3.394	3.415	3.295	3.073	3.333	4.8	AVG	
3-Methylphenol	1.217	1.226	1.157	1.117	1.057	1.155	6.1	AVG	
3 and 4-Methylphenol	1.217	1.226	1.157	1.117	1.057	1.155	6.1	AVG	
Acetophenone	3.829	3.387	3.161	2.818	2.560	3.151	15.7	2NDDEG	
N-Nitroso-di-n-propylamine	1.096	1.070	1.038	.924	.821	.990	11.6	AVG	#
o-Toluidine	2.115	2.008	1.912	2.388	1.714	2.027	12.3	AVG	
Hexachloroethane	.597	.640	.641	.590	.573	.608	5.0	AVG	
Nitrobenzene	.361	.425	.407	.441	.405	.408	7.3	AVG	
Isophorone	.790	.779	.789	.843	.737	.787	4.8	AVG	
2-Nitrophenol	.128	.192	.184	.212	.195	.182	17.5	1STDEG	*
2,4-Dimethylphenol	.400	.405	.400	.397	.362	.393	4.4	AVG	
Benzoic acid	.163	.244	.242	.354	.324	.266	28.4	AVG	
bis(2-Chloroethoxy)methane	.494	.480	.485	.476	.424	.472	5.8	AVG	
2,4-Dichlorophenol	.331	.330	.325	.327	.297	.322	4.4	AVG	*
1,2,4-Trichlorobenzene	.375	.367	.368	.395	.322	.365	7.4	AVG	
Naphthalene	1.126	1.086	1.061	1.020	.861	1.031	9.9	AVG	
4-Chloroaniline	.468	.480	.478	.533	.429	.478	7.8	AVG	
Hexachlorobutadiene	.182	.215	.222	.210	.195	.205	7.9	AVG	*
4-Chloro-3-methylphenol	.333	.351	.351	.351	.327	.343	3.5	AVG	*
2-Methylnaphthalene	.698	.666	.665	.632	.560	.644	8.2	AVG	
1-Methylnaphthalene	.692	.656	.646	.576	.549	.624	9.5	AVG	
Hexachlorocyclopentadiene	.220	.347	.383	.403	.379	.346	21.2	1STDEG	#
2,4,6-Trichlorophenol	.357	.440	.431	.442	.406	.415	8.6	AVG	*
2,4,5-Trichlorophenol	.403	.476	.474	.477	.441	.454	7.1	AVG	
2-Chloronaphthalene	1.277	1.262	1.207	1.203	1.056	1.201	7.3	AVG	

All CCC and $\overline{RF}$ Due to check curve fit DE 3/18/97

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

me: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

nstrument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

_____.

RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

3 FILE ID: RRF5 = >DC353 RRF50 = >DC354
F80 = >DC35Z RRF120= >DC355 RRF160= >DC352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
2-Nitroaniline	.297	.470	.458	.518	.489	.447	19.3	1STDEG	
methylphthalate	1.510	1.464	1.496	1.351	1.348	1.434	5.5	AVG	
6-Dinitrotoluene	.174	.291	.290	.335	.316	.281	22.3	1STDEG	
enaphthylene	1.947	1.974	1.945	1.912	1.602	1.876	8.3	AVG	
3-Nitroaniline	.243	.370	.365	.410	.383	.354	18.2	1STDEG	
enaphthene *	1.365	1.265	1.238	1.182	1.030	1.216	10.2	AVG	*
4-Dinitrophenol #	.082	.113	.128	.156	.165	.129	25.9	AVG	# @
Nitrophenol #	.138	.184	.182	.203	.196	.181	14.1	AVG	#
Dibenzofuran	1.836	1.757	1.737	1.642	1.473	1.689	8.2	AVG	
,4-Dinitrotoluene	.305	.410	.405	.467	.445	.406	15.3	1STDEG	
-Naphthylamine	1.047	1.020	1.028	1.064	.967	1.025	3.6	AVG	
-Naphthylamine	1.216	1.055	1.094	1.123	1.059	1.109	5.9	AVG	
Diethylphthalate	1.545	1.482	1.491	1.444	1.316	1.455	5.9	AVG	
-Chlorophenyl-phenylether	.708	.657	.666	.545	.560	.627	11.3	AVG	
luorene	1.437	1.315	1.260	1.206	1.029	1.250	12.0	AVG	
troaniline	.288	.345	.324	.376	.352	.337	9.8	AVG	
-Dinitro-2-methylphenol	.049	.099	.107	.133	.131	.104	32.9	2NDDEG	RO, JD
-Nitrosodiphenylamine (1) *	.620	.543	.544	.530	.477	.543	9.4	AVG	*
,2-Diphenylhydrazine	1.592	.971	.979	.944	.828	1.063	28.4	2NDDEG	
-Bromophenyl-phenylether	.242	.229	.237	.223	.212	.229	5.2	AVG	
Hexachlorobenzene	.177	.263	.274	.264	.243	.244	16.0	2NDDEG	
entachlorophenol *	.139	.155	.166	.187	.170	.164	11.0	AVG	*
henanthrene	1.273	1.125	1.101	1.060	.921	1.096	11.6	AVG	
nthracene	1.246	1.147	1.117	.997	.937	1.089	11.3	AVG	
Carbazole	1.107	1.034	.995	1.005	.878	1.004	8.3	AVG	
i-n-butylphthalate	1.452	1.391	1.377	1.284	1.010	1.303	13.4	AVG	
luoranthene *	1.276	1.157	1.110	1.090	.927	1.112	11.4	AVG	*
Benzidine	1.386	.804	.771	.661	.536	.832	39.4	AVG	@ JD, ~~WO~~ 5/9*
Pyrene	1.706	1.603	1.616	1.554	1.339	1.564	8.7	AVG	
Butylbenzylphthalate	.777	.796	.816	.818	.747	.791	3.7	AVG	
3,3'-Dichlorobenzidine	.458	.503	.500	.514	.464	.488	5.1	AVG	
Benzo(a)anthracene	1.385	1.378	1.373	1.393	1.279	1.361	3.4	AVG	
bis(2-Ethylhexyl)phthalate	1.021	1.068	1.072	.996	.850	1.002	9.0	AVG	
Chrysene	1.245	1.245	1.227	1.250	1.159	1.225	3.1	AVG	
Di-n-octylphthalate *	1.583	2.074	2.180	2.042	1.784	1.933	12.6	AVG	*
7,12-Dimethylbenz[a]anthrace	.493	.605	.633	.597	.552	.576	9.5	AVG	
Benzo(b)fluoranthene	1.302	1.427	1.430	1.381	1.289	1.366	4.9	AVG	
Benzo(k)fluoranthene	1.187	1.326	1.331	1.290	1.175	1.262	6.0	AVG	

No @1 No impact

(1) Cannot be separated from Diphenylamine

FORM VI SV-1 1/87 Rev.

@ %C > 30% RF Due TO poor CURVE FIT DC 5/15/97

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >DC353 RRF50 = >DC354

RRF80 = >DC352 RRF120= >DC355 RRF160= >DC352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
Benzo(a)pyrene *	1.038	1.210	1.239	1.247	1.167	1.180	7.2	AVG *
Indeno(1,2,3-cd)pyrene	.907	1.111	1.108	1.235	1.097	1.091	10.8	AVG
Dibenz(a,h)anthracene	.802	1.100	1.084	1.180	1.054	1.044	13.7	AVG
Benzo(g,h,i)perylene	.873	1.170	1.128	1.235	1.084	1.098	12.5	AVG
2-Fluorophenol	1.237	1.342	1.287	1.190	1.158	1.243	5.9	AVG
Phenol-d5	1.680	1.692	1.618	1.530	1.493	1.602	5.5	AVG
Phenol-d6	1.680	1.692	1.618	1.530	1.493	1.602	5.5	AVG
Nitrobenzene-d5	.306	.389	.370	.428	.389	.376	11.8	AVG
2-Fluorobiphenyl	1.439	1.379	1.315	1.321	1.139	1.319	8.5	AVG
2,4,6-Tribromophenol	.243	.211	.225	.235	.226	.228	5.2	AVG
Terphenyl-d14	1.177	.995	1.002	.984	.902	1.012	9.9	AVG

* 2,4-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC35Z Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 11:38

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	39884	12.29	132426	15.72	74325	20.63
	UPPER LIMIT	79768		264852		148650	
	LOWER LIMIT	19942		66213		37163	
	EPA SAMPLE NO.						
01	SBLKWE0764	39829	12.29	139750	15.72	80119	20.63
02	076WELCS4	51821	12.30	184268	15.72	98707	20.63
03	KMMW4	41884	12.29	143414	15.71	82136	20.63
04	KMMW4MS	40229	12.31	139448	15.73	75184	20.64
05	KMMW4MSD	43058	12.33	154056	15.76	85175	20.67
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC35Z Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 11:38

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	127498		24.82	89904		31.82	74776		37.76
	UPPER LIMIT	254996			179808			149552		
	LOWER LIMIT	63749			44952			37388		
	EPA SAMPLE NO.									
01	SBLKWE0764	159917		24.82	112042		31.81	93612		37.75
02	076WELCS4	166732		24.83	127832		31.83	122147		37.77
03	KMMW4	156372		24.82	111435		31.81	98266		37.75
04	KMMW4MS	125979		24.84	94302		31.83	88794		37.78
05	KMMW4MSD	147463		24.87	103640		31.86	99809		37.80
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC370 DFTPP Injection Date: 03/18/97

Instrument ID: HP03301 DFTPP Injection Time: 21:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	.1 (.2)1
127	40.0 - 60.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.9
365	Greater than 1.00% of mass 198	1.85
441	Present, but less than mass 443	6.9
442	Greater than 40.0% of mass 198	47.8
443	17.0 - 23.0% of mass 442	8.9 (18.7)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
01	SSTD80	STD0737	>DC371	03/18/97	22:17
02	RB-02	2677434	>DC376	03/18/97	23:16
03	KMMW3	2677529	>DC377	03/19/97	00:12
04	KMMW5	2677535	>DC378	03/19/97	01:09
05	KMMW1	2677536	>DC379	03/19/97	02:05
06	KMW-3	2677537	>DC380	03/19/97	08:07
07	KMW23	2677538	>DC381	03/19/97	09:03
08					
09					
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22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

Lab File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.511	1.696	89.81	80.0	-12.3
N-Nitrosodimethylamine		.875	.985	90.09	80.0	-12.6
2-Picoline		1.500	1.540	82.11	80.0	-2.6
Phenol	*	1.594	1.510	75.79	80.0	5.3*
Aniline		1.965	1.902	77.44	80.0	3.2
bis(2-Chloroethyl)ether		1.331	1.397	83.94	80.0	-4.9
2-Chlorophenol		1.318	1.243	75.45	80.0	5.7
1,3-Dichlorobenzene		1.487	1.479	79.59	80.0	.5
1,4-Dichlorobenzene	*	1.483	1.502	81.00	80.0	-1.3*
Benzyl alcohol		.801	.745	74.48	80.0	6.9
1,2-Dichlorobenzene		1.405	1.370	78.00	80.0	2.5
2-Methylphenol		1.126	1.060	75.30	80.0	5.9
2,2'-oxybis(1-Chloropropane)		3.333	3.299	79.19	80.0	1.0
bis(2-Chloroisopropyl)ether		3.333	3.299	79.19	80.0	1.0
4-Methylphenol		1.155	1.074	74.37	80.0	7.0
3- and 4-Methylphenol		1.155	1.074	74.37	80.0	7.0
Acetophenone		3.151	2.771	68.10	80.0	14.9
N-Nitroso-di-n-propylamine	#	.990	.903	72.98	80.0	8.8#
o-Toluidine		2.027	1.769	69.80	80.0	12.7
Hexachloroethane		.608	.655	86.18	80.0	-7.7
Nitrobenzene		.408	.375	73.70	80.0	7.9
Isophorone		.787	.727	73.87	80.0	7.7
2-Nitrophenol	*	.182	.158	64.84	80.0	19.0*
2,4-Dimethylphenol		.393	.376	76.64	80.0	4.2
Benzoic acid		.266	.213	64.11	80.0	19.9
bis(2-Chloroethoxy)methane		.472	.457	77.52	80.0	3.1
2,4-Dichlorophenol	*	.322	.325	80.88	80.0	-1.1*
1,2,4-Trichlorobenzene		.365	.447	97.85	80.0	-22.3
Naphthalene		1.031	1.017	78.93	80.0	1.3
4-Chloroaniline		.478	.624	104.44	80.0	-30.6
Hexachlorobutadiene	*	.205	.229	89.22	80.0	-11.5*
4-Chloro-3-methylphenol	*	.343	.311	72.62	80.0	9.2*
2-Methylnaphthalene		.644	.612	75.95	80.0	5.1
1-Methylnaphthalene		.624	.595	76.32	80.0	4.6
Hexachlorocyclopentadiene	#	.346	.411	86.25	80.0	-7.8#
2,4,6-Trichlorophenol	*	.415	.427	82.25	80.0	-2.8*
2,4,5-Trichlorophenol		.454	.467	82.26	80.0	-2.8
2-Chloronaphthalene		1.201	1.009	67.20	80.0	16.0

OK

Q 85%

~~JD, JE~~

JD, JE

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.447	.389	64.76	80.0	19.1
Dimethylphthalate		1.434	1.368	76.34	80.0	4.6
2,6-Dinitrotoluene		.281	.233	61.19	80.0	23.5
Acenaphthylene		1.876	1.987	84.74	80.0	-5.9
3-Nitroaniline		.354	.311	65.45	80.0	18.2
Acenaphthene	*	1.216	1.198	78.82	80.0	1.5*
2,4-Dinitrophenol	#	.129	.110	68.58	80.0	14.3#
4-Nitrophenol	#	.181	.159	70.30	80.0	12.1#
Dibenzofuran		1.689	1.661	78.68	80.0	1.7
2,4-Dinitrotoluene		.406	.342	63.57	80.0	20.5
1-Naphthylamine		1.025	.983	76.74	80.0	4.1
2-Naphthylamine		1.109	1.060	76.43	80.0	4.5
Diethylphthalate		1.455	1.317	72.40	80.0	9.5
4-Chlorophenyl-phenylether		.627	.632	80.64	80.0	-.8
Fluorene		1.250	1.179	75.47	80.0	5.7
4-Nitroaniline		.337	.277	65.78	80.0	17.8
4,6-Dinitro-2-methylphenol		.104	.100	71.73	80.0	10.3
N-Nitrosodiphenylamine (1)	*	.543	.544	80.22	80.0	-.3*
1,2-Diphenylhydrazine		1.063	.967	79.02	80.0	1.2
4-Bromophenyl-phenylether		.229	.242	84.68	80.0	-5.9
Hexachlorobenzene		.244	.281	83.11	80.0	-3.9
Pentachlorophenol	*	.164	.150	73.45	80.0	8.2*
Phenanthrene		1.096	1.084	79.13	80.0	1.1
Anthracene		1.089	1.099	80.73	80.0	-.9
Carbazole		1.004	.982	78.28	80.0	2.1
Di-n-butylphthalate		1.303	1.323	81.24	80.0	-1.5
Fluoranthene	*	1.112	1.100	79.12	80.0	1.1*
Benzidine		.832	.734	282.48	320.0	11.7
Pyrene		1.564	1.508	77.15	80.0	3.6
Butylbenzylphthalate		.791	.759	76.75	80.0	4.1
3,3'-Dichlorobenzidine		.488	.522	85.63	80.0	-7.0
Benzo(a)anthracene		1.361	1.345	79.06	80.0	1.2
bis(2-Ethylhexyl)phthalate		1.002	.974	77.83	80.0	2.7
Chrysene		1.225	1.218	79.53	80.0	.6
Di-n-octylphthalate	*	1.933	1.817	75.20	80.0	6.0*
7,12-Dimethylbenz[a]anthrace		.576	.598	83.01	80.0	-3.8
Benzo(b)fluoranthene		1.366	1.358	79.55	80.0	.6
Benzo(k)fluoranthene		1.262	1.304	82.68	80.0	-3.3

(1) Cannot be separated from Diphenylamine

OK 3/97

OK 5/97

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

Lab File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Benzo(a)pyrene	*	1.180	1.221	82.78	80.0	-3.5	*
Indeno(1,2,3-cd)pyrene		1.091	1.133	83.05	80.0	-3.8	
Dibenz(a,h)anthracene		1.044	1.110	85.04	80.0	-6.3	
Benzo(g,h,i)perylene		1.098	1.141	83.11	80.0	-3.9	
2-Fluorophenol		1.243	1.237	79.64	80.0	.4	
Phenol-d5		1.602	1.547	77.24	80.0	3.4	
Phenol-d6		1.602	1.547	77.24	80.0	3.4	
Nitrobenzene-d5		.376	.333	70.67	80.0	11.7	
2-Fluorobiphenyl		1.319	1.396	84.72	80.0	-5.9	
2,4,6-Tribromophenol		.228	.199	69.69	80.0	12.9	
Terphenyl-d14		1.012	.962	76.09	80.0	4.9	

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

GC Column ID (Standard): >DC371 Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 22:17

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	61903	12.32	194935	15.74	94691	20.64
	UPPER LIMIT	123806		389870		189382	
	LOWER LIMIT	30952		97468		47346	
	EPA SAMPLE NO.						
01	RB-02	61343	12.30	212662	15.72	116265	20.63
02	KMMW3	51113	12.31	217644	15.73	89005	20.62
03	KMMW5	49112	12.31	165572	15.72	88509	20.62
04	KMMW1	48079	12.30	162008	15.72	82993	20.63
05	KMW-3	59003	12.32	64242*	15.77	90194	20.64
06	KMW23	53043	12.32	256923	16.13	81972	20.64
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JD, WL all assc compds.

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

File ID (Standard): >DC371 Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 22:17

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	150068	24.83	113033	31.80	108878	37.72
	UPPER LIMIT	300136		226066		217756	
	LOWER LIMIT	75034		56517		54439	
	EPA SAMPLE NO.						
01	RB-02	198467	24.81	141001	31.79	127811	37.70
02	KMMW3	153816	24.81	111577	31.79	102566	37.71
03	KMMW5	158175	24.81	122326	31.78	104974	37.69
04	KMMW1	141910	24.81	106351	31.79	96091	37.70
05	KMW-3	140265	24.83	104417	31.80	94112	37.71
06	KMW23	124760	24.83	88282	31.79	80851	37.70
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC390 DFTPP Injection Date: 03/19/97

Instrument ID: HP03301 DFTPP Injection Time: 11:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	54.0
70	Less than 2.0% of mass 69	.2 (.4)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 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.18
441	Present, but less than mass 443	8.9
442	Greater than 40.0% of mass 198	60.1
443	17.0 - 23.0% of mass 442	11.4 (19.0)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
01	SSTD80	STD0737	>DC391	03/19/97	11:49
02	KMW-4	2677539	>DC396	03/19/97	14:01
03	RB--1	2677540	>DC397	03/19/97	14:57
04	RB-3-	2678205	>DC398	03/19/97	15:54
05	KMW23DL	2677538DL	>DC425	03/19/97	16:51
06	KMW-3DL	2677537DL	>DC426	03/19/97	17:47
07	KMW-3RE	2677537RE	>DC427	03/19/97	18:44
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22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.511	1.606	85.07	80.0	-6.3
N-Nitrosodimethylamine		.875	.979	89.47	80.0	-11.8
2-Picoline		1.500	1.541	82.15	80.0	-2.7
Phenol	*	1.594	1.594	79.98	80.0	.0*
Aniline		1.965	1.962	79.90	80.0	.1
bis(2-Chloroethyl)ether		1.331	1.324	79.61	80.0	.5
2-Chlorophenol		1.318	1.312	79.68	80.0	.4
1,3-Dichlorobenzene		1.487	1.445	77.72	80.0	2.9
1,4-Dichlorobenzene	*	1.483	1.474	79.52	80.0	.6*
Benzyl alcohol		.801	.829	82.84	80.0	-3.6
1,2-Dichlorobenzene		1.405	1.380	78.57	80.0	1.8
2-Methylphenol		1.126	1.144	81.24	80.0	-1.5
2,2'-oxybis(1-Chloropropane)		3.333	3.499	83.99	80.0	-5.0
bis(2-Chloroisopropyl)ether		3.333	3.499	83.99	80.0	-5.0
4-Methylphenol		1.155	1.171	81.08	80.0	-1.4
3- and 4-Methylphenol		1.155	1.171	81.08	80.0	-1.4
Acetophenone		3.151	2.989	75.23	80.0	6.0
N-Nitroso-di-n-propylamine	#	.990	1.007	81.37	80.0	-1.7#
o-Toluidine		2.027	1.902	75.06	80.0	6.2
Hexachloroethane		.608	.624	82.10	80.0	-2.6
Nitrobenzene		.408	.418	82.06	80.0	-2.6
Isophorone		.787	.776	78.86	80.0	1.4
2-Nitrophenol	*	.182	.195	79.43	80.0	.7*
2,4-Dimethylphenol		.393	.389	79.26	80.0	.9
Benzoic acid		.266	.286	86.05	80.0	-7.6
bis(2-Chloroethoxy)methane		.472	.476	80.66	80.0	-.8
2,4-Dichlorophenol	*	.322	.326	80.98	80.0	-1.2*
1,2,4-Trichlorobenzene		.365	.354	77.49	80.0	3.1
Naphthalene		1.031	.993	77.10	80.0	3.6
4-Chloroaniline		.478	.464	77.70	80.0	2.9
Hexachlorobutadiene	*	.205	.223	87.19	80.0	-9.0*
4-Chloro-3-methylphenol	*	.343	.344	80.29	80.0	-.4*
2-Methylnaphthalene		.644	.629	78.13	80.0	2.3
1-Methylnaphthalene		.624	.613	78.66	80.0	1.7
Hexachlorocyclopentadiene	#	.346	.447	93.48	80.0	-16.9#
2,4,6-Trichlorophenol	*	.415	.457	88.11	80.0	-10.1*
2,4,5-Trichlorophenol		.454	.488	85.94	80.0	-7.4
2-Chloronaphthalene		1.201	1.203	80.16	80.0	-.2

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.447	.469	77.32	80.0	3.3
Dimethylphthalate		1.434	1.403	78.27	80.0	2.2
2,6-Dinitrotoluene		.281	.297	76.61	80.0	4.2
Acenaphthylene		1.876	1.857	79.18	80.0	1.0
3-Nitroaniline		.354	.352	73.63	80.0	8.0
Acenaphthene	*	1.216	1.176	77.40	80.0	3.2*
2,4-Dinitrophenol	#	.129	.143	89.18	80.0	-11.5#
4-Nitrophenol	#	.181	.169	74.64	80.0	6.7#
Dibenzofuran		1.689	1.633	77.36	80.0	3.3
2,4-Dinitrotoluene		.406	.394	72.52	80.0	9.3
1-Naphthylamine		1.025	.961	74.98	80.0	6.3
2-Naphthylamine		1.109	1.042	75.13	80.0	6.1
Diethylphthalate		1.455	1.326	72.91	80.0	8.9
4-Chlorophenyl-phenylether		.627	.623	79.45	80.0	.7
Fluorene		1.250	1.130	72.33	80.0	9.6
4-Nitroaniline		.337	.282	66.86	80.0	16.4
4,6-Dinitro-2-methylphenol		.104	.125	86.33	80.0	-7.9
N-Nitrosodiphenylamine (1)	*	.543	.557	82.08	80.0	-2.6*
1,2-Diphenylhydrazine		1.063	.978	80.10	80.0	-.1
4-Bromophenyl-phenylether		.229	.257	89.96	80.0	-12.4
Hexachlorobenzene		.244	.300	89.62	80.0	-12.0
Pentachlorophenol	*	.164	.176	86.08	80.0	-7.6*
Phenanthrene		1.096	1.064	77.64	80.0	3.0
Anthracene		1.089	1.075	78.97	80.0	1.3
Carbazole		1.004	.905	72.08	80.0	9.9
Di-n-butylphthalate		1.303	1.197	73.53	80.0	8.1
Fluoranthene	*	1.112	.949	68.31	80.0	14.6*
Benzidine		.832	.775	298.04	320.0	6.9
Pyrene		1.564	1.808	92.51	80.0	-15.6
Butylbenzylphthalate		.791	.776	78.46	80.0	1.9
3,3'-Dichlorobenzidine		.488	.499	81.79	80.0	-2.2
Benzo(a)anthracene		1.361	1.337	78.57	80.0	1.8
bis(2-Ethylhexyl)phthalate		1.002	.989	79.03	80.0	1.2
Chrysene		1.225	1.208	78.90	80.0	1.4
Di-n-octylphthalate	*	1.933	1.934	80.06	80.0	-.1*
7,12-Dimethylbenz[a]anthrace		.576	.599	83.24	80.0	-4.0
Benzo(b)fluoranthene		1.366	1.375	80.53	80.0	-.7
Benzo(k)fluoranthene		1.262	1.265	80.20	80.0	-.2

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene *	1.180	1.273	86.29	80.0	-7.9*
Indeno(1,2,3-cd)pyrene	1.091	1.102	80.81	80.0	-1.0
Dibenz(a,h)anthracene	1.044	.995	76.21	80.0	4.7
Benzo(g,h,i)perylene	1.098	1.021	74.39	80.0	7.0
2-Fluorophenol	1.243	1.253	80.66	80.0	-.8
Phenol-d5	1.602	1.625	81.15	80.0	-1.4
Phenol-d6	1.602	1.625	81.15	80.0	-1.4
Nitrobenzene-d5	.376	.396	84.05	80.0	-5.1
2-Fluorobiphenyl	1.319	1.343	81.47	80.0	-1.8
2,4,6-Tribromophenol	.228	.238	83.50	80.0	-4.4
Terphenyl-d14	1.012	1.135	89.75	80.0	-12.2

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC391 Date Analyzed: 03/19/97

Instrument ID: HP03301 Time Analyzed: 11:49

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	68280	12.23	235804	15.66	125113	20.56
	UPPER LIMIT	136560		471608		250226	
	LOWER LIMIT	34140		117902		62557	
	EPA SAMPLE NO.						
01	KMW-4	63617	12.24	208232	15.66	106708	20.57
02	RB--1	60622	12.24	208487	15.67	115079	20.58
03	RB-3-	74442	12.24	257842	15.66	141394	20.57
04	KMW23DL	70672	12.24	225680	15.69	126107	20.57
05	KMW-3DL	70402	12.24	241492	15.67	124767	20.58
06	KMW-3RE	81373	12.26	81790*	15.67	142669	20.59
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC391 Date Analyzed: 03/19/97

Instrument ID: HP03301 Time Analyzed: 11:49

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	191850	24.75	101577	31.72	84174	37.57
	UPPER LIMIT	383700		203154		168348	
	LOWER LIMIT	95925		50789		42087	
	EPA SAMPLE NO.						
01	KMW-4	191110	24.76	144148	31.73	117418	37.60
02	RB--1	202218	24.77	137078	31.74	118197	37.61
03	RB-3-	252680	24.77	180376	31.74	150621	37.61
04	KMW23DL	225981	24.77	156593	31.73	137163	37.61
05	KMW-3DL	212086	24.77	150527	31.74	136840	37.61
06	KMW-3RE	215159	24.78	142582	31.75	122749	37.62
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC430 DFTPP Injection Date: 03/20/97

Instrument ID: HP03301 DFTPP Injection Time: 07:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	59.2
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	44.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.7
365	Greater than 1.00% of mass 198	1.87
441	Present, but less than mass 443	7.5
442	Greater than 40.0% of mass 198	49.8
443	17.0 - 23.0% of mass 442	9.1 (18.2)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
01	SSTD80	STD0737	>DC431	03/20/97	08:24
02	KMW23DL2	2677538DL2	>DC436	03/20/97	09:23
03	SBLKLA0764	SBLKLA076	>DC437	03/20/97	10:20
04	076LALCS4	076LALCS	>DC438	03/20/97	11:17
05	076LAUS4	076LAUS	>DC439	03/20/97	12:13
06	076LAMS4	076LAMS	>DC440	03/20/97	13:10
07	076LAMSD4	076LAMSD	>DC441	03/20/97	14:07
08	S2160	2677200	>DC442	03/20/97	15:03
09	S3160	2677201	>DC443	03/20/97	16:00
10	S4M1-	2677203	>DC445	03/20/97	17:54
11	S4M2-	2677204	>DC446	03/20/97	18:50
12	S4M13	2677205	>DC447	03/20/97	19:47
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/20/97 Time: 08:24

Lab File ID: >DC431 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.511	1.634	86.51	80.0	-8.1
N-Nitrosodimethylamine		.875	.959	87.69	80.0	-9.6
2-Picoline		1.500	1.513	80.66	80.0	-.8
Phenol	*	1.594	1.638	82.22	80.0	-2.8*
Aniline		1.965	1.988	80.95	80.0	-1.2
bis(2-Chloroethyl)ether		1.331	1.356	81.49	80.0	-1.9
2-Chlorophenol		1.318	1.363	82.76	80.0	-3.4
1,3-Dichlorobenzene		1.487	1.537	82.70	80.0	-3.4
1,4-Dichlorobenzene	*	1.483	1.551	83.67	80.0	-4.6*
Benzyl alcohol		.801	.823	82.26	80.0	-2.8
1,2-Dichlorobenzene		1.405	1.447	82.38	80.0	-3.0
2-Methylphenol		1.126	1.132	80.44	80.0	-.5
2,2'-oxybis(1-Chloropropane)		3.333	3.082	73.99	80.0	7.5
bis(2-Chloroisopropyl)ether		3.333	3.082	73.99	80.0	7.5
4-Methylphenol		1.155	1.167	80.82	80.0	-1.0
3- and 4-Methylphenol		1.155	1.167	80.82	80.0	-1.0
Acetophenone		3.151	3.149	80.63	80.0	-.8
N-Nitroso-di-n-propylamine	#	.990	1.045	84.48	80.0	-5.6#
o-Toluidine		2.027	1.929	76.12	80.0	4.8
Hexachloroethane		.608	.645	84.79	80.0	-6.0
Nitrobenzene		.408	.435	85.33	80.0	-6.7
Isophorone		.787	.765	77.68	80.0	2.9
2-Nitrophenol	*	.182	.208	84.61	80.0	-5.8*
2,4-Dimethylphenol		.393	.398	80.96	80.0	-1.2
Benzoic acid		.266	.263	79.14	80.0	1.1
bis(2-Chloroethoxy)methane		.472	.476	80.68	80.0	-.8
2,4-Dichlorophenol	*	.322	.326	81.10	80.0	-1.4*
1,2,4-Trichlorobenzene		.365	.370	81.06	80.0	-1.3
Naphthalene		1.031	1.054	81.85	80.0	-2.3
4-Chloroaniline		.478	.474	79.34	80.0	.8
Hexachlorobutadiene	*	.205	.225	87.63	80.0	-9.5*
4-Chloro-3-methylphenol	*	.343	.340	79.41	80.0	.7*
2-Methylnaphthalene		.644	.649	80.60	80.0	-.8
1-Methylnaphthalene		.624	.632	81.08	80.0	-1.3
Hexachlorocyclopentadiene	#	.346	.428	89.59	80.0	-12.0#
2,4,6-Trichlorophenol	*	.415	.449	86.59	80.0	-8.2*
2,4,5-Trichlorophenol		.454	.482	84.89	80.0	-6.1
2-Chloronaphthalene		1.201	1.228	81.79	80.0	-2.2

484 4/24/97

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/20/97 Time: 08:24

Lab File ID: >DC431 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.447	.472	77.71	80.0	2.9
Dimethylphthalate		1.434	1.431	79.84	80.0	.2
2,6-Dinitrotoluene		.281	.301	77.57	80.0	3.0
Acenaphthylene		1.876	1.946	82.96	80.0	-3.7
3-Nitroaniline		.354	.370	77.34	80.0	3.3
Acenaphthene	*	1.216	1.238	81.44	80.0	-1.8*
2,4-Dinitrophenol	#	.129	.147	91.33	80.0	-14.2#
4-Nitrophenol	#	.181	.183	81.19	80.0	-1.5#
Dibenzofuran		1.689	1.706	80.81	80.0	-1.0
2,4-Dinitrotoluene		.406	.417	76.61	80.0	4.2
1-Naphthylamine		1.025	1.047	81.69	80.0	-2.1
2-Naphthylamine		1.109	1.144	82.49	80.0	-3.1
Diethylphthalate		1.455	1.431	78.64	80.0	1.7
4-Chlorophenyl-phenylether		.627	.656	83.65	80.0	-4.6
Fluorene		1.250	1.235	79.10	80.0	1.1
4-Nitroaniline		.337	.337	79.99	80.0	.0
4,6-Dinitro-2-methylphenol		.104	.123	84.89	80.0	-6.1
N-Nitrosodiphenylamine (1)	*	.543	.536	78.99	80.0	1.3*
1,2-Diphenylhydrazine		1.063	.940	76.37	80.0	4.5
4-Bromophenyl-phenylether		.229	.240	84.02	80.0	-5.0
Hexachlorobenzene		.244	.285	84.41	80.0	-5.5
Pentachlorophenol	*	.164	.171	83.57	80.0	-4.5*
Phenanthrene		1.096	1.108	80.84	80.0	-1.1
Anthracene		1.089	1.123	82.52	80.0	-3.1
Carbazole		1.004	1.007	80.22	80.0	-.3
Di-n-butylphthalate		1.303	1.423	87.35	80.0	-9.2
Fluoranthene	*	1.112	1.176	84.58	80.0	-5.7*
Benzidine		.832	.753	289.78	320.0	9.4
Pyrene		1.564	1.469	75.16	80.0	6.0
Butylbenzylphthalate		.791	.773	78.17	80.0	2.3
3,3'-Dichlorobenzidine		.488	.534	87.52	80.0	-9.4
Benzo(a)anthracene		1.361	1.339	78.68	80.0	1.6
bis(2-Ethylhexyl)phthalate		1.002	1.054	84.15	80.0	-5.2
Chrysene		1.225	1.225	80.00	80.0	.0
Di-n-octylphthalate	*	1.933	2.005	82.99	80.0	-3.7*
7,12-Dimethylbenz[a]anthrace		.576	.604	83.89	80.0	-4.9
Benzo(b)fluoranthene		1.366	1.397	81.85	80.0	-2.3
Benzo(k)fluoranthene		1.262	1.300	82.43	80.0	-3.0

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/20/97 Time: 08:24

Lab File ID: >DC431 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene *	1.180	1.223	82.92	80.0	-3.7*
Indeno(1,2,3-cd)pyrene	1.091	1.152	84.41	80.0	-5.5
Dibenz(a,h)anthracene	1.044	1.124	86.11	80.0	-7.6
Benzo(g,h,i)perylene	1.098	1.133	82.54	80.0	-3.2
2-Fluorophenol	1.243	1.291	83.07	80.0	-3.8
Phenol-d5	1.602	1.631	81.42	80.0	-1.8
Phenol-d6	1.602	1.631	81.42	80.0	-1.8
Nitrobenzene-d5	.376	.408	86.65	80.0	-8.3
2-Fluorobiphenyl	1.319	1.380	83.71	80.0	-4.6
2,4,6-Tribromophenol	.228	.238	83.57	80.0	-4.5
Terphenyl-d14	1.012	.963	76.14	80.0	4.8

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC431 Date Analyzed: 03/20/97

Instrument ID: HP03301 Time Analyzed: 08:24

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	40170	12.18	134346	15.60	70598	20.50
	UPPER LIMIT	80340		268692		141196	
	LOWER LIMIT	20085		67173		35299	
	EPA SAMPLE NO.						
01	KMW23DL2	33474	12.17	115555	15.60	63319	20.49
02	SBLKLA0764	37871	12.17	129640	15.59	69666	20.50
03	076LALCS4	43830	12.18	132282	15.60	61588	20.50
04	076LAUS4	40216	12.18	136158	15.61	70495	20.50
05	076LAMS4	47464	12.18	148693	15.61	64090	20.51
06	076LAMSD4	43663	12.19	149724	15.61	74049	20.51
07	S2160	41247	12.19	137627	15.60	72555	20.50
08	S3160	42628	12.19	138672	15.60	68659	20.51
09	S4M1-	55443	12.18	176643	15.60	81602	20.50
10	S4M2-	49771	12.18	148137	15.60	63977	20.50
11	S4M13	53082	12.16	170289	15.58	79543	20.49
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID (Standard): >DC431 Date Analyzed: 03/20/97

Instrument ID: HP03301 Time Analyzed: 08:24

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	119150	24.69	98295	31.66	91450	37.44
	UPPER LIMIT	238300		196590		182900	
	LOWER LIMIT	59575		49148		45725	
	EPA SAMPLE NO.						
01	KMW23DL2	113139	24.68	79431	31.65	67932	37.44
02	SBLKLA0764	120338	24.68	76444	31.65	68455	37.44
03	076LALCS4	101970	24.69	80571	31.66	73092	37.45
04	076LAUS4	108122	24.69	76196	31.65	70845	37.45
05	076LAMS4	95962	24.69	75490	31.66	68097	37.45
06	076LAMSD4	107347	24.69	78606	31.67	71717	37.46
07	S2160	119436	24.69	74383	31.66	59325	37.45
08	S3160	106003	24.70	64523	31.65	53363	37.46
09	S4M1-	119265	24.69	72487	31.65	66444	37.45
10	S4M2-	94595	24.69	55538	31.65	47784	37.44
11	S4M13	111680	24.68	62881	31.65	54722	37.42
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst_____ *** Shift #2 Analyst: [illegible] *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

S-F
SVOA

Other problems or comments are as follows:

_____

_____

_____

_____

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC35A	DFTPP	50NG/UL	03/18/97	09:50			[illegible]
1	>DC351	SSTD80	STD0737	03/18/97	10:31			[illegible]
1	>DC35Z	SSTD80	STD0737	03/18/97	11:38			[illegible]
2	>DC352	SSTD160	STD0737	03/18/97	12:55			"
3	>DC353	SSTD05	STD0737	03/18/97	13:52			"
4	>DC354	SSTD50	STD0737	03/18/97	14:49			"
5	>DC355	SSTD120	STD0737	03/18/97	15:45			"
6	>DC356	SBLKWE0764	SBLKWE076	03/18/97	16:42	97076WAE		"
7	>DC357	076WELCS4	076WELCS	03/18/97	17:38	97076WAE		"
8	>DC358	KMMW4	2677530	03/18/97	18:35	97076WAE		"
9	>DC359	KMMW4MS	2677532	03/18/97	19:31	97076WAE		"
10	>DC360	KMMW4MSD	2677533	03/18/97	20:28	97076WAE		"
1	>DC370	DFTPP	50NG/UL	03/18/97	21:36			V

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst: JKC *** Shift #2 Analyst: DJE

Comment Code:
R = Reinjection necessary
S = Surrogate problem
NU = Not used
MR = Meets requirements
Cz = Confirms z, (z = I or X)
X = Sample sent to be reextracted
I = Internal Standard problem
F = Further dilution required
IUO = Internal use only
T = Injected outside valid tune period

Other problems or comments are as follows:

* Autosampler error following injection of >DC379

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC370	DFTPP	50NG/UL	03/18/97	21:36			MR
1	>DC371	SSTD80	STD0737	03/18/97	22:17			MR
6	>DC376	RB-02	2677434	03/18/97	23:16	97076WAE		MR
7	>DC377	KMMW3	2677529	03/19/97	00:12	97076WAE		MR
8	>DC378	KMMW5	2677535	03/19/97	01:09	97076WAE		MR
9	>DC379	KMMW1	2677536	03/19/97	02:05	97076WAE		F, R
10	>DC380	KMW-3	2677537	03/19/97	08:07	97076WAE		F, MR
11	>DC381	KMW23	2677538	03/19/97	09:03	97076WAE		MR
1	>DC390	DFTPP	50NG/UL	03/19/97	11:20			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst: DKG *** Shift #2 Analyst: DJE

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC390	DFTPP	50NG/UL	03/19/97	11:20			MTR
1	>DC391	SSTD80	STD0737	03/19/97	11:49			MTR
7	>DC397	RB--1	2677540	03/19/97	14:57	97076WAE		MTR
8	>DC398	RB-3-	2678205	03/19/97	15:54	97076WAE		MTR
9	>DC425	KMW23DL	26775380L	03/19/97	16:51	97076WAE	10	OK/FS
10	>DC426	KMW-3DL	26775370L	03/19/97	17:47	97076WAE	40	MTR
11	>DC427	KMW-3RE	2677537RE	03/19/97	18:44	97076WAE		IC
9	>DC428	KMW23DL2	26775380L2	03/19/97	19:41	97076WAE	40	NU
1	>DC430	DFTPP	50NG/UL	03/20/97	07:59			MTR
	DC396	KMW-1	2677539	3/19/97	14:01	97076WAE	Lm 3/27/97	

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst DKC *** Shift #2 Analyst: D. Ward

Comment Code:

R = Reinjection necessary		X = Sample sent to be reextracted	
S = Surrogate problem		I = Internal Standard problem	
NU = Not used		F = Further dilution required	
NR = Meets requirements		IUO = Internal use only	
Cz = Confirms z, (z = I or X)		T = Injected outside valid tune period	

J 8/27/97

Other problems or comments are as follows:

*

*

*

*

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date Injected	Time Injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC430	DFTPP	50NG/UL	03/20/97	07:59			C12
1	>DC431	SSTD80	STD0737	03/20/97	08:24			1
6	>DC436	KMW23DL2	26775380L2	03/20/97	09:23	97076WAE	80	1
7	>DC437	SBLKLA0764	SBLKLA076	03/20/97	10:20	97076SLA		1
8	>DC438	076LALCS4	076LALCS	03/20/97	11:17	97076SLA		1
9	>DC439	076LAUS4	076LAUS	03/20/97	12:13	97076SLA		1
10	>DC440	076LAMS4	076LAMS	03/20/97	13:10	97076SLA		1
11	>DC441	076LAMSD4	076LAMSD	03/20/97	14:07	97076SLA		1
12	>DC442	S2160	2677200	03/20/97	15:03	97076SLA		1
13	>DC443	S3160	2677201	03/20/97	16:00	97076SLA		1
14	>DC444	S316-	2677202	03/20/97	16:57	97076SLA		12
15	>DC445	S4M1-	2677203	03/20/97	17:54	97076SLA		12
16	>DC446	S4M2-	2677204	03/20/97	18:50	97076SLA		1
17	>DC447	S4M13	2677205	03/20/97	19:47	97076SLA		1
1	>DC450	DFTPP	50NG/UL	03/20/97	20:51			C12

Organic Extraction Batchlog

Prep Analysis # 00813 BNA Water Extraction
Prep Group # 603 TC8 Water Dept: 26

Verified:
Start Date: 3-17-97
Start Time: 11:40
Tech 1: S. Durkin
Tech 2:

BATCH NO. 97076WAE026 | 0178 KERR

QC	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKWB	1000	SS97051A*	1.0			1.0	N/A	DI H_2O
LCS6	LCSRH	1000	SS97051A*	1.0	MS97073C	1.0	↓	↓	↓ I3TC84
2677532MS	KMMW4MS	1000	SS97051A*	1.0	MS97073C	1.0	↓	↓	light brown cloudy/milky
2677533MSD	KMMW4MSD	1000	SS97051A*	1.0	MS97073C	1.0	↓	↓	↓

SLD 3-17-97

	Sample #	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2677434	RB-02	1000	SS97051A*	1.0	1.0	N/A		4678 4679	3/28/97	N
2	2677529	KMMW3	1000	SS97051A*	1.0			yellow/milky centrifuged	4678 4679	3/28/97	N
3	2677530 bkg	KMMW4	1000	SS97051A*	1.0			light brown cloudy/milky	4678 4679	3/28/97	N
4	2677535	KMMW5	1000	SS97051A*	1.0			Brown/milky centrifuged	4678 4679	3/28/97	N
5	2677536	KMMW1	1000	SS97051A*	1.0			yellow/milky centrifuged	4678 4679	3/28/97	N
6	2677537	KMW-3	1000	SS97051A*	1.0			Grey/milky color centrifuged	4678 4679	3/28/97	N
7	2677538	KMW23	1000	SS97051A*	1.0			↓ centrifuged	4678 4679	3/28/97	N
8	2677539	KMW-4	1000	SS97051A*	1.0			milky centrifuged	4678 4679	3/28/97	N
9	2677540	RB-1	1000	SS97051A*	1.0				4678 4679	3/28/97	N
10	2678205	RB-3	1000	SS97051A	1.0	↓	↓				
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

SLD 3-17-97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	B11759	H_2SO_4	K35243
Na_2SO_4	960515		
NaOH	960778H		
nal Standar	LA63606	Balance #	
Evap/bath	70 °C	S-Evap/bath	°C
N-Evap	°C		

Spike Solutions:

* ~~SS97051A~~ SS97051A SLD 3-17-97 BNA SURROGATE STD.
MS97073C LCS SPIKE (100)

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
P	Aq	EB	RB-1	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

• = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column(1): DB608 ID: 0.53 (mm) GC Column(2): DB1701 ID: 0.53 (mm)

	SAMPLE	SAMPLE CODE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	TOT OUT	
01	2677536	KMMW1	70	91	57 *	54 *	2	J@, UJ@
02	2677529	KMMW3	68	92	55 *	51 *	2	J@, UJ@
03	2677530	KMMW4	72	93	45 *	44 *	2	J@, UJ@
04	2677532 MS	KMMW4MS	64	80	70	68	0	
05	2677533 MSD	KMMW4MSD	64	81	82	76	0	
06	2677535	KMMW5	64	85	37 *	37 *	2	J@, UJ@
07	2677539	KMW-4	73	92	70	69	0	
08	BLANKA	PBLKWW	63	80	108	96	0	
09	2677540	RB--1	77	104	99	91	0	

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION
TCX = Tetrachloro-m-xylene	(60-120)	0.402 ug/L
DCB = Decachlorbiphenyl	(60-120)	0.401 ug/L

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column(1): DB608 ID: 0.53 (mm) GC Column(2): DB1701 ID: 0.53 (mm)

	SAMPLE	SAMPLE CODE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	TOT OUT
01	2677537	KMW-3	93	66	28 *	26 *	2
02	2677538	KMW23	98	64	29 *	28 *	2

JD, UJD
JD, UJD

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION
TCX = Tetrachloro-m-xylene	(60-120)	0.402 ug/L
DCB = Decachlorbiphenyl	(60-120)	0.401 ug/L

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Matrix Spike - Sample Code No.: KMMW4

Compound	Spike Added (ug/L)	Sample Concen (ug/L)	MS Concen (ug/L)	MSD Concen (ug/L)	MS % REC#	MSD % REC#	MS-MSD % REC Limits	% RPD #	% RPD LIM
alpha-BHC	0.803	0	0.764	0.773	95	96	(67-122)	1	30
gamma-BHC (Lindan	0.803	0	0.764	0.770	95	96	(66-120)	1	30
beta-BHC	0.804	0	0.806	0.777	100	97	(74-120)	4	30
Heptachlor	0.802	0	0.697	0.690	87	86	(54-120)	1	30
delta-BHC	0.803	0	0.845	0.851	105	106	(69-126)	1	30
Aldrin	0.803	0	0.656	0.642	82	80	(42-120)	2	30
Heptachlor epoxid	0.803	0	0.740	0.731	92	91	(64-120)	1	30
gamma-Chlordane	0.803	0	0.704	0.694	88	86	(71-113)	1	30
alpha-Chlordane	0.803	0	0.750	0.758	93	94	(75-114)	1	30
Endosulfan I	0.803	0	0.757	0.762	94	95	(60-120)	1	30
4,4'-DDE	0.803	0	0.621	0.603	77	75	(60-120)	3	30
Dieldrin	0.803	0	0.668	0.658	83	82	(66-120)	2	30
Endrin	0.802	0	0.888	0.852	111	106	(73-129)	4	30
4,4'-DDD	0.803	0	0.789	0.753	98	94	(67-121)	5	30
Endosulfan II	0.804	0	0.776	0.769	97	96	(67-120)	1	30
4,4'-DDT	0.803	0	0.769	0.752	96	94	(71-120)	2	30
Endrin aldehyde	0.803	0	0.962	1.01	120	126	(59-126)	5	30
ndosulfan sulfat	0.803	0	0.901	0.918	112	114	(53-128)	2	30
ethoxychlor	0.803	0	0.823	0.810	102	101	(57-140)	2	30
Endrin ketone	0.804	0	0.797	0.797	99	99	(76-109)	0	30

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

* Values outside of QC limits

RPD: 0 out of 20 outside limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

Sample No.: 2677530 Batch: 970770001A

FORM III PEST -1

4C

PESTICIDE METHOD BLANK SUMMARY

SAMPLE CODE NO.

PBLKWW

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: BLANKA Lab File ID:

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 03/18/97

Date Analyzed (1): 03/26/97 Date Analyzed (2): 03/26/97

Time Analyzed (1): 14:07 Time Analyzed (2): 14:07

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

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

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	KMMW1	2677536	03/26/97	03/26/97
02	KMMW3	2677529	03/26/97	03/26/97
03	KMMW4	2677530	03/26/97	03/26/97
04	KMMW4MS	2677532	03/26/97	03/26/97
05	KMMW4MSD	2677533	03/26/97	03/26/97
06	KMMW5	2677535	03/26/97	03/26/97
07	KMW-3	2677537	04/02/97	04/02/97
08	KMW-4	2677539	03/26/97	03/26/97
09	KMW23	2677538	04/02/97	04/02/97
10	PBLKWW	BLANKA	03/26/97	03/26/97
11	RB--1	2677540	03/27/97	03/27/97

COMMENTS: _____

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.: PBLKWW

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

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

Sample wt/vol: 1000 (g/ml) ml Lab File ID:

% Moisture: Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/97

Concentrated Extract Volume 10000 (uL) Date Analyzed: 03/26/97

Injection Volume: 1 (uL) Dilution Factor: 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L or UG/KG) UG/L	Q
319-84-6	alpha-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0010	U
319-85-7	beta-BHC	0.0011	U
76-44-8	Heptachlor	0.0016	U
319-86-8	delta-BHC	0.0030	U
309-00-2	Aldrin	0.0063	U
1024-57-3	Heptachlor epoxide	0.0010	U
5103-74-2	gamma-Chlordane	0.0014	U
5103-71-9	alpha-Chlordane	0.0010	U
959-98-8	Endosulfan I	0.0020	U
72-55-9	4,4'-DDE	0.0010	U
60-57-1	Dieldrin	0.0010	U
72-20-8	Endrin	0.0071	U
72-54-8	4,4'-DDD	0.0048	U
33213-65-9	Endosulfan II	0.0049	U
50-29-3	4,4'-DDT	0.0090	U
7421-93-4	Endrin aldehyde	0.0048	U
1031-07-8	Endosulfan sulfate	0.0030	U
72-43-5	Methoxychlor	0.016	U
53494-70-5	Endrin ketone	0.0041	U
53469-21-9	Aroclor-1242	0.10	U
11141-16-5	Aroclor-1232	0.048	U
11104-28-2	Aroclor-1221	0.12	U
12674-11-2	Aroclor-1016	0.043	U
12672-29-6	Aroclor-1248	0.038	U
11097-69-1	Aroclor-1254	0.14	U
8001-35-2	Toxaphene	0.40	U
11096-82-5	Aroclor-1260	0.036	U

6D
PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
Endosulfan I			11.92	11.92		11.92	11.87	11.97
alpha-BHC	5.60	5.60	5.60	5.60	5.60	5.60	5.54	5.65
gamma-BHC (Lindane)	6.71	6.70	6.70	6.70	6.71	6.70	6.64	6.75
beta-BHC	6.89	6.88	6.88	6.88	6.89	6.88	6.82	6.93
Heptachlor	7.74	7.74	7.73	7.73	7.74	7.73	7.68	7.79
delta-BHC	8.03	8.03	8.02	8.02	8.03	8.02	7.97	8.08
Aldrin	8.81	8.80	8.80	8.80	8.81	8.80	8.74	8.85
Heptachlor epoxide	10.68	10.68	10.68	10.68	10.69	10.68	10.60	10.75
gamma-Chlordane	11.26	11.26	11.26	11.26	11.27	11.26	11.18	11.33
alpha-Chlordane	11.83	11.83	11.83	11.83	11.84	11.83	11.75	11.90
4,4'-DDE	12.77	12.76	12.76	12.76	12.77	12.76	12.68	12.83
Dieldrin	13.03	13.03	13.02	13.02	13.03	13.02	12.95	13.10
Endrin	14.35	14.35	14.34	14.35	14.36	14.34	14.27	14.42
4,4'-DDD	14.81	14.81	14.80	14.81	14.81	14.80	14.73	14.88
Endosulfan II	15.02	15.02	15.01	15.02	15.03	15.01	14.94	15.09
4,4'-DDT	15.94	15.94	15.93	15.93	15.94	15.93	15.85	16.00
Endrin aldehyde	16.24	16.24	16.23	16.23	16.24	16.23	16.16	16.31
Endosulfan sulfate	16.72	16.72	16.71	16.71	16.72	16.71	16.64	16.79
Methoxychlor	19.61	19.61	19.60	19.60	19.61	19.60	19.52	19.67
Endrin ketone	20.03	20.03	20.01	20.02	20.03	20.01	19.94	20.09
Tetrachloro-m-xylene	3.97	3.97	3.97	3.97	3.97	3.97	3.92	4.02
Decachlorbiphenyl	28.44	28.45	28.42	28.43	28.44	28.42	28.35	28.50

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	7.79E+03	7.30E+03	6.86E+03	6.71E+03	8.46E+03	7.42E+03	9.6
gamma-BHC (Lindane)	6.45E+03	6.06E+03	5.76E+03	5.40E+03	6.36E+03	6.01E+03	7.2
beta-BHC	2.76E+03	2.61E+03	2.47E+03	2.19E+03	2.14E+03	2.43E+03	10.9
Heptachlor	5.05E+03	4.88E+03	4.54E+03	4.25E+03	4.58E+03	4.66E+03	6.8
delta-BHC	5.44E+03	5.27E+03	5.21E+03	4.82E+03	5.64E+03	5.28E+03	5.8
Aldrin	4.61E+03	4.46E+03	4.30E+03	4.00E+03	4.33E+03	4.34E+03	5.2
Heptachlor epoxide	4.39E+03	4.09E+03	3.95E+03	3.56E+03	3.78E+03	3.96E+03	8.0
gamma-Chlordane	4.36E+03	4.12E+03	3.92E+03	3.55E+03	3.76E+03	3.94E+03	7.9
alpha-Chlordane	4.08E+03	3.96E+03	3.73E+03	3.40E+03	3.58E+03	3.75E+03	7.4
Endosulfan I	4.26E+03	3.85E+03	3.63E+03	3.32E+03	3.38E+03	3.69E+03	10.5
4,4'-DDE	3.95E+03	3.70E+03	3.54E+03	3.54E+03	4.70E+03	3.89E+03	12.5
Dieldrin	3.81E+03	3.62E+03	3.43E+03	3.42E+03	4.32E+03	3.72E+03	10.0
Endrin	3.09E+03	2.90E+03	2.75E+03	2.59E+03	3.00E+03	2.87E+03	6.9
4,4'-DDD	3.06E+03	2.87E+03	2.74E+03	2.61E+03	3.06E+03	2.87E+03	6.9
Endosulfan II	3.03E+03	2.88E+03	2.68E+03	2.60E+03	3.07E+03	2.85E+03	7.2
4,4'-DDT	3.07E+03	2.76E+03	2.67E+03	2.58E+03	2.93E+03	2.80E+03	7.1
Endrin aldehyde	1.90E+03	1.82E+03	1.63E+03	1.58E+03	1.65E+03	1.72E+03	8.0
ndosulfan sulfate	2.45E+03	2.33E+03	2.15E+03	2.05E+03	2.26E+03	2.25E+03	7.0
Methoxychlor	1.06E+03	9.53E+02	8.95E+02	9.50E+02	1.34E+03	1.04E+03	17.3
Endrin ketone	2.35E+03	2.25E+03	2.09E+03	1.96E+03	2.24E+03	2.18E+03	7.0
Tetrachloro-m-xylene	4.89E+03	4.39E+03	4.15E+03	4.00E+03	5.57E+03	4.60E+03	13.9
Decachlorbiphenyl	1.37E+03	1.26E+03	1.17E+03	1.04E+03	1.03E+03	1.17E+03	12.3

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	14.30	14.23	14.37	128	1	50.20000	7864	16.4
						2	100.4000	14054	
						3	200.8000	25977	
						4	502	55388	
						5	1004	106066	
	2	15.89	15.82	15.96	112	1	50.20000	6483	12.7
						2	100.4000	12148	
						3	200.8000	22757	
						4	502	49169	
						5	1004	97176	
	3	16.03	15.96	16.10	100	1	50.20000	6002	14.7
						2	100.4000	10760	
						3	200.8000	20403	
						4	502	43873	
						5	1004	83914	
	4	17.95	17.88	18.02	260	1	50.20000	14749	9.5
						2	100.4000	26257	
						3	200.8000	48914	
						4	502	115532	
						5	1004	274098	
	5	19.72	19.65	19.79	50	1	50.20000	2911	11.8
						2	100.4000	5254	
						3	200.8000	10169	
						4	502	22748	
						5	1004	43252	
	6	20.12	20.05	20.19	82	1	50.20000	4801	13.0
						2	100.4000	8813	
						3	200.8000	17203	
						4	502	36284	
						5	1004	70791	
Aroclor-1254	1	11.23	11.16	11.30	106	1	100	10596	
	2	11.46	11.39	11.53	115	1	100	11452	
	3	12.93	12.86	13.00	97	1	100	9711	
	4	13.33	13.26	13.40	192	1	100	19174	
	5	13.77	13.70	13.84	120	1	100	11965	
	6	15.90	15.83	15.97	128	1	100	12823	
Aroclor-1221	1	4.87	4.80	4.94	54	1	251.25	13462	
	2	5.31	5.24	5.38	28	1	251.25	7002	
	3	5.48	5.41	5.55	81	1	251.25	20350	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.87	4.80	4.94	55	1	251.25	13717	
	2	5.48	5.41	5.55	76	1	251.25	19002	
	3	6.63	6.56	6.70	43	1	251.25	10722	
	4	7.75	7.68	7.82	62	1	251.25	15479	
	5	8.25	8.18	8.32	33	1	251.25	8400	
	6	9.83	9.76	9.90	24	1	251.25	6030	
Aroclor-1248	1	7.75	7.68	7.82	87	1	100.39	8755	
	2	9.84	9.77	9.91	92	1	100.39	9220	
	3	10.74	10.67	10.81	117	1	100.39	11753	
	4	10.95	10.88	11.02	126	1	100.39	12685	
	5	11.94	11.87	12.01	124	1	100.39	12439	
	6	13.32	13.25	13.39	68	1	100.39	6793	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	5.47	5.40	5.54	73	1	50.12	4458	16.1
						2	100.24	7909	
						3	200.48	14789	
						4	501.2000	32005	
						5	1002.400	59663	
	2	6.63	6.56	6.70	98	1	50.12	5939	16.1
						2	100.24	10811	
						3	200.48	20053	
						4	501.2000	43205	
						5	1002.400	79507	
	3	7.74	7.67	7.81	153	1	50.12	9333	15.6
						2	100.24	16811	
						3	200.48	30067	
						4	501.2000	66741	
						5	1002.400	129353	
	4	8.25	8.18	8.32	80	1	50.12	4773	15.7
						2	100.24	8778	
						3	200.48	16105	
						4	501.2000	34910	
						5	1002.400	64973	
	5	9.83	9.76	9.90	58	1	50.12	3396	14.6
						2	100.24	6467	
						3	200.48	11683	
						4	501.2000	26226	
						5	1002.400	47304	
	6	10.25	10.18	10.32	31	1	50.12	1837	14.0
						2	100.24	3478	
						3	200.48	6177	
						4	501.2000	14269	
						5	1002.400	26024	
Aroclor-1242	1	4.86	4.79	4.93	54	1	251	13503	
	2	5.47	5.40	5.54	52	1	251	13176	
	3	6.63	6.56	6.70	74	1	251	18519	
	4	7.75	7.68	7.82	113	1	251	28444	
	5	8.25	8.18	8.32	60	1	251	15068	
	6	10.94	10.87	11.01	62	1	251	15515	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 1V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/25/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	12.81	12.74	12.88	22	1	500	10909	
	2	14.52	14.45	14.59	28	1	500	13916	
	3	14.75	14.68	14.82	32	1	500	16244	
	4	15.10	15.03	15.17	47	1	500	23460	
	5	15.97	15.90	16.04	37	1	500	18439	
	6	18.24	18.17	18.31	41	1	500	20309	

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
alpha-BHC	4.64	4.64	4.63	4.63	4.64	4.63	4.58	4.69
gamma-BHC (Lindane)	5.58	5.58	5.58	5.58	5.58	5.58	5.52	5.63
Heptachlor	6.20	6.20	6.20	6.19	6.20	6.20	6.14	6.25
Aldrin	6.98	6.98	6.97	6.97	6.98	6.97	6.92	7.03
beta-BHC	7.50	7.49	7.49	7.49	7.50	7.49	7.43	7.54
delta-BHC	8.25	8.24	8.24	8.24	8.25	8.24	8.19	8.30
Heptachlor epoxide	8.89	8.89	8.88	8.88	8.90	8.88	8.83	8.94
Endosulfan I	9.77	9.76	9.76	9.76	9.77	9.76	9.68	9.83
gamma-Chlordane	9.91	9.90	9.90	9.90	9.90	9.90	9.82	9.97
alpha-Chlordane	10.09	10.09	10.09	10.08	10.09	10.09	10.01	10.16
4,4'-DDE	10.46	10.45	10.45	10.45	10.46	10.45	10.37	10.52
Dieldrin	10.92	10.92	10.91	10.91	10.93	10.91	10.84	10.99
Endrin	11.59	11.59	11.58	11.58	11.59	11.58	11.51	11.66
4,4'-DDD	13.02	13.02	13.01	13.01	13.02	13.01	12.94	13.09
Endosulfan II	13.15	13.15	13.14	13.15	13.16	13.14	13.07	13.22
4,4'-DDT	13.63	13.63	13.62	13.62	13.63	13.62	13.55	13.70
Endrin aldehyde	14.50	14.50	14.50	14.50	14.51	14.50	14.43	14.58
Endosulfan sulfate	15.58	15.58	15.57	15.58	15.58	15.57	15.49	15.64
Methoxychlor	15.77	15.77	15.77	15.77	15.78	15.77	15.69	15.84
Endrin ketone	16.98	16.98	16.97	16.98	16.98	16.97	16.90	17.05
Tetrachloro-m-xylene	2.97	2.97	2.97	2.97	2.97	2.97	2.91	3.02
Decachlorbiphenyl	20.79	20.80	20.78	20.78	20.79	20.78	20.71	20.86

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	1.73E+04	1.67E+04	1.65E+04	1.71E+04	2.07E+04	1.77E+04	9.7
gamma-BHC (Lindane)	1.43E+04	1.41E+04	1.36E+04	1.38E+04	1.65E+04	1.45E+04	8.1
Heptachlor	1.28E+04	1.25E+04	1.22E+04	1.20E+04	1.36E+04	1.26E+04	5.0
Aldrin	1.15E+04	1.15E+04	1.10E+04	1.09E+04	1.22E+04	1.14E+04	4.6
beta-BHC	4.45E+03	4.70E+03	4.56E+03	4.28E+03	4.53E+03	4.50E+03	3.4
delta-BHC	1.02E+04	1.03E+04	1.06E+04	1.02E+04	1.21E+04	1.07E+04	7.5
Heptachlor epoxide	1.00E+04	9.68E+03	9.35E+03	9.16E+03	9.89E+03	9.63E+03	3.8
Endosulfan I	8.55E+03	8.56E+03	7.99E+03	7.56E+03	8.16E+03	8.16E+03	5.1
gamma-Chlordane	9.41E+03	9.27E+03	8.93E+03	8.73E+03	9.57E+03	9.18E+03	3.8
alpha-Chlordane	8.51E+03	8.48E+03	8.34E+03	7.97E+03	8.73E+03	8.41E+03	3.4
4,4'-DDE	8.29E+03	8.00E+03	8.01E+03	7.89E+03	9.83E+03	8.40E+03	9.6
Dieldrin	8.74E+03	8.48E+03	8.38E+03	8.65E+03	1.02E+04	8.88E+03	8.2
Endrin	7.46E+03	7.12E+03	7.07E+03	7.05E+03	8.32E+03	7.40E+03	7.3
4,4'-DDD	5.72E+03	5.65E+03	5.62E+03	5.55E+03	6.31E+03	5.77E+03	5.4
Endosulfan II	6.27E+03	6.33E+03	6.20E+03	6.14E+03	7.39E+03	6.46E+03	8.0
4,4'-DDT	5.64E+03	5.72E+03	5.47E+03	5.46E+03	6.42E+03	5.74E+03	6.9
Endrin aldehyde	2.27E+03	2.27E+03	2.15E+03	2.17E+03	2.34E+03	2.24E+03	3.5
Endosulfan sulfate	3.98E+03	4.14E+03	3.92E+03	3.93E+03	4.42E+03	4.08E+03	5.2
Methoxychlor	2.38E+03	2.40E+03	2.35E+03	2.68E+03	2.91E+03	2.54E+03	9.6
Endrin ketone	5.14E+03	5.46E+03	5.23E+03	5.37E+03	6.42E+03	5.52E+03	9.4
Tetrachloro-m-xylene	9.94E+03	9.64E+03	9.37E+03	9.94E+03	1.18E+04	1.01E+04	9.5
Decachlorbiphenyl	3.11E+03	2.99E+03	3.01E+03	2.83E+03	3.05E+03	3.00E+03	3.4

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	11.95	11.88	12.02	267	1	50.20000	14574	6.0
						2	100.4000	27400	
						3	200.8000	53339	
						4	502	124105	
						5	1004	261183	
	2	12.53	12.46	12.60	139	1	50.20000	7619	6.6
						2	100.4000	14489	
						3	200.8000	27999	
						4	502	64684	
						5	1004	132919	
	3	13.25	13.18	13.32	247	1	50.20000	13218	6.7
						2	100.4000	26043	
						3	200.8000	49844	
						4	502	111014	
						5	1004	244090	
	4	14.29	14.22	14.36	203	1	50.20000	10792	4.5
						2	100.4000	20663	
						3	200.8000	40733	
						4	502	95223	
						5	1004	202499	
	5	15.28	15.21	15.35	650	1	50.20000	33226	9.0
						2	100.4000	61242	
						3	200.8000	122985	
						4	502	309637	
						5	1004	750331	
	6	16.49	16.42	16.56	358	1	50.20000	18685	6.3
						2	100.4000	34682	
						3	200.8000	69513	
						4	502	168741	
						5	1004	391707	
Aroclor-1254	1	8.71	8.64	8.78	174	1	100	17431	
	2	9.29	9.22	9.36	167	1	100	16720	
	3	10.70	10.63	10.77	303	1	100	30280	
	4	11.54	11.47	11.61	200	1	100	20007	
	5	11.97	11.90	12.04	142	1	100	14234	
	6	13.11	13.04	13.18	257	1	100	25711	
Aroclor-1221	1	3.58	3.51	3.65	71	1	251.25	17964	
	2	3.88	3.81	3.95	40	1	251.25	10013	
	3	4.01	3.94	4.08	155	1	251.25	38974	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.01	3.94	4.08	138	1	251.25	34772	
	2	4.83	4.76	4.90	75	1	251.25	18733	
	3	5.98	5.91	6.05	138	1	251.25	34636	
	4	6.31	6.24	6.38	51	1	251.25	12767	
	5	6.58	6.51	6.65	54	1	251.25	13460	
	6	7.54	7.47	7.61	47	1	251.25	11752	
Aroclor-1248	1	5.98	5.91	6.05	191	1	100.39	19222	
	2	7.55	7.48	7.62	174	1	100.39	17513	
	3	7.82	7.75	7.89	170	1	100.39	17053	
	4	8.45	8.38	8.52	99	1	100.39	9941	
	5	9.49	9.42	9.56	175	1	100.39	17607	
	6	10.70	10.63	10.77	99	1	100.39	9943	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	4.00	3.93	4.07	132	1	50.12	7239	6.6
						2	100.24	13761	
						3	200.48	26159	
						4	501.2000	62054	
						5	1002.400	125259	
	2	4.82	4.75	4.89	194	1	50.12	11001	8.8
						2	100.24	20115	
						3	200.48	38802	
						4	501.2000	90905	
						5	1002.400	176591	
	3	5.96	5.89	6.03	376	1	50.12	19840	4.6
						2	100.24	37399	
						3	200.48	72943	
						4	501.2000	178059	
						5	1002.400	392352	
	4	6.29	6.22	6.36	135	1	50.12	7599	7.7
						2	100.24	13796	
						3	200.48	26522	
						4	501.2000	63950	
						5	1002.400	125718	
	5	6.57	6.50	6.64	143	1	50.12	7749	5.4
						2	100.24	14525	
						3	200.48	28168	
						4	501.2000	67249	
						5	1002.400	139036	
	6	7.53	7.46	7.60	121	1	50.12	6491	5.8
						2	100.24	12759	
						3	200.48	23889	
						4	501.2000	58140	
						5	1002.400	113757	
Aroclor-1242	1	4.83	4.76	4.90	143	1	251	35866	
	2	5.39	5.32	5.46	59	1	251	14923	
	3	5.97	5.90	6.04	266	1	251	66735	
	4	6.30	6.23	6.37	98	1	251	24547	
	5	6.58	6.51	6.65	104	1	251	26086	
	6	7.54	7.47	7.61	96	1	251	24179	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 1V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/24/97 03/24/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	10.06	9.99	10.13	38	1	500	19082	
	2	11.94	11.87	12.01	44	1	500	21754	
	3	12.94	12.87	13.01	59	1	500	29257	
	4	13.25	13.18	13.32	78	1	500	38927	
	5	13.92	13.85	13.99	31	1	500	15352	
	6	15.46	15.39	15.53	96	1	500	48197	

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/24/97

Lab File ID: 1V5083.02R Time Analyzed: 13:06

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.59	5.54	5.65	8.71	10.00	-12.9
gamma-BHC (Lindane)	6.70	6.64	6.75	8.85	10.00	-11.5
beta-BHC	6.88	6.82	6.93	9.99	10.00	-0.1
4,4'-DDE	12.76	12.68	12.83	0.91		
Endrin	14.34	14.27	14.42	48.25	50.10	-3.7
4,4'-DDD	14.81	14.73	14.88	0.90		
4,4'-DDT	15.93	15.85	16.00	108.98	100.40	8.5
Endrin aldehyde	16.23	16.16	16.31	0.61		
Methoxychlor	19.60	19.52	19.67	230.01	250.70	-8.3
Endrin ketone	20.01	19.94	20.09	1.08		
Tetrachloro-m-xylene	3.97	3.92	4.02	14.99	20.10	-25.4
Decachlorbiphenyl	28.42	28.35	28.50	17.70	20.10	-12.0

4,4'-DDT % breakdown: 2.1 Endrin % breakdown: 2.4 Combined % breakdown: 4.5

out of control, but on stds and following dis CV

670

FORM VII PEST-1

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083.61R Time Analyzed: 6:26

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D	
alpha-BHC	5.59	5.54	5.65	9.34	10.00	-6.6	
gamma-BHC (Lindane)	6.69	6.64	6.75	9.54	10.00	-4.6	
beta-BHC	6.87	6.82	6.93	10.37	10.00	3.7	
4,4'-DDE	12.75	12.68	12.83	0.64			
Endrin	14.33	14.27	14.42	51.67	50.10	3.1	
4,4'-DDD	14.81	14.73	14.88	1.01			
4,4'-DDT	15.92	15.85	16.00	123.36	100.40	22.9	*
Endrin aldehyde	16.22	16.16	16.31	0.70			
Methoxychlor	19.58	19.52	19.67	234.92	250.70	-6.3	
Endrin ketone	20.01	19.94	20.09	1.14			
Tetrachloro-m-xylene	3.97	3.92	4.02	15.37	20.10	-23.5	*
Decachlorbiphenyl	28.40	28.35	28.50	18.98	20.10	-5.6	

4,4'-DDT % breakdown: 1.6 Endrin % breakdown: 2.4 Combined % breakdown: 4.1

* acceptable on 2nd column

FORM VII PEST-1

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083.03R Time Analyzed: 17:39

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D	
alpha-BHC	5.59	5.54	5.65	9.74	10.00	-2.6	
gamma-BHC (Lindane)	6.69	6.64	6.75	9.77	10.00	-2.3	
beta-BHC	6.87	6.82	6.93	10.84	10.00	8.4	
4,4'-DDE	12.75	12.68	12.83	0.52			
Endrin	14.33	14.27	14.42	54.48	50.10	8.7	
4,4'-DDD	14.80	14.73	14.88	1.08			
4,4'-DDT	15.92	15.85	16.00	126.85	100.40	26.3	*
Endrin aldehyde	16.23	16.16	16.31	0.56			
Methoxychlor	19.58	19.52	19.67	240.76	250.70	-4.0	
Endrin ketone	20.00	19.94	20.09	1.11			
Tetrachloro-m-xylene	3.97	3.92	4.02	16.27	20.10	-19.0	*
Decachlorbiphenyl	28.38	28.35	28.50	19.60	20.10	-2.5	

4,4'-DDT % breakdown: 1.5 Endrin % breakdown: 2.1 Combined % breakdown: 3.6

* out of control
JD, VJO

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083.20R Time Analyzed: 5:30

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.59	5.54	5.65	9.41	10.00	-5.9
gamma-BHC (Lindane)	6.69	6.64	6.75	9.72	10.00	-2.8
beta-BHC	6.87	6.82	6.93	10.72	10.00	7.2
4,4'-DDE	12.74	12.68	12.83	0.48		
Endrin	14.32	14.27	14.42	52.35	50.10	4.5
4,4'-DDD	14.80	14.73	14.88	1.04		
4,4'-DDT	15.91	15.85	16.00	126.07	100.40	25.6
Endrin aldehyde	16.21	16.16	16.31	0.48		
Methoxychlor	19.56	19.52	19.67	234.92	250.70	-6.3
Endrin ketone	19.98	19.94	20.09	1.10		
Tetrachloro-m-xylene	3.97	3.92	4.02	15.67	20.10	-22.0
Decachlorbiphenyl	28.36	28.35	28.50	19.22	20.10	-4.4

4,4'-DDT % breakdown: 1.4 Endrin % breakdown: 2.1 Combined % breakdown: 3.5

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.59R Time Analyzed: 3:12

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.57	5.52	5.63	9.17	10.00	-8.3
gamma-BHC (Lindane)	6.67	6.62	6.73	9.38	10.00	-6.2
beta-BHC	6.85	6.80	6.91	10.41	10.00	4.1
4,4'-DDE	12.71	12.64	12.79	0.40		
Endrin	14.29	14.22	14.37	53.76	50.10	7.3
4,4'-DDD	14.76	14.68	14.83	1.29		
4,4'-DDT	15.87	15.80	15.95	122.47	100.40	22.0
Endrin aldehyde	16.18	16.10	16.25	0.54		
Methoxychlor	19.51	19.45	19.60	228.14	250.70	-9.0
Endrin ketone	19.92	19.86	20.01	1.06		
Tetrachloro-m-xylene	3.95	3.90	4.01	15.14	20.10	-24.7
Decachlorbiphenyl	28.24	28.20	28.34	19.75	20.10	-1.7

4,4'-DDT % breakdown: 1.6 Endrin % breakdown: 2.1 Combined % breakdown: 3.6

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.72R Time Analyzed: 12:16

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.56	5.52	5.63	9.25	10.00	-7.5
gamma-BHC (Lindane)	6.66	6.62	6.73	9.43	10.00	-5.7
beta-BHC	6.84	6.80	6.91	10.32	10.00	3.2
4,4'-DDE	12.70	12.64	12.79	0.39		
Endrin	14.27	14.22	14.37	53.73	50.10	7.3
4,4'-DDD	14.74	14.68	14.83	1.32		
4,4'-DDT	15.86	15.80	15.95	123.96	100.40	23.5
Endrin aldehyde	16.16	16.10	16.25	0.51		
Methoxychlor	19.50	19.45	19.60	239.48	250.70	-4.5
Endrin ketone	19.91	19.86	20.01	1.09		
Tetrachloro-m-xylene	3.95	3.90	4.01	15.16	20.10	-24.6
Decachlorbiphenyl	28.22	28.20	28.34	19.18	20.10	-4.6

4,4'-DDT % breakdown: 1.6 Endrin % breakdown: 2.1 Combined % breakdown: 3.6

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/24/97

Lab File ID: 1V5083B.02R Time Analyzed: 13:06

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	8.72	10.00	-12.8
gamma-BHC (Lindane)	5.57	5.52	5.63	8.73	10.00	-12.7
beta-BHC	7.48	7.43	7.54	9.06	10.00	-9.4
4,4'-DDE	10.44	10.37	10.52	1.00		
Endrin	11.57	11.51	11.66	50.02	50.10	-0.2
4,4'-DDD	13.04	12.94	13.09	0.52		
4,4'-DDT	13.61	13.55	13.70	107.18	100.40	6.7
Methoxychlor	15.76	15.69	15.84	258.82	250.70	3.2
Endrin ketone	16.97	16.90	17.05	0.98		
Tetrachloro-m-xylene	2.97	2.91	3.02	17.96	20.10	-10.7
Decachlorbiphenyl	20.77	20.71	20.86	17.07	20.10	-15.1

4,4'-DDT % breakdown: 1.8 Endrin % breakdown: 1.4 Combined % breakdown: 3.3

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083B.61R Time Analyzed: 6:26

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	9.22	10.00	-7.8
gamma-BHC (Lindane)	5.58	5.52	5.63	9.41	10.00	-5.9
beta-BHC	7.49	7.43	7.54	9.82	10.00	-1.8
4,4'-DDE	10.45	10.37	10.52	0.67		
Endrin	11.59	11.51	11.66	54.71	50.10	9.2
4,4'-DDD	13.06	12.94	13.09	0.53		
4,4'-DDT	13.62	13.55	13.70	117.72	100.40	17.2
Methoxychlor	15.77	15.69	15.84	282.08	250.70	12.5
Endrin ketone	16.98	16.90	17.05	1.06		
Tetrachloro-m-xylene	2.97	2.91	3.02	18.48	20.10	-8.1
Decachlorbiphenyl	20.79	20.71	20.86	18.02	20.10	-10.4

4,4'-DDT % breakdown: 1.3 Endrin % breakdown: 1.4 Combined % breakdown: 2.7

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083B.03R Time Analyzed: 17:39

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.64	4.58	4.69	9.61	10.00	-3.9
gamma-BHC (Lindane)	5.58	5.52	5.63	9.77	10.00	-2.3
beta-BHC	7.49	7.43	7.54	10.30	10.00	3.0
4,4'-DDE	10.46	10.37	10.52	0.51		
Endrin	11.59	11.51	11.66	57.71	50.10	15.2
4,4'-DDD	13.06	12.94	13.09	0.58		
4,4'-DDT	13.63	13.55	13.70	117.40	100.40	16.9
Methoxychlor	15.77	15.69	15.84	288.59	250.70	15.1
Endrin ketone	16.98	16.90	17.05	1.01		
Tetrachloro-m-xylene	2.97	2.91	3.02	19.80	20.10	-1.5
Decachlorbiphenyl	20.79	20.71	20.86	18.32	20.10	-8.9

4,4'-DDT % breakdown: 1.1 Endrin % breakdown: 1.3 Combined % breakdown: 2.4

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083B.20R Time Analyzed: 5:30

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.64	4.58	4.69	9.36	10.00	-6.4
gamma-BHC (Lindane)	5.58	5.52	5.63	9.65	10.00	-3.5
beta-BHC	7.49	7.43	7.54	10.00	10.00	0.0
4,4'-DDE	10.46	10.37	10.52	0.46		
Endrin	11.59	11.51	11.66	55.08	50.10	9.9
4,4'-DDD	13.05	12.94	13.09	0.78		
4,4'-DDT	13.62	13.55	13.70	117.25	100.40	16.8
Methoxychlor	15.77	15.69	15.84	285.90	250.70	14.0
Endrin ketone	16.98	16.90	17.05	0.89		
Tetrachloro-m-xylene	2.97	2.91	3.02	18.85	20.10	-6.2
Decachlorbiphenyl	20.78	20.71	20.86	17.87	20.10	-11.1

4,4'-DDT % breakdown: 1.2 Endrin % breakdown: 1.2 Combined % breakdown: 2.4

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.59R Time Analyzed: 3:12

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	9.46	10.00	-5.4
gamma-BHC (Lindane)	5.57	5.52	5.63	9.67	10.00	-3.3
beta-BHC	7.48	7.43	7.54	9.67	10.00	-3.3
4,4'-DDE	10.45	10.37	10.52	0.38		
Endrin	11.59	11.50	11.65	53.91	50.10	7.6
4,4'-DDD	13.02	12.93	13.08	0.88		
4,4'-DDT	13.62	13.54	13.69	119.57	100.40	19.1
Methoxychlor	15.76	15.69	15.84	284.82	250.70	13.6
Endrin ketone	16.97	16.89	17.04	0.90		
Tetrachloro-m-xylene	2.97	2.91	3.02	18.84	20.10	-6.3
Decachlorbiphenyl	20.77	20.69	20.84	18.23	20.10	-9.3

4,4'-DDT % breakdown: 1.2 Endrin % breakdown: 1.2 Combined % breakdown: 2.4

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.72R Time Analyzed: 12:16

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	9.25	10.00	-7.5
gamma-BHC (Lindane)	5.57	5.52	5.63	9.58	10.00	-4.2
beta-BHC	7.47	7.43	7.54	9.80	10.00	-2.0
4,4'-DDE	10.44	10.37	10.52	0.94		
Endrin	11.57	11.50	11.65	54.16	50.10	8.1
4,4'-DDD	13.02	12.93	13.08	0.92		
4,4'-DDT	13.60	13.54	13.69	115.47	100.40	15.0
Methoxychlor	15.75	15.69	15.84	287.04	250.70	14.5
Endrin ketone	16.96	16.89	17.04	0.87		
Tetrachloro-m-xylene	2.97	2.91	3.02	18.08	20.10	-10.0
Decachlorbiphenyl	20.75	20.69	20.84	17.76	20.10	-11.7

4,4'-DDT % breakdown: 2.0 Endrin % breakdown: 1.2 Combined % breakdown: 3.1

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083.58R Time Analyzed: 4:20

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.59	5.54	5.65	8.05	8.00	0.6
gamma-BHC (Lindane)	6.70	6.64	6.75	8.28	8.00	3.5
beta-BHC	6.88	6.82	6.93	9.48	8.00	18.5
Heptachlor	7.73	7.68	7.79	8.68	8.00	8.5
delta-BHC	8.02	7.97	8.08	8.73	8.00	9.1
Aldrin	8.80	8.74	8.85	8.74	8.00	9.2
Heptachlor epoxide	10.67	10.60	10.75	8.62	8.00	7.7
gamma-Chlordane	11.25	11.18	11.33	8.64	8.00	7.9
alpha-Chlordane	11.82	11.75	11.90	8.55	8.00	6.9
4,4'-DDE	12.75	12.68	12.83	14.14	16.00	-11.6
Dieldrin	13.02	12.95	13.10	14.44	16.00	-9.7
Endrin	14.34	14.27	14.42	16.70	16.00	4.4
4,4'-DDD	14.79	14.73	14.88	16.72	16.00	4.5
Endosulfan II	15.01	14.94	15.09	16.10	16.00	0.6
4,4'-DDT	15.92	15.85	16.00	17.31	16.00	8.2
Endrin aldehyde	16.22	16.16	16.31	16.36	16.00	2.3
Endosulfan sulfate	16.70	16.64	16.79	17.36	16.00	8.5
Methoxychlor	19.59	19.52	19.67	80.56	80.00	0.7
Endrin ketone	20.01	19.94	20.09	16.87	16.00	5.4
Tetrachloro-m-xylene	3.97	3.92	4.02	13.55	16.00	-15.3
Decachlorbiphenyl	28.43	28.35	28.50	36.56	32.00	14.2

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083.60R Time Analyzed: 5:44

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	5.48	5.40	5.54	201.51	200.48	0.5
	6.64	6.56	6.70			
	7.76	7.67	7.81			
	8.26	8.18	8.32			
	9.84	9.76	9.90			
	10.27	10.18	10.32			
Aroclor-1260	14.30	14.23	14.37	202.96	200.80	1.1
	15.89	15.82	15.96			
	16.04	15.96	16.10			
	17.96	17.88	18.02			
	19.72	19.65	19.79			
	20.12	20.05	20.19			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083.01R Time Analyzed: 16:14

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.59	5.54	5.65	7.80	8.00	-2.6
gamma-BHC (Lindane)	6.69	6.64	6.75	8.15	8.00	1.9
beta-BHC	6.87	6.82	6.93	9.41	8.00	17.6
Heptachlor	7.73	7.68	7.79	8.47	8.00	5.8
delta-BHC	8.02	7.97	8.08	8.70	8.00	8.7
Aldrin	8.79	8.74	8.85	8.32	8.00	4.0
Heptachlor epoxide	10.67	10.60	10.75	8.54	8.00	6.8
gamma-Chlordane	11.25	11.18	11.33	8.30	8.00	3.7
alpha-Chlordane	11.82	11.75	11.90	8.42	8.00	5.3
Endosulfan I	11.91	11.87	11.97	9.10	8.00	13.7
4,4'-DDE	12.74	12.68	12.83	13.66	16.00	-14.6
Dieldrin	13.01	12.95	13.10	13.97	16.00	-12.7
Endrin	14.33	14.27	14.42	16.54	16.00	3.4
4,4'-DDD	14.79	14.73	14.88	15.98	16.00	-0.1
Endosulfan II	15.00	14.94	15.09	16.42	16.00	2.7
4,4'-DDT	15.92	15.85	16.00	16.11	16.00	0.7
Endrin aldehyde	16.21	16.16	16.31	15.98	16.00	-0.1
Endosulfan sulfate	16.70	16.64	16.79	17.42	16.00	8.9
Methoxychlor	19.58	19.52	19.67	80.34	80.00	0.4
Endrin ketone	20.00	19.94	20.09	17.09	16.00	6.8
Tetrachloro-m-xylene	3.97	3.92	4.02	13.19	16.00	-17.5
Decachlorbiphenyl	28.37	28.35	28.50	35.58	32.00	11.2

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083.02R Time Analyzed: 16:57

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	5.47	5.40	5.54	200.73	200.48	0.1
	6.62	6.56	6.70			
	7.74	7.67	7.81			
	8.24	8.18	8.32			
	9.82	9.76	9.90			
	10.25	10.18	10.32			
Aroclor-1260	14.28	14.23	14.37	199.90	200.80	-0.4
	15.87	15.82	15.96			
	16.02	15.96	16.10			
	17.94	17.88	18.02			
	19.69	19.65	19.79			
	20.09	20.05	20.19			

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083.18R Time Analyzed: 4:06

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.59	5.54	5.65	8.13	8.00	1.6
gamma-BHC (Lindane)	6.69	6.64	6.75	8.40	8.00	5.1
beta-BHC	6.86	6.82	6.93	9.75	8.00	21.9
Heptachlor	7.72	7.68	7.79	8.50	8.00	6.2
delta-BHC	8.01	7.97	8.08	8.92	8.00	11.5
Aldrin	8.78	8.74	8.85	8.58	8.00	7.3
Heptachlor epoxide	10.65	10.60	10.75	8.70	8.00	8.8
gamma-Chlordane	11.23	11.18	11.33	8.57	8.00	7.1
alpha-Chlordane	11.80	11.75	11.90	8.70	8.00	8.7
4,4'-DDE	12.73	12.68	12.83	13.76	16.00	-14.0
Dieldrin	13.00	12.95	13.10	14.11	16.00	-11.8
Endrin	14.32	14.27	14.42	16.75	16.00	4.7
4,4'-DDD	14.77	14.73	14.88	16.31	16.00	1.9
Endosulfan II	14.99	14.94	15.09	16.50	16.00	3.1
4,4'-DDT	15.90	15.85	16.00	16.86	16.00	5.4
Endrin aldehyde	16.20	16.16	16.31	16.97	16.00	6.1
Endosulfan sulfate	16.68	16.64	16.79	17.27	16.00	8.0
Methoxychlor	19.56	19.52	19.67	81.53	80.00	1.9
Endrin ketone	19.97	19.94	20.09	17.23	16.00	7.7
Tetrachloro-m-xylene	3.97	3.92	4.02	13.75	16.00	-14.1
Decachlorbiphenyl	28.35	28.35	28.50	36.23	32.00	13.2

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083.19R Time Analyzed: 4:48

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	5.47	5.40	5.54	204.41	200.48	2.0
	6.63	6.56	6.70			
	7.74	7.67	7.81			
	8.24	8.18	8.32			
	9.82	9.76	9.90			
	10.25	10.18	10.32			
Aroclor-1260	14.29	14.23	14.37	202.71	200.80	1.0
	15.88	15.82	15.96			
	16.02	15.96	16.10			
	17.94	17.88	18.02			
	19.69	19.65	19.79			
	20.09	20.05	20.19			

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.57R Time Analyzed: 1:48

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.56	5.52	5.63	7.82	8.00	-2.2
gamma-BHC (Lindane)	6.66	6.62	6.73	7.99	8.00	-0.1
beta-BHC	6.84	6.80	6.91	9.16	8.00	14.5
Heptachlor	7.69	7.65	7.76	8.37	8.00	4.6
delta-BHC	7.98	7.93	8.04	8.54	8.00	6.7
Aldrin	8.75	8.71	8.82	8.12	8.00	1.5
Heptachlor epoxide	10.62	10.56	10.71	8.35	8.00	4.3
gamma-Chlordane	11.20	11.14	11.29	8.33	8.00	4.2
alpha-Chlordane	11.77	11.71	11.86	8.24	8.00	3.0
4,4'-DDE	12.69	12.64	12.79	13.46	16.00	-15.9
Dieldrin	12.95	12.90	13.05	14.00	16.00	-12.5
Endrin	14.27	14.22	14.37	16.53	16.00	3.3
4,4'-DDD	14.73	14.68	14.83	16.33	16.00	2.1
Endosulfan II	14.94	14.89	15.04	16.41	16.00	2.6
4,4'-DDT	15.86	15.80	15.95	16.32	16.00	2.0
Endrin aldehyde	16.15	16.10	16.25	16.73	16.00	4.6
Endosulfan sulfate	16.64	16.58	16.73	17.40	16.00	8.7
Methoxychlor	19.49	19.45	19.60	79.10	80.00	-1.1
Endrin ketone	19.91	19.86	20.01	16.85	16.00	5.3
Tetrachloro-m-xylene	3.95	3.90	4.01	12.86	16.00	-19.6
Decachlorbiphenyl	28.21	28.20	28.34	34.87	32.00	9.0

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.58R Time Analyzed: 2:30

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	5.44	5.38	5.53	196.25	200.48	-2.1
	6.60	6.54	6.69			
	7.71	7.64	7.79			
	8.21	8.15	8.30			
	9.78	9.73	9.88			
	10.21	10.15	10.30			
Aroclor-1260	14.24	14.18	14.33	199.62	200.80	-0.6
	15.82	15.77	15.92			
	15.97	15.91	16.06			
	17.88	17.82	17.97			
	19.63	19.59	19.74			
	20.01	19.99	20.14			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.70R Time Analyzed: 10:52

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.57	5.52	5.63	7.82	8.00	-2.2
gamma-BHC (Lindane)	6.67	6.62	6.73	8.07	8.00	0.9
beta-BHC	6.85	6.80	6.91	9.18	8.00	14.8
Heptachlor	7.70	7.65	7.76	8.57	8.00	7.1
delta-BHC	7.99	7.93	8.04	8.72	8.00	9.0
Aldrin	8.76	8.71	8.82	8.27	8.00	3.4
Heptachlor epoxide	10.63	10.56	10.71	8.34	8.00	4.2
gamma-Chlordane	11.21	11.14	11.29	8.31	8.00	3.9
alpha-Chlordane	11.78	11.71	11.86	8.21	8.00	2.7
Endosulfan I	11.87	11.82	11.93	9.08	8.00	13.4
4,4'-DDE	12.71	12.64	12.79	13.86	16.00	-13.4
Dieldrin	12.97	12.90	13.05	14.12	16.00	-11.8
Endrin	14.29	14.22	14.37	16.89	16.00	5.6
4,4'-DDD	14.75	14.68	14.83	16.17	16.00	1.1
Endosulfan II	14.96	14.89	15.04	16.55	16.00	3.4
4,4'-DDT	15.88	15.80	15.95	16.45	16.00	2.8
Endrin aldehyde	16.17	16.10	16.25	16.33	16.00	2.1
Endosulfan sulfate	16.65	16.58	16.73	17.45	16.00	9.1
Methoxychlor	19.51	19.45	19.60	80.74	80.00	0.9
Endrin ketone	19.93	19.86	20.01	16.57	16.00	3.6
Tetrachloro-m-xylene	3.95	3.90	4.01	13.05	16.00	-18.4
Decachlorbiphenyl	28.25	28.20	28.34	35.31	32.00	10.3

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083.71R Time Analyzed: 11:34

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	5.44	5.38	5.53	199.65	200.48	-0.4
	6.60	6.54	6.69			
	7.71	7.64	7.79			
	8.21	8.15	8.30			
	9.79	9.73	9.88			
	10.21	10.15	10.30			
Aroclor-1260	14.24	14.18	14.33	202.05	200.80	0.6
	15.83	15.77	15.92			
	15.97	15.91	16.06			
	17.89	17.82	17.97			
	19.63	19.59	19.74			
	20.03	19.99	20.14			

691

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083B.58R Time Analyzed: 4:20

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.64	4.58	4.69	7.90	8.00	-1.3
gamma-BHC (Lindane)	5.58	5.52	5.63	8.14	8.00	1.8
Heptachlor	6.20	6.14	6.25	8.11	8.00	1.4
Aldrin	6.98	6.92	7.03	8.42	8.00	5.3
beta-BHC	7.49	7.43	7.54	8.91	8.00	11.3
delta-BHC	8.24	8.19	8.30	8.57	8.00	7.1
Heptachlor epoxide	8.89	8.83	8.94	8.34	8.00	4.2
Endosulfan I	9.77	9.68	9.83	8.56	8.00	7.0
gamma-Chlordane	9.90	9.82	9.97	8.34	8.00	4.3
alpha-Chlordane	10.09	10.01	10.16	8.34	8.00	4.2
4,4'-DDE	10.46	10.37	10.52	15.93	16.00	-0.5
Dieldrin	10.92	10.84	10.99	15.89	16.00	-0.7
Endrin	11.59	11.51	11.66	15.85	16.00	-0.9
4,4'-DDD	13.02	12.94	13.09	16.77	16.00	4.8
Endosulfan II	13.15	13.07	13.22	16.17	16.00	1.1
4,4'-DDT	13.62	13.55	13.70	16.75	16.00	4.7
Endrin aldehyde	14.51	14.43	14.58	16.30	16.00	1.9
Endosulfan sulfate	15.58	15.49	15.64	16.93	16.00	5.8
Methoxychlor	15.77	15.69	15.84	82.49	80.00	3.1
Endrin ketone	16.99	16.90	17.05	16.29	16.00	1.8
Tetrachloro-m-xylene	2.97	2.91	3.02	15.81	16.00	-1.2
Decachlorbiphenyl	20.80	20.71	20.86	33.24	32.00	3.9

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 1V5083B.60R Time Analyzed: 5:44

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.01	3.93	4.07	206.22	200.48	2.9
	4.84	4.75	4.89			
	5.98	5.89	6.03			
	6.31	6.22	6.36			
	6.59	6.50	6.64			
	7.55	7.46	7.60			
Aroclor-1260	11.97	11.88	12.02	201.82	200.80	0.5
	12.54	12.46	12.60			
	13.26	13.18	13.32			
	14.30	14.22	14.36			
	15.30	15.21	15.35			
	16.50	16.42	16.56			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083B.01R Time Analyzed: 16:14

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	8.04	8.00	0.5
gamma-BHC (Lindane)	5.58	5.52	5.63	8.16	8.00	1.9
Heptachlor	6.20	6.14	6.25	8.03	8.00	0.3
Aldrin	6.98	6.92	7.03	8.33	8.00	4.2
beta-BHC	7.49	7.43	7.54	8.56	8.00	7.0
delta-BHC	8.24	8.19	8.30	8.75	8.00	9.4
Heptachlor epoxide	8.89	8.83	8.94	8.32	8.00	4.0
Endosulfan I	9.76	9.68	9.83	8.28	8.00	3.5
gamma-Chlordane	9.90	9.82	9.97	8.14	8.00	1.8
alpha-Chlordane	10.08	10.01	10.16	8.00	8.00	0.0
4,4'-DDE	10.45	10.37	10.52	15.48	16.00	-3.3
Dieldrin	10.92	10.84	10.99	15.58	16.00	-2.6
Endrin	11.59	11.51	11.66	15.09	16.00	-5.7
4,4'-DDD	13.02	12.94	13.09	16.50	16.00	3.1
Endosulfan II	13.15	13.07	13.22	16.01	16.00	0.1
4,4'-DDT	13.62	13.55	13.70	16.39	16.00	2.4
Endrin aldehyde	14.50	14.43	14.58	16.09	16.00	0.6
Endosulfan sulfate	15.58	15.49	15.64	17.91	16.00	11.9
Methoxychlor	15.77	15.69	15.84	81.23	80.00	1.5
Endrin ketone	16.98	16.90	17.05	17.02	16.00	6.4
Tetrachloro-m-xylene	2.97	2.91	3.02	15.91	16.00	-0.5
Decachlorbiphenyl	20.79	20.71	20.86	32.73	32.00	2.3

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/26/97

Lab File ID: 2V5083B.02R Time Analyzed: 16:57

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.00	3.93	4.07	207.39	200.48	3.4
	4.82	4.75	4.89			
	5.96	5.89	6.03			
	6.30	6.22	6.36			
	6.57	6.50	6.64			
	7.54	7.46	7.60			
Aroclor-1260	11.95	11.88	12.02	202.75	200.80	1.0
	12.52	12.46	12.60			
	13.25	13.18	13.32			
	14.28	14.22	14.36			
	15.29	15.21	15.35			
	16.48	16.42	16.56			

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083B.18R Time Analyzed: 4:06

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	8.22	8.00	2.8
gamma-BHC (Lindane)	5.57	5.52	5.63	8.24	8.00	3.0
Heptachlor	6.20	6.14	6.25	8.33	8.00	4.1
Aldrin	6.97	6.92	7.03	8.42	8.00	5.3
beta-BHC	7.48	7.43	7.54	8.89	8.00	11.1
delta-BHC	8.24	8.19	8.30	8.86	8.00	10.8
Heptachlor epoxide	8.88	8.83	8.94	8.71	8.00	8.9
Endosulfan I	9.76	9.68	9.83	8.51	8.00	6.4
gamma-Chlordane	9.89	9.82	9.97	8.36	8.00	4.5
alpha-Chlordane	10.08	10.01	10.16	8.53	8.00	6.6
4,4'-DDE	10.45	10.37	10.52	16.16	16.00	1.0
Dieldrin	10.91	10.84	10.99	15.89	16.00	-0.7
Endrin	11.58	11.51	11.66	16.28	16.00	1.7
4,4'-DDD	13.01	12.94	13.09	17.26	16.00	7.9
Endosulfan II	13.14	13.07	13.22	16.45	16.00	2.8
4,4'-DDT	13.62	13.55	13.70	16.64	16.00	4.0
Endrin aldehyde	14.49	14.43	14.58	16.64	16.00	4.0
Endosulfan sulfate	15.57	15.49	15.64	17.89	16.00	11.8
Methoxychlor	15.76	15.69	15.84	82.76	80.00	3.5
Endrin ketone	16.97	16.90	17.05	17.07	16.00	6.7
Tetrachloro-m-xylene	2.97	2.91	3.02	16.45	16.00	2.8
Decachlorbiphenyl	20.77	20.71	20.86	33.40	32.00	4.4

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 03/24/97 03/25/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/27/97

Lab File ID: 2V5083B.19R Time Analyzed: 4:48

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.00	3.93	4.07	213.68	200.48	6.6
	4.83	4.75	4.89			
	5.97	5.89	6.03			
	6.30	6.22	6.36			
	6.58	6.50	6.64			
	7.54	7.46	7.60			
Aroclor-1260	11.96	11.88	12.02	205.53	200.80	2.4
	12.53	12.46	12.60			
	13.25	13.18	13.32			
	14.29	14.22	14.36			
	15.29	15.21	15.35			
	16.49	16.42	16.56			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.57R Time Analyzed: 1:48

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	8.00	8.00	0.0
gamma-BHC (Lindane)	5.57	5.52	5.63	8.34	8.00	4.2
Heptachlor	6.19	6.14	6.25	8.21	8.00	2.6
Aldrin	6.97	6.92	7.03	8.21	8.00	2.7
beta-BHC	7.47	7.43	7.54	8.83	8.00	10.3
delta-BHC	8.23	8.18	8.29	8.87	8.00	10.9
Heptachlor epoxide	8.88	8.83	8.94	8.30	8.00	3.7
Endosulfan I	9.75	9.68	9.83	8.47	8.00	5.8
gamma-Chlordane	9.89	9.82	9.97	8.38	8.00	4.7
alpha-Chlordane	10.07	10.01	10.16	8.17	8.00	2.1
4,4'-DDE	10.44	10.37	10.52	16.00	16.00	0.0
Dieldrin	10.90	10.84	10.99	15.72	16.00	-1.7
Endrin	11.57	11.50	11.65	16.64	16.00	4.0
4,4'-DDD	12.99	12.93	13.08	16.95	16.00	5.9
Endosulfan II	13.13	13.06	13.21	16.32	16.00	2.0
4,4'-DDT	13.61	13.54	13.69	16.61	16.00	3.8
Endrin aldehyde	14.48	14.42	14.57	16.92	16.00	5.8
Endosulfan sulfate	15.55	15.49	15.64	17.90	16.00	11.9
Methoxychlor	15.75	15.69	15.84	82.46	80.00	3.1
Endrin ketone	16.95	16.89	17.04	16.96	16.00	6.0
Tetrachloro-m-xylene	2.97	2.91	3.02	15.76	16.00	-1.5
Decachlorbiphenyl	20.75	20.69	20.84	33.47	32.00	4.6

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.58R Time Analyzed: 2:30

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.00	3.93	4.07	209.33	200.48	4.4
	4.82	4.75	4.89			
	5.95	5.89	6.03			
	6.29	6.22	6.36			
	6.56	6.50	6.64			
	7.53	7.46	7.60			
Aroclor-1260	11.94	11.88	12.02	203.41	200.80	1.3
	12.51	12.46	12.60			
	13.24	13.18	13.32			
	14.27	14.22	14.36			
	15.27	15.21	15.35			
	16.47	16.42	16.56			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.70R Time Analyzed: 10:52

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	4.63	4.58	4.69	8.04	8.00	0.5
gamma-BHC (Lindane)	5.58	5.52	5.63	8.35	8.00	4.3
Heptachlor	6.20	6.14	6.25	8.32	8.00	4.0
Aldrin	6.97	6.92	7.03	8.17	8.00	2.1
beta-BHC	7.49	7.43	7.54	8.75	8.00	9.4
delta-BHC	8.24	8.18	8.29	8.91	8.00	11.4
Heptachlor epoxide	8.89	8.83	8.94	8.31	8.00	3.9
Endosulfan I	9.77	9.68	9.83	8.36	8.00	4.5
gamma-Chlordane	9.90	9.82	9.97	8.30	8.00	3.8
alpha-Chlordane	10.09	10.01	10.16	8.20	8.00	2.5
4,4'-DDE	10.45	10.37	10.52	15.97	16.00	-0.2
Dieldrin	10.92	10.84	10.99	15.91	16.00	-0.5
Endrin	11.59	11.50	11.65	16.39	16.00	2.4
4,4'-DDD	13.01	12.93	13.08	16.73	16.00	4.6
Endosulfan II	13.15	13.06	13.21	16.35	16.00	2.2
4,4'-DDT	13.62	13.54	13.69	16.03	16.00	0.2
Endrin aldehyde	14.50	14.42	14.57	17.02	16.00	6.4
Endosulfan sulfate	15.57	15.49	15.64	18.48	16.00	15.5
Methoxychlor	15.77	15.69	15.84	82.37	80.00	3.0
Endrin ketone	16.98	16.89	17.04	16.77	16.00	4.8
Tetrachloro-m-xylene	2.97	2.91	3.02	15.71	16.00	-1.8
Decachlorbiphenyl	20.78	20.69	20.84	32.83	32.00	2.6

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Init. Calib. Date(s): 04/02/97 04/02/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 04/02/97

Lab File ID: 3V5083B.71R Time Analyzed: 11:34

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	3.99	3.93	4.07	212.83	200.48	6.2
	4.82	4.75	4.89			
	5.96	5.89	6.03			
	6.29	6.22	6.36			
	6.56	6.50	6.64			
	7.53	7.46	7.60			
Aroclor-1260	11.95	11.88	12.02	204.04	200.80	1.6
	12.52	12.46	12.60			
	13.24	13.18	13.32			
	14.28	14.22	14.36			
	15.28	15.21	15.35			
	16.48	16.42	16.56			

8D

PESTICIDE ANALYTICAL SEQUENCE

b Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB608 ID: 0.53 (mm) Init. Calib Date(s): 03/24/97 03/25/97

Instrument: V5808A Calibration File: 1V5083

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 3.97 DCB: 28.42

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	EVALX	EVALX96G	03/24/97	13:06	3.97	28.42
02	MIXA1	MIXA197A	03/24/97	13:48	3.97	28.44
03	MIXA2	MIXA297A	03/24/97	14:30	3.97	28.45
04	MIXA3	MIXA397B	03/24/97	15:12	3.97	28.42
05	MIXA4	MIXA497A	03/24/97	15:54	3.97	28.43
06	MIXA5	MIXA597A	03/24/97	16:35	3.97	28.44
07	TOXAX	TOXAX97A	03/24/97	20:46	3.97	28.43
08	AR161	AR16196F	03/24/97	22:10	3.97	28.41
09	AR162	AR16296D	03/24/97	22:52	3.97	28.42
10	AR163	AR16397A	03/24/97	23:34	3.97	28.42
11	AR164	AR16496D	03/25/97	0:15	3.97	28.43
12	AR165	AR16596E	03/25/97	0:57	3.97	28.41
13	AR21X	AR21X97A	03/25/97	1:39	3.97	28.41
*	AR32X	AR32X97A	03/25/97	2:21	3.98	28.42
	AR42X	AR42X96C	03/25/97	3:03	3.96	28.40
16	AR482	AR48297A	03/25/97	3:45	3.97	28.43
17	AR542	AR54297A	03/25/97	4:27	3.97	28.41
18	MIXA3	MIXA397B	03/26/97	4:20	3.97	28.43
19	AR163	AR16397A	03/26/97	5:44	3.98	28.42
20	EVALX	EVALX96G	03/26/97	6:26	3.97	28.40
21	ZZZZZ	BLANKA	03/26/97	7:08	3.97	28.43
22	ZZZZZ	LCSA	03/26/97	7:50	3.97	28.39
23	ZZZZZ	2676417	03/26/97	8:32	3.97	28.39
24	ZZZZZ	2676806	03/26/97	9:14	3.97	28.40
25	ZZZZZ	2677577	03/26/97	9:56	3.97	28.39
26	ZZZZZ	2675629	03/26/97	10:38	3.97	28.38
27	ZZZZZ	BLANKA	03/26/97	11:20	3.97	28.38
28	ZZZZZ	LCSA	03/26/97	12:02	3.96	28.37

QC LIMITS

TCX = Tetrachloro-m-xylene (3.92 -4.02 MINUTES)

DCB = Decachlorbiphenyl (28.35 -28.50 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

8D

PESTICIDE ANALYTICAL SEQUENCE

ab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB608 ID: 0.53 (mm) Init. Calib Date(s): 03/24/97 03/25/97

Instrument: V5808A Calibration File: 1V5083

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 3.97 DCB: 28.42

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
29	ZZZZZ	2680567	03/26/97	12:44	3.97	28.38
30	ZZZZZ	2680569	03/26/97	13:25	3.96	28.35
31	PBLKWW	BLANKA	03/26/97	14:07	3.97	28.36
32	ZZZZZ	LCSA	03/26/97	14:49	3.96	28.37
33	ZZZZZ	2677021	03/26/97	15:32	3.97	
34	MIXA3	MIXA397B	03/26/97	16:14	3.97	28.37
35	AR163	AR16397A	03/26/97	16:57	3.96	28.36
36	EVALX	EVALX97A	03/26/97	17:39	3.97	28.38
37	KMMW3	2677529	03/26/97	18:21	3.96	28.36
38	KMMW4	2677530	03/26/97	19:03	3.97	28.35
39	KMMW4MS	2677532	03/26/97	19:44	3.97	28.38
40	KMMW4MSD	2677533	03/26/97	20:26	3.96	28.36
41	KMMW5	2677535	03/26/97	21:08	3.97	28.37
?	KMMW1	2677536	03/26/97	21:50	3.96	28.38
.3	ZZZZZ	2677537	03/26/97	22:32	3.98	28.36
44	ZZZZZ	2677538	03/26/97	23:14	3.98	28.36
45	KMW-4	2677539	03/26/97	23:56	3.97	28.35
46	RB--1	2677540	03/27/97	0:37	3.96	28.35
47	ZZZZZ	TOXAPHENE	03/27/97	1:19		
48	ZZZZZ	CHLORDANE	03/27/97	2:01		
49	ZZZZZ	CHLORDANE	03/27/97	2:43		
50	ZZZZZ	CHLORDANE	03/27/97	3:24		
51	MIXA3	MIXA397B	03/27/97	4:06	3.97	28.35
52	AR163	AR16397A	03/27/97	4:48	3.97	28.36
53	EVALX	EVALX97A	03/27/97	5:30	3.97	28.36

QC LIMITS

TCX = Tetrachloro-m-xylene (3.92 -4.02 MINUTES)

DCB = Decachlorbiphenyl (28.35 -28.50 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

8D

PESTICIDE ANALYTICAL SEQUENCE

b Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB608 ID: 0.53 (mm) Init. Calib Date(s): 04/02/97 04/02/97

Instrument: V5808A Calibration File: 3V5083

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 3.96 DCB: 28.27

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	MIXA3	MIXA397C	04/02/97	1:48	3.95	28.21
02	AR163	AR16397A	04/02/97	2:30	3.95	28.22
03	EVALX	EVALX97A	04/02/97	3:12	3.95	28.24
04	ZZZZZ	CHLORDANE	04/02/97	3:54		
05	ZZZZZ	CHLORDANE	04/02/97	4:36		
06	ZZZZZ	MDL BLANK	04/02/97	5:17		
07	ZZZZZ	PCB1221/12	04/02/97	5:59		
08	ZZZZZ	PCB1221/12	04/02/97	6:41		
09	ZZZZZ	PCB1221/12	04/02/97	7:23		
10	ZZZZZ	MIX A MDL	04/02/97	8:05		
11	KMW-3	2677537	04/02/97	8:47	3.97	28.22
12	KMW23	2677538	04/02/97	9:28	3.97	28.21
13	ZZZZZ	BLANKA	04/02/97	10:10	3.96	28.25
	MIXA3	MIXA397C	04/02/97	10:52	3.95	28.25
	AR163	AR16397A	04/02/97	11:34	3.95	28.24
16	EVALX	EVALX97A	04/02/97	12:16	3.95	28.22

QC LIMITS

TCX = Tetrachloro-m-xylene (3.90 -4.01 MINUTES)

DCB = Decachlorbiphenyl (28.20 -28.34 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

8D

PESTICIDE ANALYTICAL SEQUENCE

ab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB1701 ID: 0.53 (mm) Init. Calib Date(s): 03/24/97 03/25/97

Instrument: V5808B Calibration File: 1V5083B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 2.97 DCB: 20.78

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	EVALX	EVALX96G	03/24/97	13:06	2.97	20.77
02	MIXA1	MIXA197A	03/24/97	13:48	2.97	20.79
03	MIXA2	MIXA297A	03/24/97	14:30	2.97	20.80
04	MIXA3	MIXA397B	03/24/97	15:12	2.97	20.78
05	MIXA4	MIXA497A	03/24/97	15:54	2.97	20.78
06	MIXA5	MIXA597A	03/24/97	16:35	2.97	20.79
07	TOXAX	TOXAX97A	03/24/97	20:46	2.97	20.80
08	AR161	AR16196F	03/24/97	22:10	2.97	20.79
09	AR162	AR16296D	03/24/97	22:52	2.97	20.80
10	AR163	AR16397A	03/24/97	23:34	2.96	20.79
11	AR164	AR16496D	03/25/97	0:15	2.97	20.79
12	AR165	AR16596E	03/25/97	0:57	2.97	20.79
13	AR21X	AR21X97A	03/25/97	1:39	2.99	20.79
14	AR32X	AR32X97A	03/25/97	2:21	2.99	20.78
15	AR42X	AR42X96C	03/25/97	3:03	2.95	20.79
16	AR482	AR48297A	03/25/97	3:45	2.97	20.79
17	AR542	AR54297A	03/25/97	4:27	2.97	20.80
18	MIXA3	MIXA397B	03/26/97	4:20	2.97	20.80
19	AR163	AR16397A	03/26/97	5:44	2.98	20.79
20	EVALX	EVALX96G	03/26/97	6:26	2.97	20.79
21	ZZZZZ	BLANKA	03/26/97	7:08	2.97	20.80
22	ZZZZZ	LCSA	03/26/97	7:50	2.97	20.81
23	ZZZZZ	2676417	03/26/97	8:32	2.97	20.78
24	ZZZZZ	2676806	03/26/97	9:14	2.97	20.79
25	ZZZZZ	2677577	03/26/97	9:56	2.97	20.78
26	ZZZZZ	2675629	03/26/97	10:38	2.97	20.79
27	ZZZZZ	BLANKA	03/26/97	11:20	2.97	20.78
28	ZZZZZ	LCSA	03/26/97	12:02	2.96	20.77

QC LIMITS

TCX = Tetrachloro-m-xylene (2.91 -3.02 MINUTES)

DCB = Decachlorbiphenyl (20.71 -20.86 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

8D

PESTICIDE ANALYTICAL SEQUENCE

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB1701 ID: 0.53 (mm) Init. Calib Date(s): 03/24/97 03/25/97

Instrument: V5808B Calibration File: 1V5083B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 2.97 DCB: 20.78

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
29	ZZZZZ	2680567	03/26/97	12:44	2.97	20.78
30	ZZZZZ	2680569	03/26/97	13:25	2.97	20.77
31	PBLKWW	BLANKA	03/26/97	14:07	2.97	20.77
32	ZZZZZ	LCSA	03/26/97	14:49	2.97	20.78
33	ZZZZZ	2677021	03/26/97	15:32	2.97	20.77
34	MIXA3	MIXA397B	03/26/97	16:14	2.97	20.79
35	AR163	AR16397A	03/26/97	16:57	2.97	20.78
36	EVALX	EVALX97A	03/26/97	17:39	2.97	20.79
37	KMMW3	2677529	03/26/97	18:21	2.97	20.78
38	KMMW4	2677530	03/26/97	19:03	2.97	20.78
39	KMMW4MS	2677532	03/26/97	19:44	2.97	20.79
40	KMMW4MSD	2677533	03/26/97	20:26	2.96	20.77
41	KMMW5	2677535	03/26/97	21:08	2.97	20.79
?	KMMW1	2677536	03/26/97	21:50	2.97	20.79
.3	ZZZZZ	2677537	03/26/97	22:32	2.95	20.79
44	ZZZZZ	2677538	03/26/97	23:14	2.99	20.77
45	KMW-4	2677539	03/26/97	23:56	2.97	20.77
46	RB--1	2677540	03/27/97	0:37	2.97	20.77
47	ZZZZZ	TOXAPHENE	03/27/97	1:19		
48	ZZZZZ	CHLORDANE	03/27/97	2:01		
49	ZZZZZ	CHLORDANE	03/27/97	2:43		
50	ZZZZZ	CHLORDANE	03/27/97	3:24		
51	MIXA3	MIXA397B	03/27/97	4:06	2.97	20.77
52	AR163	AR16397A	03/27/97	4:48	2.97	20.79
53	EVALX	EVALX97A	03/27/97	5:30	2.97	20.78

QC LIMITS

TCX = Tetrachloro-m-xylene (2.91 -3.02 MINUTES)

DCB = Decachlorbiphenyl (20.71 -20.86 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

FORM VIII PEST

8D

PESTICIDE ANALYTICAL SEQUENCE

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

GC Column: DB1701 ID: 0.53 (mm) Init. Calib Date(s): 04/02/97 04/02/97

Instrument: V5808B Calibration File: 3V5083B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

SURROGATE RT FROM INITIAL CALIBRATION
TCX: 2.97 DCB: 20.77

	SAMPLE CODE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	MIXA3	MIXA397C	04/02/97	1:48	2.97	20.75
02	AR163	AR16397A	04/02/97	2:30	2.97	20.76
03	EVALX	EVALX97A	04/02/97	3:12	2.97	20.77
04	ZZZZZ	CHLORDANE	04/02/97	3:54		
05	ZZZZZ	CHLORDANE	04/02/97	4:36		
06	ZZZZZ	MDL BLANK	04/02/97	5:17		
07	ZZZZZ	PCB1221/12	04/02/97	5:59		
08	ZZZZZ	PCB1221/12	04/02/97	6:41		
09	ZZZZZ	PCB1221/12	04/02/97	7:23		
10	ZZZZZ	MIX A MDL	04/02/97	8:05		
11	KMW-3	2677537	04/02/97	8:47	2.96	20.77
12	KMW23	2677538	04/02/97	9:28	2.96	20.78
13	ZZZZZ	BLANKA	04/02/97	10:10	2.97	20.79
	MIXA3	MIXA397C	04/02/97	10:52	2.97	20.78
	AR163	AR16397A	04/02/97	11:34	2.96	20.77
16	EVALX	EVALX97A	04/02/97	12:16	2.97	20.75

QC LIMITS

TCX = Tetrachloro-m-xylene (2.91 -3.02 MINUTES)

DCB = Decachlorbiphenyl (20.69 -20.84 MINUTES)

Column used to flag retention time values with asterisk.
* Values outside of QC limits.

FORM VIII PEST

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.
KMMW5

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677535 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	6.65	6.64	6.75	0.0017	
	2	5.56	5.52	5.63	0.0017	0.0
Heptachlor epoxide	1	10.70	10.60	10.75	0.0016	
	2	8.92	8.83	8.94	0.0024	50.0

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: KMMW1

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677536 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	6.64	6.64	6.75	0.0022	
	2	5.57	5.52	5.63	0.0015	46.7
4,4'-DDE	1	12.78	12.68	12.83	0.0021	
	2	10.40	10.37	10.52	0.0035	66.7

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.

KMW-3

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677537 Date(s) Analyzed: 04/02/97 04/02/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endrin	1	14.23	14.22	14.37	0.049	
	2	11.62	11.50	11.65	0.038	28.9

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: KMW23

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677538 Date(s) Analyzed: 04/02/97 04/02/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
4,4'-DDE	1	12.77	12.64	12.79	0.037	
	2	10.40	10.37	10.52	0.019	94.7
Endosulfan II	1	15.03	14.89	15.04	0.0094	
	2	13.21	13.06	13.21	0.011	17.0
4,4'-DDT	1	15.95	15.80	15.95	0.0097	
	2	13.60	13.54	13.69	0.010	3.1
Endrin aldehyde	1	16.19	16.10	16.25	0.024	
	2	14.43	14.42	14.57	0.045	87.5
Endosulfan sulfate	1	16.71	16.58	16.73	0.033	
	2	15.57	15.49	15.64	0.024	37.5

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: KMMW4MS

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677532 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	5.59	5.54	5.65	0.76	
	2	4.64	4.58	4.69	0.82	7.9
gamma-BHC (Lindane)	1	6.69	6.64	6.75	0.76	
	2	5.58	5.52	5.63	0.83	9.2
beta-BHC	1	6.87	6.82	6.93	0.83	
	2	7.49	7.43	7.54	0.81	2.5
Heptachlor	1	7.73	7.68	7.79	0.70	
	2	6.20	6.14	6.25	0.70	0.0
delta-BHC	1	8.01	7.97	8.06	0.85	
	2	8.24	8.19	8.30	0.87	2.4
Aldrin	1	8.79	8.74	8.85	0.66	
	2	6.98	6.92	7.03	0.67	1.5
Heptachlor epoxide	1	10.66	10.60	10.75	0.74	
	2	8.89	8.83	8.94	0.76	2.7
gamma-Chlordane	1	11.24	11.18	11.33	0.70	
	2	9.90	9.82	9.97	0.76	8.6
lpha-Chlordane	1	11.81	11.75	11.90	0.75	
	2	10.09	10.01	10.16	0.81	8.0
Endosulfan I	1	11.91	11.87	11.97	0.78	
	2	9.76	9.68	9.83	0.76	2.6
4,4'-DDE	1	12.75	12.68	12.83	0.62	
	2	10.45	10.37	10.52	0.72	16.1
Dieldrin	1	13.00	12.95	13.10	0.67	
	2	10.92	10.84	10.99	0.75	11.9
Endrin	1	14.33	14.27	14.42	0.89	
	2	11.58	11.51	11.66	0.89	0.0
4,4'-DDD	1	14.78	14.73	14.88	0.79	
	2	13.02	12.94	13.09	0.81	2.5
Endosulfan II	1	15.00	14.94	15.09	0.78	
	2	13.15	13.07	13.22	0.80	2.6
4,4'-DDT	1	15.91	15.86	16.00	0.77	
	2	13.63	13.55	13.70	0.77	0.0
Endrin aldehyde	1	16.21	16.16	16.31	0.96	
	2	14.50	14.43	14.58	1.00	4.2
Endosulfan sulfate	1	16.69	16.64	16.79	0.90	
	2	15.58	15.49	15.64	0.94	4.4
Methoxychlor	1	19.57	19.52	19.67	1.5	
	2	15.77	15.69	15.84	0.82	82.9

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: KMMW4MS

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677532 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endrin ketone	1	19.99	19.94	20.09	0.83	
	2	16.96	16.90	17.05	0.80	3.7

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: KMMW4MSD

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677533 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	5.58	5.54	5.65	0.77	
	2	4.83	4.58	4.69	0.83	7.8
gamma-BHC (Lindane)	1	6.68	6.64	6.75	0.77	
	2	5.57	5.52	5.63	0.81	5.2
beta-BHC	1	6.86	6.82	6.93	0.84	
	2	7.48	7.43	7.54	0.78	7.7
Heptachlor	1	7.72	7.68	7.79	0.69	
	2	6.19	6.14	6.25	0.69	0.0
delta-BHC	1	8.00	7.97	8.08	0.85	
	2	8.23	8.19	8.30	0.88	3.5
Aldrin	1	8.78	8.74	8.85	0.64	
	2	6.97	6.92	7.03	0.66	3.1
Heptachlor epoxide	1	10.65	10.60	10.75	0.73	
	2	8.88	8.83	8.94	0.78	6.8
gamma-Chlordane	1	11.23	11.18	11.33	0.69	
	2	9.89	9.82	9.97	0.71	2.9
alpha-Chlordane	1	11.80	11.75	11.90	0.76	
	2	10.06	10.01	10.16	0.77	1.3
Endosulfan I	1	11.89	11.87	11.97	0.78	
	2	9.75	9.68	9.83	0.76	2.6
4,4'-DDE	1	12.73	12.68	12.83	0.60	
	2	10.44	10.37	10.52	0.73	21.7
Dieldrin	1	12.99	12.95	13.10	0.66	
	2	10.91	10.84	10.99	0.74	12.1
Endrin	1	14.31	14.27	14.42	0.88	
	2	11.57	11.51	11.66	0.85	3.5
4,4'-DDD	1	14.77	14.73	14.88	0.75	
	2	13.00	12.94	13.09	0.81	8.0
Endosulfan II	1	14.98	14.94	15.09	0.77	
	2	13.13	13.07	13.22	0.79	2.6
4,4'-DDT	1	15.90	15.85	16.00	0.75	
	2	13.61	13.55	13.70	0.79	5.3
Endrin aldehyde	1	16.20	16.16	16.31	1.0	
	2	14.49	14.43	14.58	1.0	0.0
Endosulfan sulfate	1	16.68	16.64	16.79	0.92	
	2	15.58	15.49	15.64	0.93	1.1
Methoxychlor	1	19.56	19.52	19.67	1.5	
	2	15.75	15.69	15.84	0.81	85.2

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.
KMMW4MSD

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Lab Sample ID: 2677533 Date(s) Analyzed: 03/26/97 03/26/97

Instrument ID (1): V5808A Instrument ID (2): V5808B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endrin ketone	1	19.98	19.94	20.09	0.80	
	2	16.97	16.90	17.05	0.81	1.2

FORM X PEST-1

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
4,4'-DDD			14.79			14.75	14.68	14.83
gamma-BHC (Lindane)			6.70			6.67	6.62	6.73
4,4'-DDE			12.75			12.71	12.64	12.79
Heptachlor			7.73			7.70	7.65	7.76
Methoxychlor			19.59			19.52	19.45	19.60
gamma-Chlordane			11.25			11.21	11.14	11.29
Endrin aldehyde			16.22			16.18	16.10	16.25
Endrin			14.34			14.29	14.22	14.37
Endrin ketone			20.01			19.94	19.86	20.01
alpha-Chlordane			11.82			11.79	11.71	11.86
4,4'-DDT			15.92			15.88	15.80	15.95
Endosulfan II			15.01			14.96	14.89	15.04
delta-BHC			8.02			7.99	7.93	8.04
alpha-BHC			5.59			5.58	5.52	5.63
Aldrin			8.80			8.76	8.71	8.82
Endosulfan sulfate			16.70			16.66	16.58	16.73
Heptachlor epoxide			10.67			10.63	10.56	10.71
beta-BHC			6.88			6.85	6.80	6.91
Dieldrin			13.02			12.97	12.90	13.05
Decachlorbiphenyl			28.43			28.27	28.20	28.34
Tetrachloro-m-xylene			3.97			3.96	3.90	4.01

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	7.79E+03	7.30E+03	6.86E+03	6.71E+03	8.46E+03	7.42E+03	9.6
gamma-BHC (Lindane)	6.45E+03	6.06E+03	5.76E+03	5.40E+03	6.36E+03	6.01E+03	7.2
beta-BHC	2.76E+03	2.61E+03	2.47E+03	2.19E+03	2.14E+03	2.43E+03	10.9
Heptachlor	5.05E+03	4.88E+03	4.54E+03	4.25E+03	4.58E+03	4.66E+03	6.8
delta-BHC	5.44E+03	5.27E+03	5.21E+03	4.82E+03	5.64E+03	5.28E+03	5.8
Aldrin	4.61E+03	4.46E+03	4.30E+03	4.00E+03	4.33E+03	4.34E+03	5.2
Heptachlor epoxide	4.39E+03	4.09E+03	3.95E+03	3.56E+03	3.78E+03	3.96E+03	8.0
gamma-Chlordane	4.36E+03	4.12E+03	3.92E+03	3.55E+03	3.76E+03	3.94E+03	7.9
alpha-Chlordane	4.08E+03	3.96E+03	3.73E+03	3.40E+03	3.58E+03	3.75E+03	7.4
Endosulfan I	4.26E+03	3.85E+03	3.63E+03	3.32E+03	3.38E+03	3.69E+03	10.5
4,4'-DDE	3.95E+03	3.70E+03	3.54E+03	3.54E+03	4.70E+03	3.89E+03	12.5
Dieldrin	3.81E+03	3.62E+03	3.43E+03	3.42E+03	4.32E+03	3.72E+03	10.0
Endrin	3.09E+03	2.90E+03	2.75E+03	2.59E+03	3.00E+03	2.87E+03	6.9
4,4'-DDD	3.06E+03	2.87E+03	2.74E+03	2.61E+03	3.06E+03	2.87E+03	6.9
Endosulfan II	3.03E+03	2.88E+03	2.68E+03	2.60E+03	3.07E+03	2.85E+03	7.2
4,4'-DDT	3.07E+03	2.76E+03	2.67E+03	2.58E+03	2.93E+03	2.80E+03	7.1
Endrin aldehyde	1.90E+03	1.82E+03	1.63E+03	1.58E+03	1.65E+03	1.72E+03	8.0
Endosulfan sulfate	2.45E+03	2.33E+03	2.15E+03	2.05E+03	2.26E+03	2.25E+03	7.0
Methoxychlor	1.06E+03	9.53E+02	8.95E+02	9.50E+02	1.34E+03	1.04E+03	17.3
Endrin ketone	2.35E+03	2.25E+03	2.09E+03	1.96E+03	2.24E+03	2.18E+03	7.0
Tetrachloro-m-xylene	4.89E+03	4.39E+03	4.15E+03	4.00E+03	5.57E+03	4.60E+03	13.9
Decachlorbiphenyl	1.37E+03	1.26E+03	1.17E+03	1.04E+03	1.03E+03	1.17E+03	12.3

6F
PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	14.26	14.18	14.33	128	1	50.20000	7864	16.4
						2	100.4000	14054	
						3	200.8000	25977	
						4	502	55388	
						5	1004	106066	
	2	15.84	15.77	15.92	112	1	50.20000	6483	12.7
						2	100.4000	12148	
						3	200.8000	22757	
						4	502	49169	
						5	1004	97176	
	3	15.98	15.91	16.06	100	1	50.20000	6002	14.7
						2	100.4000	10760	
						3	200.8000	20403	
						4	502	43873	
						5	1004	83914	
	4	17.90	17.82	17.97	260	1	50.20000	14749	9.5
						2	100.4000	26257	
						3	200.8000	48914	
						4	502	115532	
						5	1004	274098	
	5	19.66	19.59	19.74	50	1	50.20000	2911	11.8
						2	100.4000	5254	
						3	200.8000	10169	
						4	502	22748	
						5	1004	43252	
	6	20.06	19.99	20.14	82	1	50.20000	4801	13.0
						2	100.4000	8813	
						3	200.8000	17203	
						4	502	36284	
						5	1004	70791	
Aroclor-1254	1	11.20	11.12	11.27	106	1	100	10596	
	2	11.43	11.35	11.50	115	1	100	11452	
	3	12.89	12.82	12.97	97	1	100	9711	
	4	13.29	13.22	13.37	192	1	100	19174	
	5	13.73	13.66	13.80	120	1	100	11965	
	6	15.85	15.78	15.93	128	1	100	12823	
Aroclor-1221	1	4.86	4.78	4.93	54	1	251.25	13462	
	2	5.29	5.22	5.37	28	1	251.25	7002	
	3	5.46	5.39	5.54	81	1	251.25	20350	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.86	4.78	4.93	55	1	251.25	13717	
	2	5.46	5.39	5.54	76	1	251.25	19002	
	3	6.61	6.54	6.69	43	1	251.25	10722	
	4	7.73	7.65	7.80	62	1	251.25	15479	
	5	8.23	8.15	8.30	33	1	251.25	8400	
	6	9.80	9.73	9.88	24	1	251.25	6030	
Aroclor-1248	1	7.73	7.65	7.80	87	1	100.39	8755	
	2	9.81	9.74	9.89	92	1	100.39	9220	
	3	10.71	10.63	10.78	117	1	100.39	11753	
	4	10.92	10.84	10.99	126	1	100.39	12685	
	5	11.91	11.83	11.98	124	1	100.39	12439	
	6	13.28	13.21	13.36	68	1	100.39	6793	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	5.45	5.38	5.53	73	1	50.12	4458	16.1
						2	100.24	7909	
						3	200.48	14789	
						4	501.2000	32005	
						5	1002.400	59663	
	2	6.61	6.54	6.69	98	1	50.12	5939	16.1
						2	100.24	10811	
						3	200.48	20053	
						4	501.2000	43205	
						5	1002.400	79507	
	3	7.72	7.64	7.79	153	1	50.12	9333	15.6
						2	100.24	16811	
						3	200.48	30067	
						4	501.2000	66741	
						5	1002.400	129353	
	4	8.23	8.15	8.30	80	1	50.12	4773	15.7
						2	100.24	8778	
						3	200.48	16105	
						4	501.2000	34910	
						5	1002.400	64973	
	5	9.80	9.73	9.88	58	1	50.12	3396	14.6
						2	100.24	6467	
						3	200.48	11683	
						4	501.2000	26226	
						5	1002.400	47304	
	6	10.22	10.15	10.30	31	1	50.12	1837	14.0
						2	100.24	3478	
						3	200.48	6177	
						4	501.2000	14269	
						5	1002.400	26024	
Aroclor-1242	1	4.85	4.77	4.92	54	1	251	13503	
	2	5.45	5.38	5.53	52	1	251	13176	
	3	6.61	6.54	6.69	74	1	251	18519	
	4	7.73	7.65	7.80	113	1	251	28444	
	5	8.23	8.15	8.30	60	1	251	15068	
	6	10.91	10.83	10.98	62	1	251	15515	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808A Calibration File: 3V5083

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	12.77	12.70	12.85	22	1	500	10909	
	2	14.48	14.40	14.55	28	1	500	13916	
	3	14.71	14.63	14.78	32	1	500	16244	
	4	15.06	14.98	15.13	47	1	500	23460	
	5	15.92	15.85	16.00	37	1	500	18439	
	6	18.19	18.11	18.26	41	1	500	20309	

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MIDLEVEL RT	RT WINDOW FROM	TO
4,4'-DDE			10.46			10.44	10.37	10.52
gamma-BHC (Lindane)			5.58			5.57	5.52	5.63
Dieldrin			10.92			10.91	10.84	10.99
Endrin			11.59			11.58	11.50	11.65
Methoxychlor			15.77			15.76	15.69	15.84
4,4'-DDD			13.02			13.01	12.93	13.08
Endrin aldehyde			14.51			14.49	14.42	14.57
Endrin ketone			16.99			16.97	16.89	17.04
Aldrin			6.98			6.97	6.92	7.03
Heptachlor			6.20			6.20	6.14	6.25
gamma-Chlordane			9.90			9.89	9.82	9.97
alpha-Chlordane			10.09			10.08	10.01	10.16
4,4'-DDT			13.62			13.62	13.54	13.69
Endosulfan II			13.15			13.14	13.06	13.21
delta-BHC			8.24			8.23	8.18	8.29
alpha-BHC			4.64			4.63	4.58	4.69
Endosulfan sulfate			15.58			15.57	15.49	15.64
Heptachlor epoxide			8.89			8.88	8.83	8.94
Endosulfan I			9.77			9.76	9.68	9.83
beta-BHC			7.49			7.48	7.43	7.54
Decachlorbiphenyl			20.80			20.77	20.69	20.84
Tetrachloro-m-xylene			2.97			2.97	2.91	3.02

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	1.73E+04	1.67E+04	1.65E+04	1.71E+04	2.07E+04	1.77E+04	9.7
gamma-BHC (Lindane)	1.43E+04	1.41E+04	1.36E+04	1.38E+04	1.65E+04	1.45E+04	8.1
Heptachlor	1.28E+04	1.25E+04	1.22E+04	1.20E+04	1.36E+04	1.26E+04	5.0
Aldrin	1.15E+04	1.15E+04	1.10E+04	1.09E+04	1.22E+04	1.14E+04	4.6
beta-BHC	4.45E+03	4.70E+03	4.56E+03	4.28E+03	4.53E+03	4.50E+03	3.4
delta-BHC	1.02E+04	1.03E+04	1.06E+04	1.02E+04	1.21E+04	1.07E+04	7.5
Heptachlor epoxide	1.00E+04	9.68E+03	9.35E+03	9.16E+03	9.89E+03	9.63E+03	3.8
Endosulfan I	8.55E+03	8.56E+03	7.99E+03	7.56E+03	8.16E+03	8.16E+03	5.1
gamma-Chlordane	9.41E+03	9.27E+03	8.93E+03	8.73E+03	9.57E+03	9.18E+03	3.8
alpha-Chlordane	8.51E+03	8.48E+03	8.34E+03	7.97E+03	8.73E+03	8.41E+03	3.4
4,4'-DDE	8.29E+03	8.00E+03	8.01E+03	7.89E+03	9.83E+03	8.40E+03	9.6
Dieldrin	8.74E+03	8.48E+03	8.38E+03	8.65E+03	1.02E+04	8.88E+03	8.2
Endrin	7.46E+03	7.12E+03	7.07E+03	7.05E+03	8.32E+03	7.40E+03	7.3
4,4'-DDD	5.72E+03	5.65E+03	5.62E+03	5.55E+03	6.31E+03	5.77E+03	5.4
Endosulfan II	6.27E+03	6.33E+03	6.20E+03	6.14E+03	7.39E+03	6.46E+03	8.0
4,4'-DDT	5.64E+03	5.72E+03	5.47E+03	5.46E+03	6.42E+03	5.74E+03	6.9
Endrin aldehyde	2.27E+03	2.27E+03	2.15E+03	2.17E+03	2.34E+03	2.24E+03	3.5
Endosulfan sulfate	3.98E+03	4.14E+03	3.92E+03	3.93E+03	4.42E+03	4.08E+03	5.2
Methoxychlor	2.38E+03	2.40E+03	2.35E+03	2.68E+03	2.91E+03	2.54E+03	9.6
Endrin ketone	5.14E+03	5.46E+03	5.23E+03	5.37E+03	6.42E+03	5.52E+03	9.4
Tetrachloro-m-xylene	9.94E+03	9.64E+03	9.37E+03	9.94E+03	1.18E+04	1.01E+04	9.5
Decachlorbiphenyl	3.11E+03	2.99E+03	3.01E+03	2.83E+03	3.05E+03	3.00E+03	3.4

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	11.95	11.88	12.02	267	1	50.20000	14574	6.0
						2	100.4000	27400	
						3	200.8000	53339	
						4	502	124105	
						5	1004	261183	
	2	12.53	12.46	12.60	139	1	50.20000	7619	6.6
						2	100.4000	14489	
						3	200.8000	27999	
						4	502	64684	
						5	1004	132919	
	3	13.25	13.18	13.32	247	1	50.20000	13218	6.7
						2	100.4000	26043	
						3	200.8000	49844	
						4	502	111014	
						5	1004	244090	
	4	14.29	14.22	14.36	203	1	50.20000	10792	4.5
						2	100.4000	20663	
						3	200.8000	40733	
						4	502	95223	
						5	1004	202499	
	5	15.28	15.21	15.35	650	1	50.20000	33226	9.0
						2	100.4000	61242	
						3	200.8000	122985	
						4	502	309637	
						5	1004	750331	
	6	16.49	16.42	16.56	358	1	50.20000	18685	6.3
						2	100.4000	34682	
						3	200.8000	69513	
						4	502	168741	
						5	1004	391707	
Aroclor-1254	1	8.71	8.64	8.78	174	1	100	17431	
	2	9.29	9.22	9.36	167	1	100	16720	
	3	10.70	10.63	10.77	303	1	100	30280	
	4	11.54	11.47	11.61	200	1	100	20007	
	5	11.97	11.90	12.04	142	1	100	14234	
	6	13.11	13.04	13.18	257	1	100	25711	
Aroclor-1221	1	3.58	3.51	3.65	71	1	251.25	17964	
	2	3.88	3.81	3.95	40	1	251.25	10013	
	3	4.01	3.94	4.08	155	1	251.25	38974	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.01	3.94	4.08	138	1	251.25	34772	
	2	4.83	4.76	4.90	75	1	251.25	18733	
	3	5.98	5.91	6.05	138	1	251.25	34636	
	4	6.31	6.24	6.38	51	1	251.25	12767	
	5	6.58	6.51	6.65	54	1	251.25	13460	
	6	7.54	7.47	7.61	47	1	251.25	11752	
Aroclor-1248	1	5.98	5.91	6.05	191	1	100.39	19222	
	2	7.55	7.48	7.62	174	1	100.39	17513	
	3	7.82	7.75	7.89	170	1	100.39	17053	
	4	8.45	8.38	8.52	99	1	100.39	9941	
	5	9.49	9.42	9.56	175	1	100.39	17607	
	6	10.70	10.63	10.77	99	1	100.39	9943	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	4.00	3.93	4.07	132	1	50.12	7239	6.6
						2	100.24	13761	
						3	200.48	26159	
						4	501.2000	62054	
						5	1002.400	125259	
	2	4.82	4.75	4.89	194	1	50.12	11001	8.8
						2	100.24	20115	
						3	200.48	38802	
						4	501.2000	90905	
						5	1002.400	176591	
	3	5.96	5.89	6.03	376	1	50.12	19840	4.6
						2	100.24	37399	
						3	200.48	72943	
						4	501.2000	178059	
						5	1002.400	392352	
	4	6.29	6.22	6.36	135	1	50.12	7599	7.7
						2	100.24	13796	
						3	200.48	26522	
						4	501.2000	63950	
						5	1002.400	125718	
	5	6.57	6.50	6.64	143	1	50.12	7749	5.4
						2	100.24	14525	
						3	200.48	28168	
						4	501.2000	67249	
						5	1002.400	139036	
	6	7.53	7.46	7.60	121	1	50.12	6491	5.8
						2	100.24	12759	
						3	200.48	23889	
						4	501.2000	58140	
						5	1002.400	113757	
Aroclor-1242	1	4.83	4.76	4.90	143	1	251	35866	
	2	5.39	5.32	5.46	59	1	251	14923	
	3	5.97	5.90	6.04	266	1	251	66735	
	4	6.30	6.23	6.37	98	1	251	24547	
	5	6.58	6.51	6.65	104	1	251	26086	
	6	7.54	7.47	7.61	96	1	251	24179	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS02

Instrument: V5808B Calibration File: 3V5083B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 04/02/97 04/02/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	10.06	9.99	10.13	38	1	500	19082	
	2	11.94	11.87	12.01	44	1	500	21754	
	3	12.94	12.87	13.01	59	1	500	29257	
	4	13.25	13.18	13.32	78	1	500	38927	
	5	13.92	13.85	13.99	31	1	500	15352	
	6	15.46	15.39	15.53	96	1	500	48197	

Organic Extraction Batchlog

Verified: SD 3-19-97

Prep Analysis # 00817 Water Sample Pest. Extraction

Prep Group # 5 8081 Pesticides - waters Dept: 24

Start Date: ~~3-18-97~~ 3-18-97

Start Time: 16:40

Tech 1: S. Durkin

Tech 2:

BATCH NO. 970770001A | 178 3/18 KERR

QC	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANKA	PBLKWW	1000	SS97076A	1.0			10.0	5	DI H_2O
LCSA	LCSS1	1000	SS97076A	1.0	MS97051E	1.0	↓	5	↓
2677532MS	KMMW4MS	250	SS97076A	1.0	MS97051E	1.0	↓	7	limited Sample milky
2677533MSD	KMMW4MSD	250	SS97076A	1.0	MS97051E	1.0	↓	7	↓ ↓

SD 3-18-97

	Sample #	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2677529	KMMW3	1000	SS97076A	1.0	10.0	7	yellow/milky	937	3/28/97	N
	2677530 bkg	KMMW4	1000	SS97076A	1.0	↓	8	milky	937	3/28/97	N
3	2677535	KMMW5	1000	SS97076A	1.0		6	brown/milky	937	3/28/97	N
4	2677536	KMMW1	1000	SS97076A	1.0		6	yellow/milky	937	3/28/97	N
	2677537	KMW-3	800	SS97076A	1.0		6	limited Sample gray/milky odor (centrifuged)	937	3/28/97	N
6	2677538	KMW23	1000	SS97076A	1.0		6	gray/milky odor (centrifuged)	937	3/28/97	N
	2677539	KMW-4	1000	SS97076A	1.0		6	cloudy	937	3/28/97	N
	2677540	RB-1	1000	SS97076A	1.0	↓	5		937	3/28/97	N
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

SD 3-18-97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Spike Solutions:

SS97076A SW846 WATER

MS97051E SW846 WATER SPIKE

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	BN759		
Na_2SO_4	964505		
Hexane	963813		
Internal Standar		Balance #	

S-Evap/bath	97 °C	S-Evap/bath	°C	N-Evap	37 °C

Prep-Process Worksheet

Florisil

Prep Analysis # 317 Water Sample Pest. Extraction

Prep Group # 5 8081 Pesticides - Waters

Verified: DNL

Start Date: 3-18-97

Start Time: 22:30

Tech 1: SD Dennis

Tech 2:

BATCH NO. 970770001A

	Sample #	Aliquot (ml)	Final Volume (ml)	D.F. Aliq.	D.F. F.V.	Comments	Analyses
1	BLANK SD 3-18-97						
2	LCS SD 3-18-97						
3	2677535	2	2				
4	2677537	2	2				
5	2677538	2	2				
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

SD 3-18-97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
Hexane	963813		
1190 Methylene Acetone	3-7-97		
Florisil 1602FL			

Prep-Process Worksheet

GPC

Prep Analysis # 00817 Water Sample Pest. Extraction

Prep Group # 5 8081 Pesticides - waters

Verified: DK

Start Date: 4-1-97

Start Time: 1045

Tech 1: TR-238

Tech 2: L Cook 943

BATCH NO. 970770001A

	Sample #	Vol.(ml) on	Final Conc. Volume (ml)	Column ID		D.F. Aliq.	D.F. F.V.	Comments	Analyses
1	2677537 (AC)	5.0	5.0	1	(2)				937
2	2677538 (AC)	5.0	↓	(1)	2				937
				1	2				
				1	2				
				1	2				

TR 238 4/14

Additional Comment:

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
MECL2	B0203		
Hexane	963813		
Florisil			

S-Evap/bath	96.2°C	S-Evap/bath	°C	N-Evap	°C

Instrument #: AAC #2

Column ID #1: 8

Column ID #2: Zym 1 col 26 #4590

Prep-Process Worksheet

Florisil

Prep Analysis # 00817 Water Sample Pest. Extraction

Prep Group # 5 8081 Pesticides - waters

Verified: JD

Start Date: 4-1-97

Start Time: 19:00

Tech 1: TR 238

Tech 2:

BATCH NO. 970770001A

	Sample #	Aliquot (ml)	Final Volume (ml)	D.F. Aliq.	D.F. F.V.	Comments	Analyses
1	2677537 (AC)	2mL	2mL				937
2	2677538 (AC)	↓	↓				937

TR 238 4/1/97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
11% Dcm/Hex	4-1-97		
Florisil	1602 FL		

S-Evap/bath	°C	S-Evap/bath	°C	N-Evap	32.6°C

SECTION 4

INORGANIC DATA SUPPORT DOCUMENTATION

Inorganic Analyses Support Documentation

Environmental Standards Project Name: Gulf States
Sample Collection Dates: 3/12/92
Job Number: 920405-25
Project Manager: K. Blouin
Laboratory: Lancaster

Reviewed By: K. Blouin
Approved By: [illegible]
Completion Date: 5/7

Applicable Sample No's.: ☒ Refer to Table 1 in the Quality Assurance Review

Sample No.	Lab. Control No.
	SDG HM502

Deliverables: CLP ☒ Tier I ☐ Tier II ☐ Limited ☐ Other ____

The following table indicates criteria which were examined, the identified problems, and support documentation attachments.

	Criteria Examined in Detail					Problems Identified					Support Documentation Attachments				
	Check (✓) If Yes or Footnote Letter for Comments Below					Check (✓) If Yes or Footnote Number for Comments Below					Check (✓) If Yes -- or Identify Attachment No.				
	ICP or A.A Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method(s)	ICP or A.A Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method(s)	ICP or A.A Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method(s)
Holding Times	✓		✓	✓							✓		✓	✓	
Blank Analysis Results	✓		✓	✓		✓		✓			✓		✓		
Matrix Spike (Predigestion) Results	✓		✓			✓					✓		✓		
Duplicate Analysis Results ☐ Field ☒ Lab	✓		✓			✓					✓		✓		
Quantitation of Results	✓		✓	✓											
Detection Limits / Sensitivity	✓		✓								✓		✓		
Initial Calibrations	✓		✓	✓							✓		✓	✓	
Continuing Calibrations	✓		✓	✓							✓		✓	✓	
Laboratory Control Standards (LCS)	✓		✓	✓							✓		✓		
ICP Linear Range Analysis	✓		✓								✓		✓		
ICP Interference Checks	✓		✓								✓		✓		
ICP Serial Dilutions	✓					✓					✓				
ICP Post-Digestion Spike	✓					✓					✓				
GFAA Post-Digestion Spikes															
GFAA Duplicate Injections															
ICP Multiple Exposures	✓														
GFAA Standard Additions															
CRDL Standards															
Others:															

Comments: ____

BLANK ANALYSIS RESULTS FOR INORGANIC PARAMETERS

MATRIX (Aq., S)	BLANK TYPE (✓) METHOD ICB	METHOD CCB	METHOD PREP.	TRIP	EQUIPMENT	FIELD	BLANK SAMPLE NUMBER	CONTAMINANT	CONCENTRATION (units) mg/L	QUALIFICATION LIMIT FOR AQUEOUS SAMPLES (ug/L) 5x	QUALIFICATION LIMIT FOR SOLID SAMPLES (mg/Kg) 5x
Aq					X		RB-1	Aluminum	0.064	0.32	
								Calcium	0.052	0.26	
								Copper	0.0052	0.026	
								Zinc	0.014	0.07	
								Lead	0.0037	0.0185	
								Mercury	0.000046	0.00023	
									ug/L		
Aq	X						ICB1				
								Barium	0.18	0.9	
								Beryllium	2.1	10.5	
								Calcium	42.7	213.5	
								Potassium	48.2	241.	
								Silver	0.65	3.25	
Aq		X					CCB1	Aluminum	61.2	306.	
								Calcium	74.6	373.	
								Lead	3.1	15.5	
								Magnesium	56.5	282.5	
								Mercury	0.012	0.06	
								Potassium	46.3	231.5	
		X					CCB2	Aluminum	54.4	272.	
								Beryllium	0.41	2.05	
								Mercury	0.027	0.135	
								Potassium	51.2	256.	

Aq. = Aqueous; S = Solid

Notes: _____

BLANK ANALYSIS RESULTS FOR INORGANIC PARAMETERS

MATRIX (Aq., S)	BLANK TYPE (✓) METHOD ICB	METHOD CCB	METHOD PREP.	TRIP	EQUIPMENT	FIELD	BLANK SAMPLE NUMBER	CONTAMINANT	CONCENTRATION (units) ug/L	QUALIFICATION LIMIT FOR AQUEOUS SAMPLES (ug/L) 5x	QUALIFICATION LIMIT FOR SOLID SAMPLES (mg/Kg) 5x
Aq		X					CCB3	Aluminum	112	560.	
								Beryllium	1.7	8.5	
								Calcium	59.5	297.5	
								Magnesium	54.4	272.	
								Mercury	0.027	0.135	
								Potassium	35.4	177.	
								Silver	0.68	3.4	
Aq			X				PB	Calcium	58.02	290.1	
								Iron	8.17	40.85	
								Lead	3.62	18.1	
								Magnesium	40.64	203.2	
								Mercury	0.045	0.225	

Aq. = Aqueous; S = Solid

Notes: _____

QUALITY ASSURANCE SUMMARY

BLANKS

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Preparation Blank Matrix (soil/water): WATER_

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prep-aration Blank	C	M
Aluminum	-27.8	B	61.2	B	54.4	B	112	B	57.000	U	P
Antimony	4.7	U	4.7	U	-4.8	B	4.7	U	15.000	U	P
Arsenic	4.5	U	4.5	U	4.5	U	4.5	U	2.700	U	P
Barium	0.18	B	0.16	U	0.16	U	0.16	U	2.200	U	P
Beryllium	2.1	B	-0.34	B	0.41	B	1.7	B	1.300	U	P
Cadmium	0.81	U	0.81	U	0.81	U	0.81	U	2.700	U	P
Calcium	42.7	B	74.6	B	33.6	U	59.5	B	58.020	B	P
Chromium	0.67	U	0.67	U	0.67	U	0.67	U	4.300	U	P
Cobalt	1.2	U	1.2	U	1.2	U	1.2	U	5.500	U	P
Copper	1.1	U	1.1	U	-3.9	B	-5.4	B	3.800	U	P
Iron	22.0	U	22.0	U	22.0	U	22.0	U	8.170	B	P
Lead	2.3	U	3.1	B	2.3	U	2.3	U	3.620	B	P
Magnesium	26.0	U	56.5	B	26.0	U	54.4	B	40.640	B	P
Manganese	0.22	U	0.22	U	0.22	U	0.22	U	2.900	U	P
Mercury	0.0090	U	0.012	B	0.027	B	0.027	B	0.045	B	CV
Nickel	-2.1	B	-1.2	B	0.86	U	0.86	U	5.400	U	P
Potassium	48.2	B	46.3	B	51.2	B	35.4	B	150.000	U	P
Selenium	2.7	U	2.7	U	2.7	U	-3.5	B	2.700	U	P
Silver	0.65	B	0.49	U	0.49	U	0.68	B	3.600	U	P
Sodium	181	U	181	U	181	U	181	U	200.000	U	P
Thallium	8.7	U	8.7	U	8.7	U	8.7	U	-7.370	B	P
Vanadium	0.62	U	0.62	U	0.62	U	0.62	U	7.000	U	P
Zinc	3.3	U	3.3	U	3.3	U	3.3	U	12.000	U	P

QUALITY ASSURANCE SUMMARY

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Lab Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Matrix (Soil/Water): WATER_____

CLIENT SAMPLE NO.

KMMW4S

% Solids for sample: 0.0 Concentration Units (ug/l or mg/kg dry weight): UG/L__ Level (low/med): LOW

Analyte	M	Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	MS %R	Q	MSD %R	Q	Control Limits %R	RPD	Q	Ctl Lim RPD	
Aluminum	P	16550.9000		37433.3000		36000.5000		2000.00	2000.00	1044.1		972.5			3.9		20	
Antimony	P	15.0000	U	357.5300		350.4000		500.00	500.00	71.5	N	70.1	N	80-120	2.0		20	J
Arsenic	P	12.0900		1960.0300		1895.9700		2000.00	2000.00	97.4		94.2		80-120	3.3		20	
Barium	P	493.9100		2505.6300		2437.6100		2000.00	2000.00	100.6		97.2		80-120	2.8		20	
Beryllium	P	4.1600	B	50.8100		49.4500		50.00	50.00	93.3		90.6		80-120	2.7		20	
Cadmium	P	2.7000	U	46.2000		45.0500		50.00	50.00	92.4		90.1		80-120	2.5		20	
Calcium	P	42588.4200		50072.1000		48568.7900		4000.00	4000.00	187.1		149.5			3.0		20	
Chromium	P	18.5300	B	243.5200		236.1600		200.00	200.00	112.5		108.8		80-120	3.1		20	
Cobalt	P	15.5700	B	499.2500		485.0400		500.00	500.00	96.7		93.9		80-120	2.9		20	
Copper	P	21.8000	B	278.5000		269.3100		250.00	250.00	102.7		99.0		80-120	3.4		20	
Iron	P	21892.8800		38979.9000		37337.8200		1000.00	1000.00	1708.7		1544.5			4.3		20	
Lead	P	26.2200		516.3300		501.5100		500.00	500.00	98.0		95.1		80-120	2.9		20	
Magnesium	P	20562.3400		26692.7800		25832.5500		2000.00	2000.00	306.5		263.5			3.3		20	
Manganese	P	1221.2400		1960.0100		1896.0700		500.00	500.00	147.8	N	135.0	N	80-120	3.3		20	J
Mercury	CV	0.1160	B	1.0800		1.0300		1.00	1.00	96.4		91.4		80-120	4.7		20	
Nickel	P	30.5000	B	541.2800		523.6100		500.00	500.00	102.2		98.6		80-120	3.3		20	
Potassium	P	5671.5000		11259.0800		10957.4700		4000.00	4000.00	139.7	N	132.1	N	80-120	2.7		20	J
Selenium	P	2.7000	U	1872.1200		1829.5700		2000.00	2000.00	93.6		91.5		80-120	2.3		20	
Silver	P	3.6000	U	49.3100		47.8800		50.00	50.00	98.6		95.8		80-120	2.9		20	
Sodium	P	53422.2000		65482.0000		65375.4500		4000.00	4000.00	301.5		298.8			0.2		20	
Thallium	P	4.5000	U	1953.6600		1905.0500		2000.00	2000.00	97.7		95.3		80-120	2.5		20	
Vanadium	P	48.3500		587.2700		569.5400		500.00	500.00	107.8		104.2		80-120	3.1		20	
Zinc	P	84.6000		577.3900		557.9300		500.00	500.00	98.6		94.7		80-120	3.4		20	

Note: An (N) in column "Q" indicates a spike recovery that is not within the control limits. An asterisk (*) in column "Q" indicates poor duplicate precision between the matrix spike and the matrix spike duplicate. The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

Lab Name: LANCASTER_LABORATORIES___

KMMW4A

SDG No.: HMS02

Matrix (soil/water): WATER_____ Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum									NR	
Antimony		155.21	B	15.00	U	400.0	38.8		P	UJ
Arsenic									NR	J
Barium									NR	
Beryllium									NR	
Cadmium									NR	
Calcium									NR	
Chromium									NR	
Cobalt									NR	
Copper									NR	
Iron									NR	
Lead									NR	
Magnesium									NR	
Manganese		1262.00		1221.24		60.0	67.9		P	UJ
Mercury									NR	
Nickel									NR	
Potassium		8102.84		5671.50		2000.0	121.6		P	
Selenium									NR	
Silver									NR	
Sodium									NR	
Thallium									NR	
Vanadium									NR	
Zinc									NR	

Comments:

QUALITY ASSURANCE SUMMARY

DUPLICATES

CLIENT SAMPLE NO.

KMMW4D

Lab Name: LANCASTER_LABORATORIES

SDG No.: HMS02

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids for Sample: 0.0

% Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		16550.9000		19845.8700		18.1		P
Antimony		15.0000	U	15.0000	U			P
Arsenic	10.0	12.0900		14.4900		18.1		P
Barium	100.0	493.9100		505.2000		2.3		P
Beryllium		4.1600	B	2.1600	B	63.3		P
Cadmium		2.7000	U	2.7000	U			P
Calcium		42588.4200		42910.4300		0.8		P
Chromium		18.5300	B	21.7000	B	15.8		P
Cobalt		15.5700	B	17.7400	B	13.0		P
Copper		21.8000	B	21.7100	B	0.4		P
Iron		21892.8800		27050.2700		21.1	*	P
Lead		26.2200		30.0800		13.7		P
Magnesium		20562.3400		21462.6400		4.3		P
Manganese		1221.2400		1258.1900		3.0		P
Mercury		0.1160	B	0.0930	B	22.0		CV
Nickel		30.5000	B	35.0000	B	13.7		P
Potassium		5671.5000		6101.9400		7.3		P
Selenium		2.7000	U	2.7000	U			P
Silver		3.6000	U	3.6000	U			P
Sodium		53422.2000		59416.9500		10.6		P
Thallium		4.5000	U	4.5000	U			P
Vanadium	20.0	48.3500		54.1800		11.4		P
Zinc	25.0	84.6000		89.4100		5.5		P

JH

NOTE: An asterisk(*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ). The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY

SERIAL DILUTIONS

CLIENT SAMPLE NO.

KMMW4 L

Lab Name: LANCASTER_LABORATORIES

SDG No.: HMS02

Matrix (soil/water): WATER

Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	16550.90		17803.95		7.6		P
Antimony	15.00	U	75.00	U			P
Arsenic	12.09		21.40	B	77.0		P
Barium	493.91		540.10		9.4		P
Beryllium	4.16	B	6.50	U	100.0		P
Cadmium	2.70	U	13.50	U			P
Calcium	42588.42		47614.60		11.8	E	P
Chromium	18.53	B	21.75	B	17.4		P
Cobalt	15.57	B	27.50	U	100.0		P
Copper	21.80	B	30.65	B	40.6		P
Iron	21892.88		23093.45		5.5		P
Lead	26.22		30.75		17.3		P
Magnesium	20562.34		21962.65		6.8		P
Manganese	1221.24		1277.00		4.6		P
Mercury							
Nickel	30.50	B	41.00	B	34.4		P
Potassium	5671.50		6086.25		7.3		P
Selenium	2.70	U	13.50	U			P
Silver	3.60	U	18.00	U			P
Sodium	10684.44		7938.50		25.7	E	P
Thallium	4.50	U	22.50	U			P
Vanadium	48.35		50.75	B	5.0		P
Zinc	84.60		125.45		48.3		P

JF

JF

NOTE: An (E) in column "Q" indicates the presence of a chemical or physical interference in the matrix during analysis (% Difference > 10% when (I) > or = 50x MDL for ICP or (I) > or = 25x MDL for GFAA).

QUALITY ASSURANCE SUMMARY

LABORATORY CONTROL SAMPLE

Lab Name: LANCASTER LABORATORIES

G No.: HMS02

Solid LCS Source: _____

queous LCS Source: LLI

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	2000.0	2099.04	105.0						
Antimony	500.0	538.51	107.7						
Arsenic	2000.0	1981.28	99.1						
Barium	2000.0	1943.86	97.2						
Beryllium	50.0	47.14	94.3						
Cadmium	50.0	47.65	95.3						
Calcium	4000.0	4077.59	101.9						
Chromium	200.0	209.01	104.5						
Cobalt	500.0	478.06	95.6						
Copper	250.0	245.39	98.2						
Iron	1000.0	1015.44	101.5						
Lead	500.0	492.12	98.4						
Magnesium	2000.0	1969.99	98.5						
Manganese	500.0	482.66	96.5						
Mercury	1.0	1.15	115.0						
Nickel	500.0	492.46	98.5						
Potassium	4000.0	3876.63	96.9						
Selenium	2000.0	1944.83	97.2						
Silver	50.0	49.39	98.8						
Sodium	4000.0	4199.94	105.0						
Thallium	2000.0	1944.30	97.2						
Vanadium	500.0	518.45	103.7						
Zinc	500.0	483.66	96.7						

(1) Control Limits: All Metals 80-120

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER_LABORATORIES___
Lab No.: HMS02__

ICP ID Number: _____ Date: 01/15/97

Flame AA ID Number: ___05220____

Furnace AA ID Number: _____

Analyte	Wavelength (nm)	Background	IDL (ug/L)	M
Aluminum				NR
Antimony				NR
Arsenic				NR
Barium				NR
Beryllium				NR
Cadmium				NR
Calcium				NR
Chromium				NR
Cobalt				NR
Copper				NR
Iron				NR
Lead				NR
Magnesium				NR
Manganese				NR
Mercury	254.00		0.0090	CV
Nickel				NR
Potassium				NR
Selenium				NR
Silver				NR
Sodium				NR
Thallium				NR
Vanadium				NR
Zinc				NR

Comments:

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER_LABORATORIES___
No.: HMS02__

ICP ID Number: ___05936____ Date: 01/15/97

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	IDL (ug/L)	M
Aluminum	308.21		24.1	P
Antimony	206.83		4.7	P
Arsenic	189.04		4.5	P
Barium	493.40		0.16	P
Beryllium	313.04		0.28	P
Cadmium	226.50		0.81	P
Calcium	317.93		33.6	P
Chromium	267.71		0.67	P
Cobalt	228.61		1.2	P
Copper	324.75		1.1	P
Iron	271.44		22.0	P
Lead	220.35		2.3	P
Magnesium	279.07		26.0	P
Manganese	257.61		0.22	P
Mercury				NR
Nickel	231.60		0.86	P
Potassium	766.49		23.1	P
Selenium	196.02		2.7	P
Silver	328.06		0.49	P
Sodium	330.23		181	P
Thallium	190.86		8.7	P
Vanadium	292.40		0.62	P
Zinc	206.20		3.3	P

Comments:

QUALITY ASSURANCE SUMMARY

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: LANCASTER_LABORATORIES___
SDG No.: HMS02__

Method: _P_ Matrix (soil/water): WATER Date: 04/12/96

Analyte	Wave-length (nm)	Back-ground	LOQ (ug/L)	MDL (ug/L)
Aluminum	308.21		200	57.0
Antimony	206.83		200	15.0
Arsenic	189.04		10.0	2.7
Barium	493.40		100	2.2
Beryllium	313.04		10.0	1.3
Cadmium	226.50		10.0	2.7
Calcium	317.93		200	30.0
Chromium	267.71		30.0	4.3
Cobalt	228.61		50.0	5.5
Copper	324.75		25.0	3.8
Iron	271.44		100	5.9
Lead	220.35		5.0	2.0
Magnesium	279.07		100	24.0
Manganese	257.61		10.0	2.9
Mercury				
Nickel	231.60		50.0	5.4
Potassium	766.49		500	150
Selenium	196.02		10.0	2.7
Silver	328.06		20.0	3.6
Sodium	330.23		600	200
Thallium	190.86		20.0	4.5
Vanadium	292.40		20.0	7.0
Zinc	206.20		25.0	12.0

** The LOQ must be adjusted for % Solids and Sample Weight for samples reporting in mg/Kg and ug.

Comments:

QUALITY ASSURANCE SUMMARY

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: LANCASTER_LABORATORIES___
SDG No.: HMS02__

Method: _CV Matrix (soil/water): WATER Date: 04/12/96

Analyte	Wave-length (nm)	Back-ground	LOQ (ug/L)	MDL (ug/L)
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Mercury	254.00		0.20	0.043
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Vanadium				
Zinc				

** The LOQ must be adjusted for % Solids and Sample Weight for samples reporting in mg/Kg and ug.

Comments:

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Initial Calibration Source: LLI_____

Continuing Calibration Source: LLI_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	Found	%R(2)	M
Aluminum	30000.0	29330.90	97.8	25000.0	25177.15	100.7	24691.80	98.8	P
Antimony	600.0	602.31	100.4	500.0	521.92	104.4	517.95	103.6	P
Arsenic	600.0	568.54	94.8	500.0	493.72	98.7	484.40	96.9	P
Barium	600.0	575.39	95.9	500.0	498.28	99.7	486.96	97.4	P
Beryllium	600.0	557.69	92.9	500.0	488.36	97.7	474.97	95.0	P
Cadmium	600.0	562.42	93.7	500.0	492.70	98.5	482.78	96.6	P
Calcium	30000.0	29273.35	97.6	25000.0	25352.82	101.4	24748.90	99.0	P
Chromium	600.0	608.91	101.5	500.0	534.42	106.9	521.82	104.4	P
Cobalt	600.0	563.19	93.9	500.0	490.20	98.0	478.97	95.8	P
Copper	600.0	588.70	98.1	500.0	507.39	101.5	489.34	97.9	P
Iron	30000.0	29560.84	98.5	25000.0	25329.61	101.3	24822.82	99.3	P
Lead	600.0	576.88	96.1	500.0	500.24	100.0	492.57	98.5	P
Magnesium	30000.0	29415.95	98.1	25000.0	24812.05	99.2	24281.94	97.1	P
Manganese	600.0	568.53	94.8	500.0	491.71	98.3	478.49	95.7	P
Mercury	2.0	2.09	104.5	1.0	1.06	106.0	1.09	109.0	CV
Nickel	600.0	574.27	95.7	500.0	500.07	100.0	496.15	99.2	P
Potassium	30000.0	30288.10	101.0	25000.0	24690.75	98.8	24585.43	98.3	P
Selenium	600.0	570.70	95.1	500.0	492.65	98.5	483.10	96.6	P
Silver	600.0	581.66	96.9	500.0	500.34	100.1	487.44	97.5	P
Sodium	30000.0	30620.58	102.1	25000.0	25893.71	103.6	26014.36	104.1	P
Thallium	600.0	564.22	94.0	500.0	483.10	96.6	502.08	100.4	P
Vanadium	600.0	604.98	100.8	500.0	526.10	105.2	514.98	103.0	P
Zinc	600.0	545.51	90.9	500.0	478.27	95.7	467.73	93.5	P

1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

I itial Calibration Source: LLI_____

Continuing Calibration Source: LLI_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	Found	%R(2)	M
luminum				25000.0	24673.29	98.7			P
ntimony				500.0	507.24	101.4			P
rsenic				500.0	480.52	96.1			P
Barium				500.0	488.09	97.6			P
eryllium				500.0	469.20	93.8			P
admium				500.0	481.66	96.3			P
Calcium				25000.0	24538.93	98.2			P
Chromium				500.0	519.63	103.9			P
obalt				500.0	475.61	95.1			P
opper				500.0	481.74	96.3			P
Iron				25000.0	24573.78	98.3			P
ead				500.0	494.54	98.9			P
agnesium				25000.0	24012.54	96.1			P
nganese				500.0	478.23	95.6			P
rcury				1.0	1.13	113.0			CV
ickel				500.0	497.96	99.6			P
otassium				25000.0	24606.17	98.4			P
elenium				500.0	481.24	96.2			P
Silver				500.0	482.88	96.6			P
odium				25000.0	25705.64	102.8			P
hallium				500.0	476.74	95.3			P
Vanadium				500.0	512.89	102.6			P
Zinc				500.0	463.12	92.6			P

( ) Control Limits: All Metals 90-110
(4) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Initial Calibration Source: LLI_____

Continuing Calibration Source: LLI_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	Found	%R(2)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium	30000.0	31759.72	105.9	25000.0	25761.85	103.0	25685.66	102.7	P
Thallium									NR
Vanadium									NR
Zinc									NR

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Initial Calibration Source: LLI_____

Continuing Calibration Source: LLI_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	Found	%R(2)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium				25000.0	25087.86	100.4	25036.76	100.1	P
Thallium									NR
Vanadium									NR
Zinc									NR

( ) Control Limits: All Metals 90-110
(4) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

) Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

I itial Calibration Source: LLI_____

Continuing Calibration Source: LLI_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	Found	%R(2)	M
luminum									NR
ntimony									NR
Arsenic									NR
Barium									NR
eryllium									NR
admium									NR
Calcium									NR
Chromium									NR
obalt									NR
opper									NR
Iron									NR
ead									NR
agnesium									NR
nganese									NR
ercury									NR
ickel									NR
otassium									NR
Selenium									NR
Silver									NR
odium				25000.0	25358.88	101.4			P
hallium									NR
Vanadium									NR
Zinc									NR

(1) Control Limits: All Metals 90-110
(2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

BLANKS

Name: LANCASTER_LABORATORIES___

G No.: HMS02

P eparation Blank Matrix (soil/water): WATER_

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
luminum	-27.8	B	61.2	B	54.4	B	112	B	57.000	U	P
ntimony	4.7	U	4.7	U	-4.8	B	4.7	U	15.000	U	P
Arsenic	4.5	U	4.5	U	4.5	U	4.5	U	2.700	U	P
arium	0.18	B	0.16	U	0.16	U	0.16	U	2.200	U	P
eryllium	2.1	B	-0.34	B	0.41	B	1.7	B	1.300	U	P
Cadmium	0.81	U	0.81	U	0.81	U	0.81	U	2.700	U	P
Calcium	42.7	B	74.6	B	33.6	U	59.5	B	58.020	B	P
hromium	0.67	U	0.67	U	0.67	U	0.67	U	4.300	U	P
obalt	1.2	U	1.2	U	1.2	U	1.2	U	5.500	U	P
Copper	1.1	U	1.1	U	-3.9	B	-5.4	B	3.800	U	P
Iron	22.0	U	22.0	U	22.0	U	22.0	U	8.170	B	P
ead	2.3	U	3.1	B	2.3	U	2.3	U	3.620	B	P
gnesium	26.0	U	56.5	B	26.0	U	54.4	B	40.640	B	P
nganese	0.22	U	0.22	U	0.22	U	0.22	U	2.900	U	P
ercury	0.0090	U	0.012	B	0.027	B	0.027	B	0.045	B	CV
ickel	-2.1	B	-1.2	B	0.86	U	0.86	U	5.400	U	P
otassium	48.2	B	46.3	B	51.2	B	35.4	B	150.000	U	P
Selenium	2.7	U	2.7	U	2.7	U	-3.5	B	2.700	U	P
ilver	0.65	B	0.49	U	0.49	U	0.68	B	3.600	U	P
odium	181	U	181	U	181	U	181	U	200.000	U	P
Thallium	8.7	U	8.7	U	8.7	U	8.7	U	-7.370	B	P
Vanadium	0.62	U	0.62	U	0.62	U	0.62	U	7.000	U	P
inc	3.3	U	3.3	U	3.3	U	3.3	U	12.000	U	P

QUALITY ASSURANCE SUMMARY

BLANKS

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium	181	U	181	U	-239	B	181	U			P
Thallium											NR
Vanadium											NR
Zinc											NR

QUALITY ASSURANCE SUMMARY

BLANKS

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium			181	U	181	U					P
Thallium											NR
Vanadium											NR
Zinc											NR

QUALITY ASSURANCE SUMMARY

ICP INTERFERENCE CHECK SAMPLE

Lab Name: LANCASTER_LABORATORIES___

No.: HMS02

ICP ID Number: 05936_____ ICS Source: LLI_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R(1)	Final Found Sol. A	Final Found Sol. AB	Final Found %R(1)
Aluminum	500000	500000	495917	491365.6	98.3	495987	481979.8	96.4
Antimony	0	0	5	4.9		2	3.3	
Arsenic	0	0	-3	2.0		3	3.1	
Barium	0	500	5	527.2	105.4	5	518.9	103.8
Beryllium	0	500	-2	471.4	94.3	-2	463.6	92.7
Cadmium	0	1000	-2	943.4	94.3	-3	940.9	94.1
Calcium	500000	500000	503723	492281.4	98.5	501971	485986.2	97.2
Chromium	0	500	4	533.6	106.7	3	530.8	106.2
Cobalt	0	500	2	490.4	98.1	2	483.3	96.7
Copper	0	500	6	570.3	114.1	0	543.5	108.7
Iron	200000	200000	200777	196725.0	98.4	200100	194169.3	97.1
Lead	0	1000	2	1034.4	103.4	8	1031.7	103.2
Magnesium	500000	500000	501075	494366.9	98.9	496784	483008.4	96.6
Manganese	0	500	9	505.4	101.1	9	500.1	100.0
Mercury								
Nickel	0	1000	6	1007.2	100.7	7	1015.7	101.6
Potassium	0	0	44	31.0		35	25.1	
Selenium	0	0	-1	-2.9		-3	-1.0	
Silver	0	1000	0	1072.4	107.2	1	1044.3	104.4
Sodium	0	0	238	225.0		115	269.3	
Thallium	0	0	-3	-4.4		4	-6.4	
Vanadium	0	500	-25	511.5	102.3	-28	508.2	101.6
Zinc	0	1000	6	902.3	90.2	5	903.6	90.4

.) Control Limits: All Metals 80-120

QUALITY ASSURANCE SUMMARY

ICP INTERFERENCE CHECK SAMPLE

Lab Name: LANCASTER_LABORATORIES___

Job No.: HMS02

ICP ID Number: 05936_____ ICS Source: LLI_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R(1)	Final Found Sol. A	Final Found Sol. AB	Final Found %R(1)
Aluminum	500000	500000	489138	493362.2	98.7	487661	482700.2	96.5
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium	500000	500000	473430	483689.5	96.7	497233	496010.4	99.2
Chromium								
Cobalt								
Copper								
Iron	200000	200000	188460	191630.5	95.8	196866	195805.4	97.9
Lead								
Magnesium	500000	500000	477367	482303.0	96.5	480737	475599.6	95.1
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium	0	0	-63	26.0		-38	30.6	
Thallium								
Vanadium								
Zinc								

(1) Control Limits: All Metals 80-120

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05936_ Method: P_

Start Date: 03/24/97 End Date: 03/24/97

EPA Sample No.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN						
30	1.00	0951		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
S	1.00	0956		X	_					X	_			X		X		_		X							_					
3	1.00	1000		_		X	X	X	X	_	_	X	X	_	X	_	X	_	X	_	X	X		X	_	X	_					
3	1.00	1005			X	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_	X	_	_					
HS1	1.00	1009		X	_	_	_	_	_	X	_	_	_	X	_	X	_	_	_	X	_	_	X	_	_	_	_					
HS2	1.00	1013		_	_	X	X	X	X	_	_	X	X	_	X	_	X	_	X	_	X	X	_	X	_	X	_					
HS3	1.00	1017		_	X					_	X			_		_		_		_			_		X		_					
CCV	1.00	1022		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
ICB	1.00	1026		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CRI	1.00	1031																_									_					
CSA	1.00	1035		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CSAB	1.00	1039		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CCV	1.00	1044		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CCB	1.00	1048		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
PBW	1.00	1053		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
SW	1.00	1057		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
MW4	1.00	1101		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	_	X	X	X	_					
MMW4A	1.00	1106																_									_					
MMW4D	1.00	1110		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	_	X	X	X	_					
MMW4S	1.00	1115		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	_	X	X	X	_					
MMW4M	1.00	1119		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	_	X	X	X	_					
MMW4L	5.00	1123		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	_	X	X	X	_					
MMW3	1.00	1128		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
MMW5	1.00	1132		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CCV	1.00	1137		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
CCB	1.00	1141		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
MMW1	1.00	1145		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
MW-3	1.00	1150		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
MW23	1.00	1154		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
RB--1	1.00	1158		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_					
ZZZZZZ	1.00	1203		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_					
ZZZZZZ	1.00	1207		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_					
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_					

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05936_ Method: P_

Start Date: 03/24/97 End Date: 03/24/97

EPA Sample No.	D/F	Time	% R	Analytes																											
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN					
CMW-4	1.00	1212		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	_					
CRI	1.00	1216																_								_					
ICSA	1.00	1220		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	_					
ICSAB	1.00	1225		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	_					
CCV	1.00	1229		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	_					
CCB	1.00	1234		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	_					
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_					

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05936_ Method: P_

Start Date: 03/26/97 End Date: 03/26/97

EPA Sample No.	D/F	Time	% R	Analytes																													
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
30	1.00	0651		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
S	1.00	0656		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
S	1.00	0701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	1.00	0705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
HS1	1.00	0709		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HS2	1.00	0714		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
HS3	1.00	0719		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICV	1.00	0724		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ICB	1.00	0729		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CRI	1.00	0734		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICSA	1.00	0739		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ICSAB	1.00	0744		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCV	1.00	0749		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCB	1.00	0753		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
MMW4	5.00	0758		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
MW4A	5.00	0803		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW4D	5.00	0808		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
MMW4S	5.00	0813		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
MMW4M	5.00	0818		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
MMW4L	25.00	0823		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ZZZZZZ	1.00	0828		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0833		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0838		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0843		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	0848		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCB	1.00	0853		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ZZZZZZ	1.00	0858		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0903		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0908		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0913		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0917		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0922		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05936_ Method: P_

Start Date: 03/26/97 End Date: 03/26/97

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
ZZZZZZ	1.00	0927		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0932		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	5.00	0937		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	0942		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	0947		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCB	1.00	0952		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ZZZZZZ	1.00	0957		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1007		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1012		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1017		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1022		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1027		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1032		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	1037		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCB	1.00	1042		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
ICSA	1.00	1047		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICSAB	1.00	1052		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCV	1.00	1056		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
CCB	1.00	1101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
	1.00	1106		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05220_ Method: CV

Start Date: 03/25/97 End Date: 03/25/97

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
S0	1.00	1356																X									
S0.2	1.00	1359																X									
S0.5	1.00	1401																X									
S1.0	1.00	1403																X									
S2.5	1.00	1406																X									
S5.0	1.00	1408																X									
ICV	1.00	1411																X									
ICB	1.00	1414																X									
CRA	1.00	1416																X									
CCV	1.00	1418																X									
CCB	1.00	1421																X									
ZZZZZZ	1.00	1423																									
ZZZZZZ	1.00	1425																									
ZZZZZZ	1.00	1427																									
ZZZZZZ	1.00	1430																									
ZZZZZZ	1.00	1432																									
ZZZZZ	1.00	1434																									
BW	1.00	1437																X									
LCSW	1.00	1439																X									
KMMW3	1.00	1441																X									
KMMW4	1.00	1444																X									
CCV	1.00	1446																X									
CCB	1.00	1448																X									
KMMW4D	1.00	1451																X									
KMMW4S	1.00	1453																X									
KMMW4M	1.00	1455																X									
KMMW5	1.00	1457																X									
KMMW1	1.00	1500																X									
KMW-3	1.00	1502																X									
KM-23	1.00	1504																X									
KM-4	1.00	1506																X									
RE -1	1.00	1509																X									

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER_LABORATORIES___

SDG No.: HMS02__

Instrument ID Number: 05220_ Method: CV

Start Date: 03/25/97 End Date: 03/25/97

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
ZZZZZ__	1.00	1511																									
CCV_____	1.00	1513																X									
CCB_____	1.00	1515																X									
_____																											

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

b Name: LANCASTER_LABORATORIES___

DG No.: HMS02

Method: P_

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
KMMW1	03/21/97		50
KMMW3	03/21/97		50
KMMW4	03/21/97		50
KMMW4D	03/21/97		50
KMMW4M	03/21/97		50
KMMW4S	03/21/97		50
KMMW5	03/21/97		50
KMW-3	03/21/97		50
KMW-4	03/21/97		50
KMW23	03/21/97		50
LCSW	03/21/97		50
PBW	03/21/97		50
RB--1	03/21/97		50

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

Name: LANCASTER_LABORATORIES___

G No.: HMS02

Method: CV

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
KMMW1	03/24/97		8
KMMW3	03/24/97		8
KMMW4	03/24/97		8
KMMW4D	03/24/97		8
KMMW4M	03/24/97		8
KMMW4S	03/24/97		8
KMMW5	03/24/97		8
KMW-3	03/24/97		8
KMW-4	03/24/97		8
KMW23	03/24/97		8
LCSW	03/24/97		8
PBW	03/24/97		8
RB--1	03/24/97		8

Lancaster Laboratories

Water Digestion Logbook
AA/ICP - 820/1848/5705/5706/6360

Batch # 97080 | 1848 | 006

Digest Type: AA/ICP/GF(Sb)-SW846 COC (Y/N): Y Start Time: 1750

	Sample #	T	Initial Vol (mL)	Final Vol (mL)	SDG #	AA (A)	ICP (I)	GF (G)	Notes	Reagents 1:1 HNO_3 Lot # 277 Vol Added (mL)	Reagents 1:1 HCl Lot # 064 Vol Added (mL)	Reagents HNO_3 Lot # Z Vol Added (mL)
1	2677529	1	50	50	HMS02		I		COC, TRACE, type I (Aluminum) (TR)	1.0	5.0	
2	7530											
3	7535											
4	7536											
5	7537											
6	7538											
7	7539											
8	7540	↓			↓				(already) Rinsate Blank			
9	6340(D)	2							Repeat (wrong) sg due 3/21			
10	(6341)(S)	↓	↓	↓			↓			↓	↓	
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
Dup (D)	2677531	1	50	50	HMS02		I		COC, TRACE, type I	1.0	5.0	
Spike (R)	7532	↓	↓	↓	↓		↓		↓	↓	↓	
MSD (M)	7533	↓	↓	↓	↓		↓		↓	↓	↓	
Blank	BLANK	↓	↓	↓	↓		↓			↓	↓	

Blank and LCS(s) final volumes are the same.

	Sample #	Spike Information: Soln ID	1	2	3	4	5	8 (GF)
QC	2677532 (R) ↓ 7533 (M)	Lot #	049	056	062	043	078	
		Vol Added (mL)	1.0	→	→	→	→	
	LCS	Vol Added (mL)	↓	↓	↓	↓	↓	
	LCSD							

Digest Date: 3-21-97

Digested By (Init/Emp #): TMK/519

1480 Rev. 01/14/97

1480a Rev. 01/14/97

Batch # 97083 5713 001

Digest Type Hg-SW846 COC (Y/N) Y Start Time _____

	Sample #	T	Initial Vol (mL)	Final Vol (mL)	DF	SDG #	Notes
1	267 7529		8	8		HMS Q2	Leeman lab. Digestion COC.
2	7530						
3	7535						
4	7536						
5	7537						
6	7538						
7	7539						
8	7540						
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Dup (D)	267 7531 D		8	8		HMSQ2	Leeman lab. Digest. COC
Spike (R)	7532 R						
MSD (M)	7533 M						
Blank	BLANK						

Blank and LCS(s) final volumes are the same.

QC	Spike Information		
	LCS	Soln ID	1 ppm Hg
		Lot #	CONT 083
		Vol Added (mL)	0.1 mL → 100
	LCSD		after ____
	Sample #	Soln ID	0.1 ppm Hg
	267 7532 (R)	Lot #	CONT 083
	267 7533 (M)	Vol Added (mL)	0.1 mL → 10

@ NSM 323 3-24-97

Reagent	Lot #	Vol Added (mL)*	Vol Added (mL)**
H_2SO_4	964343	0.4	
HNO_3	K41056	0.2	
5% $KMnO_4$	073A	1.2	
5% $K_2S_2O_8$	043	0.64	
NaCl/NH_2OH•HCl	080A	0.70	

*Automated digester volumes added to each field and QC sample.
**Manual digestion volumes added to each field and QC sample.

Digest Date 3/24/97

Digested by (Init/Emp#) NSM 323

[redacted]

Quality Control Summary

Method Blank
Instrumental Analysis

Method Blank Analysis — Matrix: WATER

Method Blank Designation	Sample Number	Sample Code	Method	Analysis Date	Batch Number	Blank Result	Units	MDL	LOQ
TOTAL CYANIDE	2677529	KMMW3	AK	3/24/97	97080-102-101	< MDL	mg/l	0.004	0.005
	2677530	KMMW4 B							
	2677531	KMMW4 D							
	2677532	KMMW4 M							
	2677535	KMMW5							
	2677536	KMMW1							
	2677537	KMW-3							
	2677538	KMW23							
	2677539	KMW-4							
	2677540	RB--1							
	2675232	MSD							

Comments: The blank is acceptable when the result is less than the limit of quantitation.

ABBREVIATION KEY

IC = Ion Chromatography	MDL = Method Detection Limit
TOC = Total Organic Carbon	LOQ = Limit of Quantitation
TOX = Total Organic Halogen	NA = Not Applicable
TKN = Total Kjeldahl Nitrogen	J = Estimated Value < LOQ
AK = Alpkem	< = Less Than
* = Out of Specification	RA = Rapid Analyzer
ND = Non-Detected	U = Less Than
B = Background	D = Duplicate
S = Spike	M = Matrix Spike Duplicate
P = Post Digest Spike	

Quality Control Summary

Matrix Spike Analysis
Instrumental Analysis

Matrix: WATER

Sample Number	Sample Code
2677529	KMMW3
2677530	KMMW4 B
2677531	KMMW4 D
2677532	KMMW4 M
2677535	KMMW5
2677536	KMMW1
2677537	KMW-3
2677538	KMW23
2677539	KMW-4
2677540	RB--1

Parameter	Meth	Analysis Date	Unspiked Desig.	Unspiked Result	LOQ	Spiked Desig.	Spike Added	Spiked Result	Units	Rec (%)
Total Cyanide	AK	3/24/97	2675230	< LOQ	0.005	2675232	0.2	0.194	mg/l	97.2
RPD= 4%	AK	3/24/97	2675230	< LOQ	0.005	2675232	0.2	0.203	mg/l	101.3

Comments: Sample results are rounded to be consistent with the limit of quantitation.

% Recovery Control Limit 75
% Recovery Control Limit 125

ABBREVIATION KEY

IC = Ion Chromatography	MDL = Method Detection Limit
TOC = Total Organic Carbon	LOQ = Limit of Quantitation
TOX = Total Organic Halogen	NA = Not Applicable
TKN = Total Kjeldahl Nitrogen	J = Estimated Value < LOQ
AK = Alpkem	< = Less Than
* = Out of Specification	RA = Rapid Analyzer
ND = Non-Detected	U = Less Than
B = Background	D = Duplicate
S = Spike	M = Matrix Spike Duplicate
P = Post Digest Spike	

Quality Control Summary

Duplicate Analysis
Instrumental Analysis

Sample Information

Sample Number	Sample Code
2677529	KMMW3
2677530	KMMW4 B
2677531	KMMW4 D
2677532	KMMW4 M
2677535	KMMW5
2677536	KMMW1
2677537	KMW-3
2677538	KMW23
2677539	KMW-4
2677540	RB--1

Duplicate Analysis — Matrix: WATER

Parameter	Meth	Analysis Date	1st Dup Desig.	1st Dup Result	LOQ	2nd Dup Desig.	2nd Dup Result	Units	RPD (%)	Control Limit % </=
Total Cyanide	AK	3/24/97	2675230	< LOQ	0.005	2655231	< LOQ	mg/l	NA	20

Comments: If one or more sample results are less than the limit of quantitation, the RPD is not required.

ample results are rounded to be consistent with the limit of quantitation.

ABBREVIATION KEY

IC = Ion Chromatography	MDL = Method Detection Limit
TOC = Total Organic Carbon	LOQ = Limit of Quantitation
TOX = Total Organic Halogen	NA = Not Applicable
TKN = Total Kjeldahl Nitrogen	J = Estimated Value < LOQ
AK = Alpkem	< = Less Than
* = Out of Specification	RA = Rapid Analyzer
ND = Non-Detected	

Sample Information	
Lab Sample No.	Client Designation
2677529	KMMW3
2677530	KMMW4 B
2677531	KMMW4 D
2677532	KMMW4 M
2677535	KMMW5
2677536	KMMW1
2677537	KMW-3
2677538	KMW23
2677539	KMW-4
2677540	RB--1

Laboratory Control Standard — Matrix: WATER

Parameter	Meth	Analysis Date	True LCS Value	LCS Result	LOQ	Units	%REC
Total Cyanide	AK	3/24/94	0.2	0.196	0.005	mg/l	97.9
RPD= 3.5%	AK	3/24/97	0.2	0.203	0.005	mg/l	101.5

Sample results are rounded to be consistent with limits of quantitation.
Recovery range:
T. Cyanide 0.16 - 0.24 mg/l

ABBREVIATION KEY

IC = Ion Chromatography	* = Out of Specification
TOC = Total Organic Carbon	ND = Not Detected
TOX = Total Organic Halogens	AK = AlpKem
TKN = Total Kjeldahl Nitrogen	LOQ = Limit of Quantitation
RA = Rapid Analyzer	NA = Not Applicable

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Quality Control Summary
Initial Calibration
Instrumental Analysis

Instrument Identification: 4757
Calibration Date: 3/24/97
TOTAL CYANIDE

Batch Numbers: 97080-102-101

This IC applies to samples:	Client Designation	Analysis #	Blank	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	Corr. Coef.
2677529	KMMW3	237	NA*	29	124	309	645	1276	2274	0.999947
2677530	KMMW4 B									
2677531	KMMW4 D									
2677532	KMMW4 M									
2677535	KMMW5									
2677536	KMMW1									
2677537	KMW-3									
2677538	KMW23									
2677539	KMW-4									
2677540	RB--1									
2675232	MSD									
BLANK										
LCS/LCSD										

Continuing Calibration Dates: 3/24/97
Concentration units: mg/l
NA*-The blank is not used in the calculation of the calibration curve.

Parameter T. CYANIDE	Reference Concentration	Result Cont. Cal	% Rec.	Acceptance Range -/+ 10%		Out of Specification
ICV	0.15	0.152	101.0	0.135	0.165	
CCV	0.15	0.157	104.9	0.135	0.165	
CCV	0.15	0.156	103.7	0.135	0.165	
CCV	0.15	0.165	109.9	0.135	0.165	

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Raw Data Logbook
Total Cyanide/Distillations
Analysis #492, 5896

Batch No. 9 7 0 8 0 | 1 0 2 | 1 0 1 |

Analysis: 492 Date: 3/21/97 Analyst: DK722

Std. Ref. (Book/Page/Line): 16,642 / 22 / 9+10

QC Design.	Sample Number	Initial Volume (mL)	Initial Weight (g)	Comments/True Values
Q	LCSLW	50		+.5ml 20mg/l std. DB973
Q	LCSDLW			↓
B	PBLW			
1	26768865			A
2	6880			
3	6881			
4	6918			
5	7247			
6	7529			C.O.C.
L7	7530			
D	7531			
R	7532			+.5ml 20mg/l std. DB973
M	7532			↓
8	7535			
9	7536			
10	7537			
11	7538			B
12	7539			
13	7540			
14	7578			
L15	7579			
D	7579			
R	7579			+.5ml 20mg/l std. DB973
16	7580			
17	7581			

Please Note: Final extraction volume is 50 mL.

Verified: DK722 Date: 3/25/97

1111

SECTION 5

PROJECT CASE NARRATIVES

AND CHAIN-OF-CUSTODY RECORDS

Analysis Request / Environmental Services Chain of Custody

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For Lancaster Laboratories use only
Acct. # 7802 Sample # 2677529-40

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: Kerr McGee Acct. #:
Project Name/#: Gulf States Creosote PWSID #:
Project Manager: Dave Updegrave P.O.#
Sampler: Dave Angle Quote #:
Name of state where samples were collected: Mississippi

For lab use only
FSC:
SCR #: 109 49

(2) (3) (4) (5)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	# of containers	TCL Volatiles	TCL Semivolatiles	TAL Inorganics	TAL Cyanide	TPL Pest/PCB's				Remarks
MW-03	3/12/97	912				X		8	✓	✓	✓	✓	✓				Bottles Preserved
MW-04 MS/MSD	3/12/97	1125				X		8	✓	✓	✓	✓	✓				
MW-04	3/12/97	1127				X		8	✓	✓	✓	✓	✓				
TB-1	3/12/97	NA				X		2	✓								
MW-05	3/12/97	1322				X		8	✓	✓	✓	✓	✓				
MW-01	3/12/97	1505				X		8	✓	✓	✓	✓	✓				
MW-3	3/12/97	1549				X		8	✓	✓	✓	✓	✓				
MW-23	3/12/97	1625				X		8	✓	✓	✓	✓	✓				
MW-21	3/12/97	1829				X		9	✓	✓	✓	✓	✓				
FB-1	3/12/97	1810				X		8	✓	✓	✓	✓	✓				

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	3/13/97	600		3-4-97	1615
				3/11/97	1400
	3/13/97	1100	FedEx: 433674793	3/13/97	1100
				3-14-97	0945

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Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee COC Seal: Present / Not Present on cooler

Date of Receipt: 3-14-97 Broken / Intact

Time of Receipt: 0945 Package: Chilled / Not Chilled

Source Code: 50-1 Unpacker Emp. No.: 920

Temperature of Samples	
#1	#2
Thermometer ID: 10103	Thermometer ID: 10103
Corrected Temp.: 2.1°	Corrected Temp.: 2.5°
Temp. Bottle / Surface Temp. 1 plus vio's	Temp. Bottle / Surface Temp. 2
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N
#3	#4
Thermometer ID: 10103	Thermometer ID: 10103
Corrected Temp.: 1.6°	Corrected Temp.: 1.8°
Temp. Bottle / Surface Temp. 3	Temp. Bottle / Surface Temp. 4
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems: 1

Sample Administration Chain of Custody			
Name	Date	Time	Reason for Transfer
K Dale	3-14-97	~~12:10~~ 12:10 3-14-97	Unpacking
Anneliese Hutchison	3/14/97	1220	Place in Storage or Entry
Anneliese Hutchison	3/14/97	1500	Remove from Storage Entry
			Place in Storage or Entry
			Entry

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Samples Included on Diskette

SDG Number: HMS02

Sample Code	Sample Number	Sample Description
KMMW3	2677529	MW-03 Water Sample
KMMW4	2677530	MW-04 Unspiked Water Sample
KMMW4	2677531	MW-04 Duplicate Water Sample
KMMW4	2677532	MW-04 Matrix Spike Water Sample
KMMW4	2677533	MW-04 Matrix Spike Duplicate Water Sample
KM-TB	2677534	TB-1 Trip Blank Water Sample
KMMW5	2677535	MW-05 Water Sample
KMMW1	2677536	MW-01 Water Sample
KMW-3	2677537	MW-3 Water Sample
KMW23	2677538	MW-23 Water Sample
KMW-4	2677539	MW-4 Water Sample
RB--1	2677540	RB-1 Rinseate Blank Water Sample

CLIENT: KERR-MCGEE
SDG: HMS02

LANCASTER LABORATORIES
VOLATILES by GC/MS

LL NUMBERS:	SAMPLE CODE:	MATRIX SOIL	MATRIX WATER	COMMENTS
2677529	KMMW3		X	
2677530	KMMW4		X	UNSPIKED
2677532	KMMW4MS		X	MATRIX SPIKE
2677533	KMMW4MSD		X	MATRIX SPIKE DUP
2677534	KM-TB		X	CLIENT BLANK
2677535	KMMW5		X	
2677536	KMMW1		X	
2677537	KMW-3		X	20X DILUTION
2677538	KMW23		X	20X DILUTION
2677539	KMW-4		X	
2677540	RB--1		X	CLIENT BLANK
LABORATORY SUBMITTED QC:				
VBLKK42	VBLKK42		X	METHOD BLANK
VBLKK43	VBLKK43		X	METHOD BLANK

SAMPLE PREPARATION:

No sample preparation was necessary for the VOA fraction.

ANALYSIS:

The method used for analysis was EPA SW846 Method 8240B.

The quantitation limits for samples KMW-3 and KMW23 were raised due to the high level of non-target compounds.

No other problems were encountered during the analysis of these samples.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Only client requested compounds are addressed in this narrative.

Statistical windows are included in the QC summary section of this data package.

All QC was within specifications.

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DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

John F. Morton Date 4/10/97

John F. Morton, M.S, GC/MS Volatiles

CASE NARRATIVE

Client: Kerr-McGee Corporation
SDG #: HMS02

LANCASTER LABORATORIES
SEMIVOLATILES BY GC/MS

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2677529	KMMW3		X	
2677530	KMMW4		X	Unspiked
2677532	KMMW4MS		X	Matrix Spike
2677533	KMMW4MSD		X	Matrix Spike Duplicate
2677535	KMMW5		X	
2677536	KMMW1		X	
2677537	KMW-3		X	
2677537RE	KMW-3RE		X	Reinjection
2677537DL	KMW-3DL		X	40X Dilution
2677538	KMW23		X	
2677538DL	KMW23DL		X	10X Dilution
2677538DL2	KMW23DL2		X	80X Dilution
2677539	KMW-4		X	
2677540	RB--1		X	
LABORATORY SUBMITTED QC:				
SBLKWE076	SBLKWE0764		X	Method Blank
076WELCS	076WELCS4		X	Lab Control Sample

SAMPLE PREPARATION:

No problems were encountered during the extraction of these samples.

ANALYSIS:

The method used for analysis was EPA SW-846 Method 8270B.

Due to a number of concentrations above calibration range, KMW-3 was analyzed at a

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further 40X dilution.

Due to a number of concentrations above calibration range, KMW23 was analyzed at further 10X and 80X dilutions.

No other problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Statistical windows are included in the QC summary section of this data package.

KMW-3 had internal standard peak areas outside QC limits for both the initial injection and the reinjection confirming a matrix effect.

In KMW-3 and KMW-3RE the surrogate recovery of nitrobenzene-d5 was outside QC limits. The recoveries were, however, greater than 10 percent.

All other QC was within specifications.

DATA INTERPRETATION:

Only non-conformances for client requested compounds are addressed in this case narrative.

Due to poor curve fit, a number of compounds were calculated using an average response factor. Refer to the calibration reports for more information

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Christine M. Ratcliff Date: 4/10/97

Christine M. Ratcliff,
Group Leader, GC/MS Semivolatiles

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CLIENT: Kerr-McGee
PROJECT: Gulf States Creosoting
SDG: HMS02

LANCASTER LABORATORIES

PESTICIDES/PCB's

LL SAMPLE #	SAMPLE CODE	MATRIX SOLID	MATRIX WATER	COMMENTS
BLANKA 3/18	PBLKWW		X	Method Blank
2677529	KMMW3		X	
2677530	KMMW4		X	Unspiked
2677532	KMMW4MS		X	Matrix Spike
2677533	KMMW4MSD		X	Matrix Spike Duplicate
2677535	KMMW5		X	
2677536	KMMW1		X	
2677537	KMW-3		X	
2677538	KMW23		X	
2677539	KMW-4		X	
2677540	RB--1		X	Client Blank

A. Sample Preparation:

Florisil cleanup was used to minimize interferences in sample KMMW5. GPC and florisil cleanup were used for samples KMW-3 and KMW23 to minimize interferences. Due to the limited amount of sample available reduced aliquots were extracted for samples KMW-3 and the MS/MSD. The LOQ's were adjusted accordingly. No other problems were encountered with the preparation of the samples.

B. Analysis:

The analysis was performed using the following runs:

- 1-3V5083 (DB608 column) and 1-3V5083B (DB1701 column) from 03/24/97 through 04/02/97. No problems were encountered. All continuing calibration data are within specifications since any target analytes which have RPD values outside the 15% criteria on one column are within the 15% criteria on the second column.

C. Quality Control:

All surrogates meet the method criteria that at least one of the two compounds is within the acceptance limits.

The MS/MSD data are within the QC limits.

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D. Data Interpretation:

The method blank was evaluated to the MDL. Values between the MDL and the LOQ are reported with a "J" qualifier.

The "W" qualifiers on the notebook pages denote compounds in which the actual quantitation limit is determined as a worst case based on the height of an interfering peak. The quantitation limits are raised accordingly. The affected samples and compounds are listed below:

- KMW23 W = dieldrin
- KMW-3 W = alpha-BHC & DDE

Due to the presence of interfering peaks, some quantitation limits were determined from a replotted chromatogram representing an increase in attenuation. The reported quantitation limits were raised accordingly. The affected compounds are flagged on the data page with a qualifier. The samples, associated qualifiers, and degree of replot are listed below:

- Y = 5-fold replot: KMW-3 & KMW23

No further interpretation is needed.

Narrative reviewed and approved by:

Jenifer E. Hess, Group Leader — Date: 9/10/97

Lancaster Laboratories
A division of Thermo Analytical Inc.
Where quality is a science.

CASE NARRATIVE FOR INORGANICS

Laboratory Name: Lancaster Laboratories

SDG Number: HSM02

Date Received: 03/14/97

Analysis:
Refer to the analysis run logs for samples requiring dilutions.

Quality Control:
The matrix spike and matrix spike duplicate were not within the control limits for antimony, manganese and potassium. This indicates that the sample matrix may be affecting the digestion and/or measurement methodology for those analytes; however, the data are considered to be valid because the laboratory control sample is within the control limits.

Poor duplication was observed between the matrix background and matrix duplicate for iron. This indicates that the sample matrix may not be homogeneous for that analyte; however, the data are considered to be valid because the laboratory control sample is within the control limits.

The recovery percentages of the matrix spike and matrix spike duplicate for aluminum, calcium, iron, magnesium and sodium were not used to validate the data because the sample results were greater than four times the respective amounts of spike added.

The reported value for calcium and sodium is estimated because of the presence of interference.

Explanatory Notes:
The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The method detection limits (MDLs) are used for determining all other U flags.

Calibration Standards:
Instrument calibration standards are prepared monthly from stock solutions purchased from Spex Industries Inc., JT Baker, Aldrich Chemical, VWR Scientific, EM Science, High Purity or VHG Laboratories.

Case Narrative reviewed and approved by:

Betsy S. Menefee Date 4/1/97

Betsy S. Menefee, Specialist III
Inorganic Analysis

QUALITY ASSURANCE SUMMARY

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES___

, No.: HMS02

Client Sample ID.	Lab Sample ID.
KMMW1	2677536
KMMW3	2677529
KMMW4	2677530
KMMW4D	2677531
KMMW4M	2677533
KMMW4S	2677532
KMMW5	2677535
KMW-3	2677537
KMW-4	2677539
KMW23	2677538
RB--1	2677540

Were ICP interelement corrections applied ? Yes/No YES

re ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

GEND:

U = Below MDL B = Below LOQ

FLAGS: (indicate matrix interference)
N = Matrix Spike OOS
* = Duplicate OOS
W = Method F Analytical Spike Recovery <85% or > 115% when the sample conc. is <50% of the spike conc.
S = Analysis Determined by MSA
+ = MSA Correlation Coefficient < 0.995
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Presence of FLAGS does not invalidate data

METHODS:
A = Flame Atomic Absorption
P = Inductively Coupled Plasma
F = Graphite Furnace
AS = Hydride Generation
CV = Cold Vapor
NR = Not Required

TERMS:
MDL = Method Detection Limit
LOQ = Limit Of Quantitation
OOS = Out of Specification
MSA = Method of Standard Addition

certify that this data package is technically accurate and complete. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Betsy S Menefee Name: Betsy S. Menefee

Date: 4/1/97 Title: Specialist III Inorganic Analysis

CASE NARRATIVE

CLIENT: Kerr-McGee Corporation
SDG: HMS02

LANCASTER LABORATORIES

INSTRUMENTAL ANALYSIS

SAMPLE NUMBERS:

LLI #'S	SAMPLE CODE	SOIL	WATER	COMMENT
2677529	KMMW3		X	
2677530	KMMW4		X	Background
2677531	KMMW4		X	Duplicate
2677532	KMMW4		X	Spike
2677535	KMMW5		X	
2677536	KMMW1		X	
2677537	KMW-3		X	
2677538	KMW23		X	
2677539	KMW-4		X	
2677540	RB--1		X	Client Blank

SAMPLE PREPARATION:
These samples were distilled for the total cyanide analysis.

ANALYSIS:
No problems were encountered during analysis.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:
QC is within specifications.

DATA INTERPRETATION:
No further interpretation of data is needed.

Case Narrative Reviewed and Approved by:

Diane Gontero Date 3-31-97
Diane O. Gontero, Senior Technical Admin., Instrumental Analysis

CASE NARRATIVE

CLIENT: Kerr-McGee Corporation
SDG: HMS02

LANCASTER LABORATORIES

INSTRUMENTAL ANALYSIS

SAMPLE NUMBERS:

LLI #'S	SAMPLE CODE	SOIL	WATER	COMMENT
2677529	KMMW3		X	
2677530	KMMW4		X	Background
2677531	KMMW4		X	Duplicate
2677532	KMMW4		X	Spike
2677535	KMMW5		X	
2677536	KMMW1		X	
2677537	KMW-3		X	
2677538	KMW23		X	
2677539	KMW-4		X	
2677540	RB--1		X	Client Blank

SAMPLE PREPARATION:
These samples were distilled for the total cyanide analysis.

ANALYSIS:
No problems were encountered during analysis.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:
QC is within specifications.

DATA INTERPRETATION:
No further interpretation of data is needed.

Case Narrative Reviewed and Approved by:

Diane Gontero Date 3-31-97
Diane O. Gontero, Senior Technical Admin., Instrumental Analysis

ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

May 20, 1997

Mr. David Upthegrove
Michael Pisani & Associates
Suite 1430
110 Poydras Street
New Orleans, LA 70163

Dear Mr. Upthegrove:

Enclosed is the quality assurance review for the samples collected on March 13 and 14, 1997, as part of the Gulf States Creosoting project. The samples were grouped by the laboratory into sample delivery group (SDG) HMS01 and were collectively analyzed for the Target Compound List of semivolatile organic compounds.

Overall, the data quality is acceptable. However, a portion of the organic data has been qualified due to calibration issues and results reported at concentrations less than the sample-specific quantitation limits.

If you have any questions/comments, or if I can be of further assistance, please feel free to call.

Sincerely,

for KB

Kathleen A. Blaine
Quality Assurance Specialist/Principal

KAB:cr/ko

Enc.

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ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

QUALITY ASSURANCE REVIEW OF SAMPLES COLLECTED FOR GULF STATES CREOSOTING

May 20, 1997

Prepared for:

MICHAEL PISANI & ASSOCIATES
Suite 1430
110 Poydras Street
New Orleans, LA 70163

Prepared by:

ENVIRONMENTAL STANDARDS, INC.
1140 Valley Forge Road
P.O. Box 911
Valley Forge, PA 19482-0911

TABLE OF CONTENTS

Introduction

This quality assurance (QA) review is based upon a rigorous examination of the data generated from the samples collected on March 13 and 14, 1997, as part of the Gulf States Creosoting project. The samples that have undergone the QA review are presented on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Organic Data Review" (United States Environmental Protection Agency [US EPA], 2/94).

The reported analytical results are presented in Section 2. Data were examined to determine the usability of the analytical results and compliance relative to requirements specified in the analytical methods. Qualifier codes have been placed next to the results so the data user can quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data end-user to best understand the usability of the analytical results. It should be understood that data that have not been qualified in this report should be considered valid based on the quality control (QC) criteria that have been reviewed. Details of this QA review are presented in the narrative section of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
RB-2 (Rinsate Blank)	2677434	HMS01	3/13/97	SVOA
SS-11 0-12"	2677435	HMS01	3/13/97	SVOA
SS-6 0-12"	2677436	HMS01	3/13/97	SVOA
SS-6 0-12"MS (Matrix Spike)	2677437MS	HMS01	3/13/97	SVOA
SS-6 0-12"MSD (Matrix Spike Dup.)	2677438MSD	HMS01	3/13/97	SVOA
SS-8 0-12"	2677439	HMS01	3/13/97	SVOA
SS-9 0-12"	2677440	HMS01	3/13/97	SVOA
SS-4 0-12"	2677441	HMS01	3/13/97	SVOA
SS-10 0-12"	2677442	HMS01	3/13/97	SVOA
SS-7 0-12"	2677443	HMS01	3/13/97	SVOA
SS-5 0-12"	2677444	HMS01	3/13/97	SVOA
SS-12 0-12"	2677445	HMS01	3/13/97	SVOA
SS-27 0-12"	2677446	HMS01	3/13/97	SVOA
SS-3 0-12"	2677447	HMS01	3/13/97	SVOA
SS-1 0-12"	2678197	HMS01	3/14/97	SVOA
SS-15 0-12"	2678198	HMS01	3/14/97	SVOA
SS-14 0-12"	2678199	HMS01	3/14/97	SVOA
SS-13 0-12"	2678200	HMS01	3/14/97	SVOA

TABLE 1 (Cont.)

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
SS-18 0-12"	2678201	HMS01	3/14/97	SVOA
SS-2 0-12"	2678202	HMS01	3/14/97	SVOA
SS-17 0-12"	26782203	HMS01	3/14/97	SVOA
SS-16 0-12"	2678204	HMS01	3/14/97	SVOA
RB-3 0-12" (Rinsate Blank)	2678205	HMS01	3/14/97	SVOA

NOTES:

SVOA - Semi-volatile organic compounds by SW-846 Method 8270B.

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 21 solid and two aqueous samples (including one matrix spike/matrix spike duplicate and two rinsate blanks) were performed by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. These 23 samples were analyzed for the target compound list of semivolatile organic compounds by SW-846 Method 8270B, as indicated on Table 1. The analytical results are presented in Section 2 of this report.

The findings in this report are based upon a rigorous review of sample holding times, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike and matrix spike duplicate results, surrogate recoveries, gas chromatography/mass spectroscopy (GC/MS) instrument mass tuning, calibrations, sample preparation, internal standard performance, analytical sequence, and the quantitation of positive results.

In the Data Support Documentation (Section 3) of this report, the data reviewer has included copies of all relevant raw data, QC forms, and other documentation needed to support any changes made to the data package. It should be emphasized that the following items do not necessarily affect data usability. Usability issues are addressed in a subsequent section. This report has been prepared according to sections that provide information that applies to specific analyses performed on the project samples.

Correctable Deficiencies

1. The internal standard (IS) summary, Form VIII, for 3/18/97 analyses on instrument HP03725, is missing from the data package supplied by the laboratory. Only QC samples associated with this IS summary, and all relative raw data have been reviewed to confirm the data acceptability.

2. Pages numbered 126-145 were not included in the data package provided. Apparently, a numbering error occurred during pagination which skipped these numbers in the numerical sequence.

Comments

1. The data usability results for the LCS and matrix spike/matrix spike duplicate analyses were evaluated utilizing the laboratory-generated precision and accuracy limits.

2. The laboratory reported "not-detected" results down the method detection limits (MDLs). In addition, positive results less than the quantitation limit but greater than the MDL were qualified by the laboratory as estimated ("J").

3. All results are reported on a wet-weight basis on the data tables as per instruction from Michael Pisani & Associates personnel.

With regard to data usability, the principal area of concern is calibration issues and results reported at concentrations below the quantitation limit. Based upon a review of the data package provided, the following data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issue should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- The analyses for 4,6-dinitro-2-methylphenol in the samples RB-2, RB-3, SS-6 0-12", SS-8 0-12", SS-9 0-12", and SS-11 0-12" are unusable, and the "not-detected" results have been flagged "R" on the data tables. A very low (<0.050) RRF was observed for this compound in the associated initial multipoint calibration standard.

- The actual reporting limits for the following compounds in the associated samples may be higher than reported, and the "not-detected" results for these compounds have been flagged "UJ" on the data tables. High percent differences (25.0% < %D ≤90.0%) in the direction of a sensitivity increase were obtained between the average RRFs of the associated initial calibrations and the RRFs in the associated continuing calibrations.

Compound	Sample(s) With Biased Reporting Limits ("UJ")
4-chloroaniline	RB-02
2,4-dinitrophenol	SS-6 0-12", SS-8 0-12", SS-9 0-12", and SS-11 0-12"

- According to reporting conventions, all positive results reported below the sample-specific quantitation limits should be considered estimated and have been flagged "J" on the data tables.

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A complete support documentation of this organic data QA review is presented in Section 3 of this report.

B. Conclusions

This QA review has identified a few aspects of the analytical data that required qualification. The majority of the data are acceptable. However, a portion of the organic data has been qualified due to calibration issues and results reported at concentrations below the quantitation limits. To confidently use any of the analytical data within these sample sets, the data user should understand the qualifications and limitations of the results.

Report prepared by:

for KB
Kathleen A. Blaine
Quality Assurance Specialist/Principal

Reported reviewed by:

Ruth L Forman
Ruth L. Forman
Senior Quality Assurance Chemist II

Report reviewed and approved by:

Rock J. Vitale, CPC
Technical Director of Chemistry/Principal

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(610) 935-5577

Date: 5-20-97

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Kerr McGee Corp, Final

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	1	U	1	1	U	1	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	1	U	1	1	U	1	67	U	67
3	2-chlorophenol	95-57-8	1	U	1	1	U	1	33	U	33
4	1,3-dichlorobenzene	541-73-1	1	U	1	1	U	1	33	U	33
5	1,4-dichlorobenzene	106-46-7	1	U	1	1	U	1	33	U	33
6	1,2-dichlorobenzene	95-50-1	1	U	1	1	U	1	33	U	33
7	2-methylphenol	95-48-7	2	U	2	2	U	2	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2	2	U	2	100	U	100
9	4-methylphenol	106-44-5	2	U	2	2	U	2	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2	2	U	2	67	U	67
11	hexachloroethane	67-72-1	2	U	2	2	U	2	67	U	67
12	nitrobenzene	98-95-3	1	U	1	1	U	1	33	U	33
13	isophorone	78-59-1	1	U	1	1	U	1	67	U	67
14	2-nitrophenol	88-75-5	2	U	2	2	U	2	67	U	67
15	2,4-dimethylphenol	105-67-9	1	U	1	1	U	1	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1	1	U	1	33	U	33
17	2,4-dichlorophenol	120-83-2	2	U	2	2	U	2	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	1	U	1	1	U	1	33	U	33
19	naphthalene	91-20-3	1	U	1	1	U	1	33	U	33
20	4-chloroaniline	106-47-8	2	UJ	2	2	U	2	100	U	100
21	hexachlorobutadiene	87-68-3	1	U	1	1	U	1	67	U	67
22	4-chloro-3-methylphenol	59-50-7	2	U	2	2	U	2	67	U	67

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1	1	U	1	33	U	33
24	hexachlorocyclopentadiene	77-47-4	3	U	3	3	U	3	170	U	170
25	2,4,6-trichlorophenol	88-06-2	1	U	1	1	U	1	67	U	67
26	2,4,5-trichlorophenol	95-95-4	1	U	1	1	U	1	67	U	67
27	2-chloronaphthalene	91-58-7	1	U	1	1	U	1	33	U	33
28	2-nitroaniline	88-74-4	1	U	1	1	U	1	67	U	67
29	dimethyl phthalate	131-11-3	3	U	3	3	U	3	33	U	33
30	2,6-dinitrotoluene	606-20-2	1	U	1	1	U	1	67	U	67
31	acenaphthylene	208-96-8	1	U	1	1	U	1	33	U	33
32	3-nitroaniline	99-09-2	1	U	1	1	U	1	67	U	67
33	acenaphthene	83-32-9	1	U	1	1	U	1	33	U	33
34	2,4-dinitrophenol	51-28-5	5	U	5	5	U	5	170	U	170
35	4-nitrophenol	100-02-7	5	U	5	5	U	5	170	U	170
36	dibenzofuran	132-64-9	1	U	1	1	U	1	33	U	33
37	2,4-dinitrotoluene	121-14-2	2	U	2	2	U	2	67	U	67
38	diethyl phthalate	84-66-2	2	U	2	2	U	2	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2	2	U	2	67	U	67
40	fluorene	86-73-7	1	U	1	1	U	1	33	U	33
41	4-nitroaniline	100-01-6	2	U	2	2	U	2	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	5	R	5	5	R	5	170	U	170
43	N-nitrosodiphenylamine	86-30-6	2	U	2	2	U	2	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	2	U	2	2	U	2	100	U	100

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1	1	U	1	100	U	100
46	pentachlorophenol	87-86-5	1	U	1	1	U	1	170	U	170
47	phenanthrene	85-01-8	1	U	1	1	U	1	33	U	33
48	anthracene	120-12-7	1	U	1	1	U	1	67	J	33
49	carbazole	86-74-8	1	U	1	1	U	1	33	U	33
50	di-n-butyl phthalate	84-74-2	1	U	1	1	U	1	38	J	33
51	fluoranthene	206-44-0	1	U	1	1	U	1	480		33
52	pyrene	129-00-0	1	U	1	1	U	1	830		67
53	butyl benzyl phthalate	85-68-7	2	U	2	2	U	2	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	2	U	2	2	U	2	130	U	130
55	benzo (a) anthracene	56-55-3	1	U	1	1	U	1	540		33
56	chrysene	218-01-9	1	U	1	1	U	1	930		33
57	bis (2-ethylhexyl) phthalate	117-81-7	2	U	2	2	U	2	67	U	67
58	di-n-octyl phthalate	117-84-0	2	U	2	2	U	2	67	U	67
59	benzo (b) fluoranthene	205-99-2	2	U	2	2	U	2	2,200		67
60	benzo (k) fluoranthene	207-08-9	2	U	2	2	U	2	650		130
61	benzo (a) pyrene	50-32-8	2	U	2	2	U	2	410		67
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2	2	U	2	460		67
63	dibenz (a,h) anthracene	53-70-3	2	U	2	2	U	2	160	J	67
64	benzo (ghi) perylene	191-24-2	2	U	2	2	U	2	240	J	67

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	170	J	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	160	J	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	490		33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	UJ	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	98	J	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	45	J	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	R	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	430		33	33	U	33	87	J	33
48	anthracene	120-12-7	530		33	33	U	33	33	U	33
49	carbazole	86-74-8	260	J	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	110	J	33	33	U	33	57	J	33
51	fluoranthene	206-44-0	3,100		33	120	J	33	390		33
52	pyrene	129-00-0	3,500		67	160	J	67	480		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	2,300		33	67	J	33	220	J	33
56	chrysene	218-01-9	3,400		33	110	J	33	320	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	5,200		67	180	J	67	540		67
60	benzo (k) fluoranthene	207-08-9	2,300		130	130	U	130	190	J	130
61	benzo (a) pyrene	50-32-8	2,400		67	84	J	67	210	J	67
62	indeno (1,2,3-cd) pyrene	193-39-5	2,100		67	67	U	67	250	J	67
63	dibenz (a,h) anthracene	53-70-3	640		67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	1,800		67	67	U	67	200	J	67

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	88	J	33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	170	J	33	33	U	33	33	U	33
48	anthracene	120-12-7	120	J	33	33	U	33	33	U	33
49	carbazole	86-74-8	61	J	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	36	J	33	42	J	33	40	J	33
51	fluoranthene	206-44-0	1,400		33	33	U	33	120	J	33
52	pyrene	129-00-0	1,800		67	67	U	67	120	J	67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	1,100		33	33	U	33	56	J	33
56	chrysene	218-01-9	1,700		33	33	U	33	110	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	230	J	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	3,900		67	67	U	67	190	J	67
60	benzo (k) fluoranthene	207-08-9	1,200		130	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	1,400		67	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	950		67	67	U	67	86	J	67
63	dibenz (a,h) anthracene	53-70-3	280	J	67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	700		67	67	U	67	80	J	67

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	160	J	33	33	U	33	47	J	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	230	J	33	33	U	33	50	J	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	170	J	33	120	J	33	230	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	47	J	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	93	J	33	36	J	33	75	J	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	88	J	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	82	J	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	250	J	33	130	J	33	1,300		33
48	anthracene	120-12-7	170	J	33	120	J	33	220	J	33
49	carbazole	86-74-8	110	J	33	46	J	33	280	J	33
50	di-n-butyl phthalate	84-74-2	110	J	33	99	J	33	100	J	33
51	fluoranthene	206-44-0	780		33	680		33	3,200		33
52	pyrene	129-00-0	950		67	1,000		67	2,400		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	490		33	540		33	1,100		33
56	chrysene	218-01-9	870		33	800		33	1,700		33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	78	J	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	1,400		67	1,200		67	2,100		67
60	benzo (k) fluoranthene	207-08-9	490		130	470		130	800		130
61	benzo (a) pyrene	50-32-8	710		67	560		67	990		67
62	indeno (1,2,3-cd) pyrene	193-39-5	600		67	470		67	700		67
63	dibenz (a,h) anthracene	53-70-3	160	J	67	140	J	67	210	J	67
64	benzo (ghi) perylene	191-24-2	1,200		67	680		67	750		67

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	33	U	33	37	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	37	J	33	33	U	33	91	J	33
48	anthracene	120-12-7	33	U	33	33	U	33	41	J	33
49	carbazole	86-74-8	33	U	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	59	J	33	44	J	33	51	J	33
51	fluoranthene	206-44-0	66	J	33	33	U	33	420		33
52	pyrene	129-00-0	200	J	67	67	U	67	640		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	41	J	33	33	U	33	400		33
56	chrysene	218-01-9	62	J	33	33	U	33	620		33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	110	J	67	67	U	67	1,200		67
60	benzo (k) fluoranthene	207-08-9	130	U	130	130	U	130	430		130
61	benzo (a) pyrene	50-32-8	220	J	67	67	U	67	420		67
62	indeno (1,2,3-cd) pyrene	193-39-5	96	J	67	67	U	67	470		67
63	dibenz (a,h) anthracene	53-70-3	67	U	67	67	U	67	140	J	67
64	benzo (ghi) perylene	191-24-2	740		67	67	U	67	340		67

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	UJ	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	R	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	68	J	33	33	U	33	33	U	33
48	anthracene	120-12-7	33	U	33	33	U	33	33	U	33
49	carbazole	86-74-8	33	U	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	49	J	33	55	J	33	33	U	33
51	fluoranthene	206-44-0	300	J	33	72	J	33	33	U	33
52	pyrene	129-00-0	540		67	98	J	67	67	U	67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	270	J	33	44	J	33	33	U	33
56	chrysene	218-01-9	360		33	78	J	33	33	U	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	930		67	130	J	67	67	U	67
60	benzo (k) fluoranthene	207-08-9	340		130	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	210	J	67	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	300	J	67	67	U	67	67	U	67
63	dibenz (a,h) anthracene	53-70-3	72	J	67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	200	J	67	67	U	67	67	U	67

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	140	J	33	45	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	UJ	170	170	UJ	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	R	170	170	R	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	33	U	33	63	J	33	33	U	33
48	anthracene	120-12-7	33	U	33	110	J	33	60	J	33
49	carbazole	86-74-8	33	U	33	43	J	33	33	U	33
50	di-n-butyl phthalate	84-74-2	46	J	33	33	U	33	33	U	33
51	fluoranthene	206-44-0	33	U	33	950		33	260	J	33
52	pyrene	129-00-0	67	U	67	1,100		67	400		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	33	U	33	640		33	220	J	33
56	chrysene	218-01-9	33	U	33	850		33	210	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	67	U	67	1,400		67	700		67
60	benzo (k) fluoranthene	207-08-9	130	U	130	530		130	250	J	130
61	benzo (a) pyrene	50-32-8	67	U	67	650		67	330	J	67
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	540		67	230	J	67
63	dibenz (a,h) anthracene	53-70-3	67	U	67	150	J	67	67	U	67
64	benzo (ghi) perylene	191-24-2	67	U	67	420		67	170	J	67

Organic Qualifiers

U Compound was not detected.

U* This compound should be considered "not-detected" since it was detected in a field, trip, and/or laboratory blank at a similar level.

J Quantitation is approximate due to limitations identified during the quality assurance review (data validation).

R Unusable result; compound may or may not be present in this sample.

UJ The compound was not detected, but the detection limit may or may not be higher due to a bias during the quality assurance review.

Kerr McGee Corp, Final

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	1	U	1	1	U	1	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	1	U	1	1	U	1	67	U	67
3	2-chlorophenol	95-57-8	1	U	1	1	U	1	33	U	33
4	1,3-dichlorobenzene	541-73-1	1	U	1	1	U	1	33	U	33
5	1,4-dichlorobenzene	106-46-7	1	U	1	1	U	1	33	U	33
6	1,2-dichlorobenzene	95-50-1	1	U	1	1	U	1	33	U	33
7	2-methylphenol	95-48-7	2	U	2	2	U	2	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2	2	U	2	100	U	100
9	4-methylphenol	106-44-5	2	U	2	2	U	2	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2	2	U	2	67	U	67
11	hexachloroethane	67-72-1	2	U	2	2	U	2	67	U	67
12	nitrobenzene	98-95-3	1	U	1	1	U	1	33	U	33
13	isophorone	78-59-1	1	U	1	1	U	1	67	U	67
14	2-nitrophenol	88-75-5	2	U	2	2	U	2	67	U	67
15	2,4-dimethylphenol	105-67-9	1	U	1	1	U	1	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1	1	U	1	33	U	33
17	2,4-dichlorophenol	120-83-2	2	U	2	2	U	2	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	1	U	1	1	U	1	33	U	33
19	naphthalene	91-20-3	1	U	1	1	U	1	33	U	33
20	4-chloroaniline	106-47-8	2	UJ	2	2	U	2	100	U	100
21	hexachlorobutadiene	87-68-3	1	U	1	1	U	1	67	U	67
22	4-chloro-3-methylphenol	59-50-7	2	U	2	2	U	2	67	U	67

Kerr McGee Corp, Final

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1	1	U	1	33	U	33
24	hexachlorocyclopentadiene	77-47-4	3	U	3	3	U	3	170	U	170
25	2,4,6-trichlorophenol	88-06-2	1	U	1	1	U	1	67	U	67
26	2,4,5-trichlorophenol	95-95-4	1	U	1	1	U	1	67	U	67
27	2-chloronaphthalene	91-58-7	1	U	1	1	U	1	33	U	33
28	2-nitroaniline	88-74-4	1	U	1	1	U	1	67	U	67
29	dimethyl phthalate	131-11-3	3	U	3	3	U	3	33	U	33
30	2,6-dinitrotoluene	606-20-2	1	U	1	1	U	1	67	U	67
31	acenaphthylene	208-96-8	1	U	1	1	U	1	33	U	33
32	3-nitroaniline	99-09-2	1	U	1	1	U	1	67	U	67
33	acenaphthene	83-32-9	1	U	1	1	U	1	33	U	33
34	2,4-dinitrophenol	51-28-5	5	U	5	5	U	5	170	U	170
35	4-nitrophenol	100-02-7	5	U	5	5	U	5	170	U	170
36	dibenzofuran	132-64-9	1	U	1	1	U	1	33	U	33
37	2,4-dinitrotoluene	121-14-2	2	U	2	2	U	2	67	U	67
38	diethyl phthalate	84-66-2	2	U	2	2	U	2	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2	2	U	2	67	U	67
40	fluorene	86-73-7	1	U	1	1	U	1	33	U	33
41	4-nitroaniline	100-01-6	2	U	2	2	U	2	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	5	R	5	5	R	5	170	U	170
43	N-nitrosodiphenylamine	86-30-6	2	U	2	2	U	2	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	2	U	2	2	U	2	100	U	100

Kerr McGee Corp, Final

			HMS01								
			RB-2 Rinseate Blank Grab Water			RB-3 Rinseate Blank Composite			SS-1 0-12 Grab Soil Sample		
			2677434			2678205			2678197		
			3/13/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			WATER			WATER			soil		
			SVOA			SVOA			SVOA		
			UG/L			UG/L			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1	1	U	1	100	U	100
46	pentachlorophenol	87-86-5	1	U	1	1	U	1	170	U	170
47	phenanthrene	85-01-8	1	U	1	1	U	1	33	U	33
48	anthracene	120-12-7	1	U	1	1	U	1	67	J	33
49	carbazole	86-74-8	1	U	1	1	U	1	33	U	33
50	di-n-butyl phthalate	84-74-2	1	U	1	1	U	1	38	J	33
51	fluoranthene	206-44-0	1	U	1	1	U	1	480		33
52	pyrene	129-00-0	1	U	1	1	U	1	830		67
53	butyl benzyl phthalate	85-68-7	2	U	2	2	U	2	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	2	U	2	2	U	2	130	U	130
55	benzo (a) anthracene	56-55-3	1	U	1	1	U	1	540		33
56	chrysene	218-01-9	1	U	1	1	U	1	930		33
57	bis (2-ethylhexyl) phthalate	117-81-7	2	U	2	2	U	2	67	U	67
58	di-n-octyl phthalate	117-84-0	2	U	2	2	U	2	67	U	67
59	benzo (b) fluoranthene	205-99-2	2	U	2	2	U	2	2,200		67
60	benzo (k) fluoranthene	207-08-9	2	U	2	2	U	2	650		130
61	benzo (a) pyrene	50-32-8	2	U	2	2	U	2	410		67
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2	2	U	2	460		67
63	dibenz (a,h) anthracene	53-70-3	2	U	2	2	U	2	160	J	67
64	benzo (ghi) perylene	191-24-2	2	U	2	2	U	2	240	J	67

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	170	J	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	160	J	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	490		33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	UJ	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	98	J	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	45	J	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-10 0-12 Composite Soil Sampl			SS-11 0-12 Composite Soil Sampl			SS-12 0-12 Composite Soil Sampl		
			2677442			2677435			2677445		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	430		33	33	U	33	87	J	33
48	anthracene	120-12-7	530		33	33	U	33	33	U	33
49	carbazole	86-74-8	260	J	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	110	J	33	33	U	33	57	J	33
51	fluoranthene	206-44-0	3,100		33	120	J	33	390		33
52	pyrene	129-00-0	3,500		67	160	J	67	480		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	2,300		33	67	J	33	220	J	33
56	chrysene	218-01-9	3,400		33	110	J	33	320	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	5,200		67	180	J	67	540		67
60	benzo (k) fluoranthene	207-08-9	2,300		130	130	U	130	190	J	130
61	benzo (a) pyrene	50-32-8	2,400		67	84	J	67	210	J	67
62	indeno (1,2,3-cd) pyrene	193-39-5	2,100		67	67	U	67	250	J	67
63	dibenz (a,h) anthracene	53-70-3	640		67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	1,800		67	67	U	67	200	J	67

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	88	J	33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-13 0-12 Grab Soil Sample			SS-14 0-12 Grab Soil Sample			SS-15 0-12 Grab Soil Sample		
			2678200			2678199			2678198		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	170	J	33	33	U	33	33	U	33
48	anthracene	120-12-7	120	J	33	33	U	33	33	U	33
49	carbazole	86-74-8	61	J	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	36	J	33	42	J	33	40	J	33
51	fluoranthene	206-44-0	1,400		33	33	U	33	120	J	33
52	pyrene	129-00-0	1,800		67	67	U	67	120	J	67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	1,100		33	33	U	33	56	J	33
56	chrysene	218-01-9	1,700		33	33	U	33	110	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	230	J	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	3,900		67	67	U	67	190	J	67
60	benzo (k) fluoranthene	207-08-9	1,200		130	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	1,400		67	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	950		67	67	U	67	86	J	67
63	dibenz (a,h) anthracene	53-70-3	280	J	67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	700		67	67	U	67	80	J	67

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	160	J	33	33	U	33	47	J	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	230	J	33	33	U	33	50	J	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	170	J	33	120	J	33	230	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	47	J	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	93	J	33	36	J	33	75	J	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	88	J	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	82	J	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-16 0-12 Grab Soil Sample			SS-17 0-12 Grab Soil Sample			SS-18 0-12 Grab Soil Sample		
			2678204			2678203			2678201		
			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM			3/14/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	250	J	33	130	J	33	1,300		33
48	anthracene	120-12-7	170	J	33	120	J	33	220	J	33
49	carbazole	86-74-8	110	J	33	46	J	33	280	J	33
50	di-n-butyl phthalate	84-74-2	110	J	33	99	J	33	100	J	33
51	fluoranthene	206-44-0	780		33	680		33	3,200		33
52	pyrene	129-00-0	950		67	1,000		67	2,400		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	490		33	540		33	1,100		33
56	chrysene	218-01-9	870		33	800		33	1,700		33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	78	J	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	1,400		67	1,200		67	2,100		67
60	benzo (k) fluoranthene	207-08-9	490		130	470		130	800		130
61	benzo (a) pyrene	50-32-8	710		67	560		67	990		67
62	indeno (1,2,3-cd) pyrene	193-39-5	600		67	470		67	700		67
63	dibenz (a,h) anthracene	53-70-3	160	J	67	140	J	67	210	J	67
64	benzo (ghi) perylene	191-24-2	1,200		67	680		67	750		67

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	33	U	33	37	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-2 0-12 Grab Soil Sample			SS-27 0-12 Composite Soil Sampl			SS-3 0-12 Composite Soil Sample		
			2678202			2677446			2677447		
			3/14/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	37	J	33	33	U	33	91	J	33
48	anthracene	120-12-7	33	U	33	33	U	33	41	J	33
49	carbazole	86-74-8	33	U	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	59	J	33	44	J	33	51	J	33
51	*fluoranthene*	206-44-0	66	J	33	33	U	33	420		33
52	pyrene	129-00-0	200	J	67	67	U	67	640		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	41	J	33	33	U	33	400		33
56	chrysene	218-01-9	62	J	33	33	U	33	620		33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	110	J	67	67	U	67	1,200		67
60	benzo (k) fluoranthene	207-08-9	130	U	130	130	U	130	430		130
61	benzo (a) pyrene	50-32-8	220	J	67	67	U	67	420		67
62	*indeno (1,2,3-cd) pyrene*	193-39-5	96	J	67	67	U	67	470		67
63	dibenz (a,h) anthracene	53-70-3	67	U	67	67	U	67	140	J	67
64	benzo (ghi) perylene	191-24-2	740		67	67	U	67	340		67

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	UJ	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-4 0-12 Composite Soil Sample			SS-5 0-12 Composite Soil Sample			SS-6 0-12 Unspiked Composite So		
			2677441			2677444			2677436		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	68	J	33	33	U	33	33	U	33
48	anthracene	120-12-7	33	U	33	33	U	33	33	U	33
49	carbazole	86-74-8	33	U	33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	49	J	33	55	J	33	33	U	33
51	fluoranthene	206-44-0	300	J	33	72	J	33	33	U	33
52	pyrene	129-00-0	540		67	98	J	67	67	U	67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	270	J	33	44	J	33	33	U	33
56	chrysene	218-01-9	360		33	78	J	33	33	U	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	930		67	130	J	67	67	U	67
60	benzo (k) fluoranthene	207-08-9	340		130	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	210	J	67	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	300	J	67	67	U	67	67	U	67
63	dibenz (a,h) anthracene	53-70-3	72	J	67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	200	J	67	67	U	67	67	U	67

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	33	U	33	33	U	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	33	U	33	140	J	33	45	J	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	33	U	33	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	UJ	170	170	UJ	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	33	U	33	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	33	U	33	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			SS-7 0-12 Composite Soil Sample			SS-8 0-12 Composite Soil Sample			SS-9 0-12 Composite Soil Sample		
			2677443			2677439			2677440		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			soil			soil			soil		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	33	U	33	63	J	33	33	U	33
48	anthracene	120-12-7	33	U	33	110	J	33	60	J	33
49	carbazole	86-74-8	33	U	33	43	J	33	33	U	33
50	di-n-butyl phthalate	84-74-2	46	J	33	33	U	33	33	U	33
51	fluoranthene	206-44-0	33	U	33	950		33	260	J	33
52	pyrene	129-00-0	67	U	67	1,100		67	400		67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	33	U	33	640		33	220	J	33
56	chrysene	218-01-9	33	U	33	850		33	210	J	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	67	U	67	1,400		67	700		67
60	benzo (k) fluoranthene	207-08-9	130	U	130	530		130	250	J	130
61	benzo (a) pyrene	50-32-8	67	U	67	650		67	330	J	67
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	540		67	230	J	67
63	dibenz (a,h) anthracene	53-70-3	67	U	67	150	J	67	67	U	67
64	benzo (ghi) perylene	191-24-2	67	U	67	420		67	170	J	67

SECTION 3

ORGANIC DATA SUPPORT DOCUMENTATION

Organic Analyses Support Documentation

Environmental Standards Project Name: Gulf States
Sample Collection Dates: 3/13/97 & 3/14/97
Job Number: 920706 35
Project Manager: N. Blaine
Laboratory: Lancaster

Reviewed By: K. Blaine
Approved By: RE
Completion Date: 5/97

Applicable Sample No's.: ☐ Refer to Table 1 in the Quality Assurance Review

Deliverables: CLP ☒
Tier I ☐
Tier II ☐
Limited ☐
Other ____

Sample No.	Lab. Control No.
SBC Hansel	

The following table indicates criteria which were examined, the identified problems, and support documentation attachments.

	Criteria Examined in Detail (Check (✓) If Yes or Footnote Letter for Comments Below)				Problems Identified (Check (✓) If Yes or Footnote Number for Comments Below)				Support Documentation Attachments (Check (✓) If Yes -- or Identify Attachment No.)			
	VOA Method	BNA Method 8270 &	PEST / PCB Method	Other Method(s)	VOA Method	BNA Method 8270 &	PEST / PCB Method	Other Method(s)	VOA Method	BNA Method 8270 &	PEST / PCB Method	Other Method(s)
Holding Times		✓								✓		
Blank Analysis Results: Target Compounds		✓								✓		
Blank Analysis Results: TICs												
System Mntr. Cmpds. &/or Surrogate Spike Rslts.		✓								✓		
Matrix Spike / Matrix Spike Duplicate Results		✓								✓		
Blank Spike Results		✓								✓		
Duplicate Analysis Results ☐ Field ☐ Lab												
Qualitative Identification: Target Compounds		✓										
Qualitative Identification: TICs												
DFTPP & BFB Mass Tuning	n/a	✓							n/a	✓		
GC Instrument Performance												
Initial Calibrations		✓				✓				✓		
Continuing Calibrations		✓				✓				✓		
Quantitation of Results		✓										
DDT / Endrin Breakdown												
Surrogate Retention Time Shifts												
Internal Standards Performance		✓								✓		
Resolution Check Standards												
Analytical Sequence		✓								✓		
Florisil Cartridge Check & GPC Calibration												
GC Column Agreement												
Others:												

Comments: ____

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
S	Aq	EB	LB-2	none			
S	Aq	EB	LB-3	none			
S	Aq	MB	SBIKL00764	none			
S	S	MB	SBIKL00766	none			
S	S	MB	SBIKL00644	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

• = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: LANCASTER LABS Contract: _____.

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

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKWE0764	88	76	69	40	61	80		0
02	076WELCS4	98	87	85	40	59	81		0
03	RB-02	83	81	86	39	58	79		0
04	RB-3-	90	78	85	39	55	87		0
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d6	(10-94)
S5 (2FP) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

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

FORM II SV-1 1/87 Rev.

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: LANCASTER LABS Contract: _____.

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

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKLD076G	70	79	87	65	63	79		0
02	SBLKLD076H	78	83	90	77	72	68		0
03	076LDLCSG	81	85	84	69	69	87		0
04	076LDLCSH	83	84	100	81	83	100		0
05	SS-11	72	83	76	66	63	79		0
06	SS-06	70	82	78	64	61	81		0
07	SS-06MS	70	81	77	64	62	83		0
08	SS-06MSD	69	78	75	64	61	77		0
09	SS-08	77	87	78	67	62	70		0
10	SS-09	69	80	74	64	60	72		0
11	SS-04	87	80	99	69	63	48		0
12	SS-10	73	83	94	61	60	69		0
13	SS-07	80	79	113	79	80	82		0
14	SS-05	84	80	114	77	74	77		0
15	SS-12	75	77	90	69	66	58		0
16	SS-27	86	86	99	74	71	66		0
17	SS-03	91	90	108	83	78	65		0
18	SS-1-	97	88	101	84	87	68		0
19	SS-15	87	84	100	79	75	64		0
20	SS-14	88	94	112	80	77	69		0
21	SS-13	85	87	79	77	76	65		0
22	SS-18	84	87	84	68	64	74		0
23	SS-2-	88	88	91	80	76	65		0
24	SS-17	80	85	80	65	56	54		0
25	SS-16	87	87	83	69	64	69		0
26									
27									
28									
29									
30									

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d6	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____

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

Lab File ID: >DC356 Lab Sample ID: SBLKWE076

Date Extracted: 03/17/97 Extraction: (SepF/Cont/Sonc/Sox) SEPF

Date Analyzed: 03/18/97 Time Analyzed: 16:42

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: HP03301

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	076WELCS4	076WELCS	>DC357	03/18/97
02	KMMW4	2677530	>DC358	03/18/97
03	KMMW4MS	2677532	>DC359	03/18/97
04	KMMW4MSD	2677533	>DC360	03/18/97
05	RB-02	2677434	>DC376	03/18/97
06	KMMW3	2677529	>DC377	03/19/97
07	KMMW5	2677535	>DC378	03/19/97
08	KMMW1	2677536	>DC379	03/19/97
09	KMW-3	2677537	>DC380	03/19/97
10	KMW23	2677538	>DC381	03/19/97
11	KMW-4	2677539	>DC396	03/19/97
12	RB--1	2677540	>DC397	03/19/97
13	RB-3-	2678205	>DC398	03/19/97
14	KMW23DL	2677538DL	>DC425	03/19/97
15	KMW-3DL	2677537DL	>DC426	03/19/97
16	KMW-3RE	2677537RE	>DC427	03/19/97
17	KMW23DL2	2677538DL2	>DC436	03/20/97

COMMENTS: _____

FORM IV SV 1/87 Rev.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GC206 Lab Sample ID:SBLKLD076

Date Extracted: 03/17/97 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 03/19/97 Time Analyzed: 15:07

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: HP03725

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	076LDLCSG	076LDLCS	>GC207	03/19/97
02	SS-06	2677436	>GC213	03/20/97
03	SS-06MS	2677437	>GC214	03/20/97
04	SS-06MSD	2677438	>GC215	03/20/97
05	SS-11	2677435	>GC216	03/20/97
06	SS-08	2677439	>GC217	03/20/97
07	SS-09	2677440	>GC218	03/20/97
08	SS-17	2678203	>GC236	03/25/97
09	SS-16	2678204	>GC237	03/25/97
10	SS-18	2678201	>GC238	03/25/97
11	SS-10	2677442	>GC239	03/25/97

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >HC373 Lab Sample ID: SBLKLD076

Date Extracted: 03/17/97 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 03/24/97 Time Analyzed: 19:33

Matrix: (soil/water) SOIL Level: (low/med) LOW

Instrument ID: HP04629

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	076LDLCSH	076LDLCS	>HC374	03/24/97
02	SS-27	2677446	>HC387	03/25/97
03	SS-15	2678198	>HC389	03/25/97
04	SS-12	2677445	>HC391	03/25/97
05	SS-03	2677447	>HC393	03/25/97
06	SS-2-	2678202	>HC395	03/25/97
07	SS-1-	2678197	>HC397	03/25/97
08	SS-13	2678200	>HC399	03/25/97
09	SS-07	2677443	>HC401	03/25/97
10	SS-14	2678199	>HC402	03/25/97
11	SS-05	2677444	>HC403	03/25/97
12	SS-04	2677441	>HC404	03/25/97

COMMENTS: _____

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

b Name: LANCASTER LABS | Lab Code: LANCAS | Instrument: HP03725

W846 METHOD 8270 | SPIKE LEVEL: 100 UG/ML | AMT USED: 30.0

SAMPLE SPIKE LEVEL: 3922.UG/KG | % MOISTURE 15. | DILUTION: 1

S SAMPLE: SS-06 2677436 | MS SAMPLE: SS-06MS 2677437 | MSD SAMPLE: SS-06MSD 2677438

COMPOUND NAME	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
henol	0.00	2610.24	2593.36	66	66	1.00		
bis(2-Chloroethyl)ether	0.00	2690.43	2526.81	69	64	6.00		
2-Chlorophenol	0.00	2903.82	2895.53	74	74	0.00		
,3-Dichlorobenzene	0.00	2880.45	2759.29	73	70	4.00		
,4-Dichlorobenzene	0.00	2882.72	2780.34	74	71	4.00		
1,2-Dichlorobenzene	0.00	2903.71	2824.06	74	72	3.00		
2-Methylphenol	0.00	2397.05	2310.24	61	59	4.00		
,2'-oxybis(1-Chloropropane)	0.00	1758.88	1800.72	45	46	-2.00		
-Methylphenol	0.00	2535.26	2441.94	65	62	4.00		
N-Nitroso-di-n-propylamine	0.00	2663.65	2653.68	68	68	0.00		
Hexachloroethane	0.00	2600.44	2506.97	66	64	4.00		
trobenzene	0.00	2699.76	2665.28	69	68	1.00		
ophorone	0.00	2862.14	2840.57	73	72	1.00		
2-Nitrophenol	0.00	3192.93	3059.49	81	78	4.00		
2,4-Dimethylphenol	0.00	799.28	655.92	20	17	20.00		
s(2-Chloroethoxy)methane	0.00	2696.55	2681.33	69	68	1.00		
4-Dichlorophenol	0.00	2907.44	2830.73	74	72	3.00		
,2,4-Trichlorobenzene	0.00	3030.75	2927.49	77	75	3.00		
Naphthalene	0.00	2752.57	2688.08	70	68	2.00		
Chloroaniline	0.00	1196.78	1357.68	30	35	-13.00		
xachlorobutadiene	0.00	3241.61	3137.30	83	80	3.00		
loro-3-methylphenol	0.00	2866.10	2791.52	73	71	3.00		
thylnaphthalene	0.00	2887.64	2794.86	74	71	3.00		
xachlorocyclopentadiene	0.00	5058.13	5261.21	64	67	-4.00		
4,6-Trichlorophenol	0.00	3055.89	2932.29	78	75	4.00		
4,5-Trichlorophenol	0.00	3106.98	2969.30	79	76	5.00		
2-Chloronaphthalene	0.00	3094.91	2953.86	79	75	5.00		
2-Nitroaniline	0.00	2727.63	2597.34	70	66	5.00		
methylphthalate	0.00	2995.62	2867.62	76	73	4.00		
6-Dinitrotoluene	0.00	3511.67	3385.71	90	86	4.00		
Acenaphthylene	0.00	3062.44	2914.97	78	74	5.00		
3-Nitroaniline	0.00	1985.90	2083.07	51	53	-5.00		
enaphthene	0.00	3014.45	2874.12	77	73	5.00		
6-Dinitrophenol	0.00	3776.29	3615.19	96	92	4.00		
4-Nitrophenol	0.00	3329.80	3211.96	85	82	4.00		
Dibenzofuran	0.00	3043.58	2939.17	78	75	3.00		
,6-Dinitrotoluene	0.00	3459.06	3329.69	88	85	4.00		
ethylphthalate	0.00	2924.18	2836.34	74	72	3.00		
4-Chlorophenyl-phenylether	0.00	2955.11	2857.95	75	73	3.00		

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

Lab Name: LANCASTER LABS Lab Code: LANCAS Instrument: HP03725

46 METHOD 8270 SPIKE LEVEL: 100 UG/ML AMT USED: 30.0

SAMPLE SPIKE LEVEL: 3922.UG/KG % MOISTURE 15. DILUTION: 1

S SAMPLE: SS-06 2677436 MS SAMPLE: SS-06MS 2677437 MSD SAMPLE: SS-06MSD 2677438

COMPOUND NAME	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
luorene	0.00	3185.13	3037.33	81	77	5.00		
-Nitroaniline	0.00	2695.25	2582.84	69	66	4.00		
4,6-Dinitro-2-methylphenol	0.00	3681.19	3510.90	94	90	5.00		
-Nitrosodiphenylamine	0.00	2833.52	2760.30	72	70	3.00		
-Bromophenyl-phenylether	0.00	2933.00	2810.04	75	72	4.00		
xachlorobenzene	0.00	2933.26	2781.77	75	71	5.00		
Pentachlorophenol	0.00	3256.50	3086.60	83	79	5.00		
Phenanthrene	0.00	2987.67	2861.93	76	73	4.00		
thracene	0.00	2813.99	2712.89	72	69	4.00		
rbazole	0.00	3434.63	3327.03	88	85	3.00		
Di-n-butylphthalate	0.00	3131.88	3039.56	80	78	3.00		
Fluoranthene	0.00	3332.07	3217.61	85	82	3.00		
rene	0.00	2907.20	2842.05	74	72	2.00		
tylbenzylphthalate	0.00	2921.39	2843.37	74	72	3.00		
3,3'-Dichlorobenzidine	0.00	1123.68	1388.55	29	35	-21.00		
Benzo(a)anthracene	0.00	2946.83	2819.59	75	72	4.00		
s(2-Ethylhexyl)phthalate	0.00	2860.97	2788.90	73	71	3.00		
rysene	0.00	3119.93	3014.02	80	77	3.00		
Di-n-octylphthalate	0.00	2988.57	2821.08	76	72	6.00		
Benzo(b)fluoranthene	0.00	3063.12	2898.42	78	74	6.00		
Benzo(k)fluoranthene	0.00	3248.33	3072.04	83	78	6.00		
Benzo(a)pyrene	0.00	2893.33	2732.95	74	70	6.00		
o(1,2,3-cd)pyrene	0.00	3068.55	2916.55	78	74	5.00		
:(a,h)anthracene	0.00	3081.19	2961.32	78	76	4.00		
Benzo(g,h,i)perylene	0.00	2921.62	2830.46	74	72	3.00		

COMMENTS:

WATER SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03301

7846 METHOD 8270 SPIKE LEVEL: 100 UG/L

LCS SAMPLE NO: 076WELCS4 076WELCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Phenol	43.21	43		
bis(2-Chloroethyl)ether	89.23	89		
2-Chlorophenol	88.21	88		
1,3-Dichlorobenzene	70.44	70		
1,4-Dichlorobenzene	74.45	74		
1,2-Dichlorobenzene	77.35	77		
2-Methylphenol	80.41	80		
2,2'-oxybis(1-Chloropropane)	71.34	71		
4-Methylphenol	77.14	77		
N-Nitroso-di-n-propylamine	99.30	99		
Hexachloroethane	54.46	54		
Nitrobenzene	96.83	97		
Isophorone	93.77	94		
2-Nitrophenol	90.01	90		
2,4-Dimethylphenol	78.08	78		
bis(2-Chloroethoxy)methane	88.11	88		
2,4-Dichlorophenol	82.98	83		
1,2,4-Trichlorobenzene	72.13	72		
Naphthalene	80.99	81		
4-Chloroaniline	43.47	43		
Hexachlorobutadiene	52.44	52		
4-Chloro-3-methylphenol	86.75	87		
2-Methylnaphthalene	79.95	80		
achlorocyclopentadiene	107.58	54		
,6-Trichlorophenol	91.41	91		
2,4,5-Trichlorophenol	88.10	88		
2-Chloronaphthalene	86.05	86		
2-Nitroaniline	85.66	86		
Dimethylphthalate	27.95	28		
2,6-Dinitrotoluene	91.56	92		
Acenaphthylene	85.73	86		
3-Nitroaniline	56.80	57		
Acenaphthene	78.47	78		
2,4-Dinitrophenol	87.48	87		
4-Nitrophenol	41.45	41		
Dibenzofuran	82.55	82		
2,4-Dinitrotoluene	89.25	89		
Diethylphthalate	60.54	60		
4-Chlorophenyl-phenylether	82.35	82		

WATER SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03301

846 METHOD 8270 SPIKE LEVEL: 100 UG/L

LCS SAMPLE NO: 076WELCS4 076WELCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Fluorene	80.06	80		
4-Nitroaniline	78.05	78		
4,6-Dinitro-2-methylphenol	90.26	90		
N-Nitrosodiphenylamine	82.83	83		
4-Bromophenyl-phenylether	85.61	86		
Hexachlorobenzene	84.39	84		
Pentachlorophenol	89.10	89		
Phenanthrene	83.14	83		
Anthracene	82.65	83		
Carbazole	88.15	88		
Di-n-butylphthalate	85.63	86		
Fluoranthene	86.25	86		
Pyrene	82.02	82		
Butylbenzylphthalate	74.89	75		
3,3'-Dichlorobenzidine	60.79	61		
Benzo(a)anthracene	84.75	85		
Bis(2-Ethylhexyl)phthalate	89.85	90		
Chrysene	88.17	88		
Di-n-octylphthalate	86.94	87		
Benzo(b)fluoranthene	79.91	80		
Benzo(k)fluoranthene	86.27	86		
Benzo(a)pyrene	80.82	81		
Indeno(1,2,3-cd)pyrene	90.00	90		
Dibenz(a,h)anthracene	92.38	92		
Benzo(g,h,i)perylene	89.06	89		

COMMENTS:

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03725

W846 METHOD 8270 SPIKE LEVEL: 100 UG/L

CS SAMPLE NO: 076LDLCSG 076LDLCS

OMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
ienol	71.27	71		
is(2-Chloroethyl)ether	73.36	73		
2-Chlorophenol	79.58	80		
1,3-Dichlorobenzene	77.68	78		
4-Dichlorobenzene	77.94	78		
2-Dichlorobenzene	78.18	78		
2-Methylphenol	68.99	69		
2,2'-oxybis(1-Chloropropane)	46.44	46		
Methylphenol	73.13	73		
Nitroso-di-n-propylamine	68.48	68		
exachloroethane	62.18	62		
Nitrobenzene	79.22	79		
ophorone	81.17	81		
Nitrophenol	87.54	88		
,4-Dimethylphenol	53.86	54		
bis(2-Chloroethoxy)methane	76.14	76		
4-Dichlorophenol	78.76	79		
2,4-Trichlorobenzene	82.11	82		
phthalene	75.19	75		
4-Chloroaniline	31.22	31		
Hexachlorobutadiene	88.20	88		
Chloro-3-methylphenol	79.15	79		
thylnaphthalene	78.53	78		
hlorocyclopentadiene	148.67	74		
,,6-Trichlorophenol	83.64	84		
4,5-Trichlorophenol	82.38	82		
Chloronaphthalene	84.44	84		
2-Nitroaniline	74.11	74		
Dimethylphthalate	79.36	79		
6-Dinitrotoluene	93.31	93		
enaphthylene	82.87	83		
3-Nitroaniline	55.10	55		
Acenaphthene	82.51	82		
4-Dinitrophenol	96.69	97		
Nitrophenol	88.00	88		
benzofuran	81.54	82		
2,4-Dinitrotoluene	94.25	94		
ethylphthalate	79.01	79		
Chlorophenyl-phenylether	80.09	80		

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP03725

46 METHOD 8270 SPIKE LEVEL: 100 UG/L

CS SAMPLE NO: 076LDLCSG 076LDLCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Fluorene	84.43	84		
4-Nitroaniline	78.26	78		
,6-Dinitro-2-methylphenol	95.14	95		
-Nitrosodiphenylamine	78.80	79		
4-Bromophenyl-phenylether	77.84	78		
Hexachlorobenzene	78.13	78		
ntachlorophenol	80.04	80		
enanthrene	80.65	81		
Anthracene	77.43	77		
Carbazole	92.54	92		
-n-butylphthalate	85.96	86		
uoranthene	90.08	90		
Pyrene	83.50	83		
Butylbenzylphthalate	81.59	82		
3'-Dichlorobenzidine	67.45	67		
nzo(a)anthracene	81.96	82		
is(2-Ethylhexyl)phthalate	80.96	81		
Chrysene	86.48	86		
-n-octylphthalate	81.62	82		
nzo(b)fluoranthene	79.71	80		
nzo(k)fluoranthene	86.43	86		
Benzo(a)pyrene	79.21	79		
deno(1,2,3-cd)pyrene	82.60	82		
benz(a,h)anthracene	83.70	84		
(g,h,i)perylene	79.08	79		

MENTS:

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP04629

SW846 METHOD 8270 SPIKE LEVEL: 100 UG/L

SAMPLE NO: 076LDLCSH 076LDLCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
henol	80.26	80		
bis(2-Chloroethyl)ether	79.09	79		
2-Chlorophenol	79.08	79		
,3-Dichlorobenzene	77.90	78		
,4-Dichlorobenzene	79.55	80		
1,2-Dichlorobenzene	77.08	77		
2-Methylphenol	72.63	73		
,2'-oxybis(1-Chloropropane)	60.80	61		
-Methylphenol	77.67	78		
N-Nitroso-di-n-propylamine	77.92	78		
Hexachloroethane	80.14	80		
itrobenzene	84.04	84		
sophorone	84.68	85		
-Nitrophenol	79.25	79		
2,4-Dimethylphenol	42.75	43		
is(2-Chloroethoxy)methane	80.22	80		
4-Dichlorophenol	76.89	77		
,2,4-Trichlorobenzene	80.12	80		
Naphthalene	78.37	78		
4-Chloroaniline	45.32	45		
xachlorobutadiene	91.46	91		
Chloro-3-methylphenol	80.81	81		
2-Methylnaphthalene	79.47	79		
Hexachlorocyclopentadiene	149.98	75		
4,6-Trichlorophenol	81.51	82		
5-Trichlorophenol	81.08	81		
oronaphthalene	84.92	85		
croaniline	83.13	83		
nethylphthalate	82.22	82		
6-Dinitrotoluene	92.48	92		
Acenaphthylene	84.22	84		
3-Nitroaniline	59.98	60		
enaphthene	79.74	80		
-Dinitrophenol	83.42	83		
4-Nitrophenol	94.06	94		
Dibenzofuran	83.46	83		
2 -Dinitrotoluene	96.61	97		
thylphthalate	91.00	91		
Chlorophenyl-phenylether	84.96	85		

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP04629

W846 METHOD 8270 SPIKE LEVEL: 100 UG/L

LCS SAMPLE NO: 076LDLCSH 076LDLCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Fluorene	89.24	89		
4-Nitroaniline	87.62	88		
4,6-Dinitro-2-methylphenol	85.69	86		
N-Nitrosodiphenylamine	77.02	77		
4-Bromophenyl-phenylether	79.75	80		
Hexachlorobenzene	82.28	82		
Pentachlorophenol	73.93	74		
Phenanthrene	84.44	84		
Anthracene	80.33	80		
Carbazole	98.40	98		
Di-n-butylphthalate	90.08	90		
Fluoranthene	86.47	86		
Pyrene	96.73	97		
Butylbenzylphthalate	94.16	94		
3,3'-Dichlorobenzidine	60.83	61		
Benzo(a)anthracene	84.56	84		
Bis(2-Ethylhexyl)phthalate	89.76	90		
Chrysene	87.62	88		
Di-n-octylphthalate	84.08	84		
Benzo(b)fluoranthene	79.41	79		
Benzo(k)fluoranthene	86.51	86		
Benzo(a)pyrene	79.03	79		
Indeno(1,2,3-cd)pyrene	90.67	91		
Dibenz(a,h)anthracene	90.14	90		
Benzo(g,h,i)perylene	81.47	81		

COMMENTS:

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC35A DFTPP Injection Date: 03/18/97

Instrument ID: HP03301 DFTPP Injection Time: 09:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.5
70	Less than 2.0% of mass 69	.2 (.5)1
127	40.0 - 60.0% of mass 198	41.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.06
441	Present, but less than mass 443	7.7
442	Greater than 40.0% of mass 198	50.1
443	17.0 - 23.0% of mass 442	9.6 (19.1)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
01	SSTD80	STD0737	>DC35Z	03/18/97	11:38
02	SSTD160	STD0737	>DC352	03/18/97	12:55
03	SSTD05	STD0737	>DC353	03/18/97	13:52
04	SSTD50	STD0737	>DC354	03/18/97	14:49
05	SSTD120	STD0737	>DC355	03/18/97	15:45
06	SBLKWE0764	SBLKWE076	>DC356	03/18/97	16:42
07	076WELCS4	076WELCS	>DC357	03/18/97	17:38
08	KMMW4	2677530	>DC358	03/18/97	18:35
09	KMMW4MS	2677532	>DC359	03/18/97	19:31
10	KMMW4MSD	2677533	>DC360	03/18/97	20:28
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

L.. Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

I--trument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

___.

M... RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF5 = >DC353 RRF50 = >DC354
...F80 = >DC35Z RRF120= >DC355 RRF160= >DC352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.249	1.660	1.589	1.529	1.527	1.511	10.3	AVG	
Nitrosodimethylamine	.728	.928	.922	.886	.911	.875	9.6	AVG	
Picoline	1.470	1.560	1.528	1.473	1.470	1.500	2.8	AVG	
ruenol	1.708	1.702	1.623	1.500	1.438	1.594	7.6	AVG	*
Aniline	2.066	2.053	1.950	1.899	1.857	1.965	4.7	AVG	
s(2-Chloroethyl)ether	1.414	1.376	1.372	1.284	1.210	1.331	6.2	AVG	
Chlorophenol	1.386	1.409	1.355	1.257	1.181	1.318	7.3	AVG	
1,3-Dichlorobenzene	1.611	1.579	1.535	1.394	1.316	1.487	8.5	AVG	
1,4-Dichlorobenzene	1.641	1.614	1.562	1.263	1.335	1.483	11.6	AVG	*
nzyl alcohol	.800	.852	.813	.782	.756	.801	4.4	AVG	
2-Dichlorobenzene	1.570	1.502	1.456	1.278	1.218	1.405	10.7	AVG	
-Methylphenol	1.186	1.170	1.118	1.097	1.060	1.126	4.6	AVG	
2,2'-oxybis(1-Chloropropane)	3.487	3.394	3.415	3.295	3.073	3.333	4.8	AVG	
is(2-Chloroisopropyl)ether	3.487	3.394	3.415	3.295	3.073	3.333	4.8	AVG	
-Methylphenol	1.217	1.226	1.157	1.117	1.057	1.155	6.1	AVG	
nd 4-Methylphenol	1.217	1.226	1.157	1.117	1.057	1.155	6.1	AVG	
cophenone	3.829	3.387	3.161	2.818	2.560	3.151	15.7	2NDDEG	
-Nitroso-di-n-propylamine	1.096	1.070	1.038	.924	.821	.990	11.6	AVG	#
-Toluidine	2.115	2.008	1.912	2.388	1.714	2.027	12.3	AVG	
Hexachloroethane	.597	.640	.641	.590	.573	.608	5.0	AVG	
Nitrobenzene	.361	.425	.407	.441	.405	.408	7.3	AVG	
sophorone	.790	.779	.789	.843	.737	.787	4.8	AVG	
-Nitrophenol	.128	.192	.184	.212	.195	.182	17.5	1STDEG	*
2,4-Dimethylphenol	.400	.405	.400	.397	.362	.393	4.4	AVG	
Benzoic acid	.163	.244	.242	.354	.324	.266	28.4	AVG	
is(2-Chloroethoxy)methane	.494	.480	.485	.476	.424	.472	5.8	AVG	
,4-Dichlorophenol	.331	.330	.325	.327	.297	.322	4.4	AVG	*
1,2,4-Trichlorobenzene	.375	.367	.368	.395	.322	.365	7.4	AVG	
Naphthalene	1.126	1.086	1.061	1.020	.861	1.031	9.9	AVG	
-Chloroaniline	.468	.480	.478	.533	.429	.478	7.8	AVG	
exachlorobutadiene	.182	.215	.222	.210	.195	.205	7.9	AVG	*
4-Chloro-3-methylphenol	.333	.351	.351	.351	.327	.343	3.5	AVG	*
2-Methylnaphthalene	.698	.666	.665	.632	.560	.644	8.2	AVG	
-Methylnaphthalene	.692	.656	.646	.576	.549	.624	9.5	AVG	
exachlorocyclopentadiene	.220	.347	.383	.403	.379	.346	21.2	1STDEG	#
2,4,6-Trichlorophenol	.357	.440	.431	.442	.406	.415	8.6	AVG	*
2,4,5-Trichlorophenol	.403	.476	.474	.477	.441	.454	7.1	AVG	
-Chloronaphthalene	1.277	1.262	1.207	1.203	1.056	1.201	7.3	AVG	

[illegible] DE 3/18/97

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

me: LANCASTER LABS Contract: _____.

a. Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

n--rument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

(i.. RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

L : FILE ID: RRF5 = >DC353 RRF50 = >DC354
R...80 = >DC352 RRF120= >DC355 RRF160= >DC352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
2-Nitroaniline	.297	.470	.458	.518	.489	.447	19.3	1STDEG	
[illegible]methylphthalate	1.510	1.464	1.496	1.351	1.348	1.434	5.5	AVG	
[illegible]-Dinitrotoluene	.174	.291	.290	.335	.316	.281	22.3	1STDEG	
Acenaphthylene	1.947	1.974	1.945	1.912	1.602	1.876	8.3	AVG	
3-Nitroaniline	.243	.370	.365	.410	.383	.354	18.2	1STDEG	
[illegible]enaphthene *	1.365	1.265	1.238	1.182	1.030	1.216	10.2	AVG	*
[illegible]4-Dinitrophenol #	.082	.113	.128	.156	.165	.129	25.9	AVG	# @
4-Nitrophenol #	.138	.184	.182	.203	.196	.181	14.1	AVG	#
Dibenzofuran	1.836	1.757	1.737	1.642	1.473	1.689	8.2	AVG	
[illegible]4-Dinitrotoluene	.305	.410	.405	.467	.445	.406	15.3	1STDEG	
[illegible]Naphthylamine	1.047	1.020	1.028	1.064	.967	1.025	3.6	AVG	
2-Naphthylamine	1.216	1.055	1.094	1.123	1.059	1.109	5.9	AVG	
Diethylphthalate	1.545	1.482	1.491	1.444	1.316	1.455	5.9	AVG	
Chlorophenyl-phenylether	.708	.657	.666	.545	.560	.627	11.3	AVG	
[illegible]orene	1.437	1.315	1.260	1.206	1.029	1.250	12.0	AVG	
[illegible]roaniline	.288	.345	.324	.376	.352	.337	9.8	AVG	2nd degree used
4,6-Dinitro-2-methylphenol	.049	.099	.107	.133	.131	.104	32.9	2NDDEG	
Nitrosodiphenylamine (1) *	.620	.543	.544	.530	.477	.543	9.4	AVG	*
2-Diphenylhydrazine	1.592	.971	.979	.944	.828	1.063	28.4	2NDDEG	
4-Bromophenyl-phenylether	.242	.229	.237	.223	.212	.229	5.2	AVG	
Hexachlorobenzene	.177	.263	.274	.264	.243	.244	16.0	2NDDEG	
[illegible]ntachlorophenol *	.139	.155	.166	.187	.170	.164	11.0	AVG	*
[illegible]enanthrene	1.273	1.125	1.101	1.060	.921	1.096	11.6	AVG	
Anthracene	1.246	1.147	1.117	.997	.937	1.089	11.3	AVG	
Carbazole	1.107	1.034	.995	1.005	.878	1.004	8.3	AVG	
[illegible]-n-butylphthalate	1.452	1.391	1.377	1.284	1.010	1.303	13.4	AVG	
[illegible]uoranthene *	1.276	1.157	1.110	1.090	.927	1.112	11.4	AVG	*
Benzidine	1.386	.804	.771	.661	.536	.832	39.4	AVG	@ Not a target
Pyrene	1.706	1.603	1.616	1.554	1.339	1.564	8.7	AVG	
[illegible]tylbenzylphthalate	.777	.796	.816	.818	.747	.791	3.7	AVG	
[illegible]3'-Dichlorobenzidine	.458	.503	.500	.514	.464	.488	5.1	AVG	
Benzo(a)anthracene	1.385	1.378	1.373	1.393	1.279	1.361	3.4	AVG	
bis(2-Ethylhexyl)phthalate	1.021	1.068	1.072	.996	.850	1.002	9.0	AVG	
[illegible]rysene	1.245	1.245	1.227	1.250	1.159	1.225	3.1	AVG	
[illegible]-n-octylphthalate *	1.583	2.074	2.180	2.042	1.784	1.933	12.6	AVG	*
7,12-Dimethylbenz[a]anthrace	.493	.605	.633	.597	.552	.576	9.5	AVG	
Benzo(b)fluoranthene	1.302	1.427	1.430	1.381	1.289	1.366	4.9	AVG	
[illegible]enzo(k)fluoranthene	1.187	1.326	1.331	1.290	1.175	1.262	6.0	AVG	

(1) Cannot be separated from Diphenylamine

FORM VI SV-1 1/87 Rev.

@ NC than RF due to poor curve fit on 4/15/97

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

me: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

I trument ID: HP03301 Calibration Date(s): 03/18/97 03/18/97

___.

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF5 = >0C353 RRF50 = >0C354
RRF80 = >0C35Z RRF120= >0C355 RRF160= >0C352

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
Benzo(a)pyrene *	1.038	1.210	1.239	1.247	1.167	1.180	7.2	AVG *
deno(1,2,3-cd)pyrene	.907	1.111	1.108	1.235	1.097	1.091	10.8	AVG
benz(a,h)anthracene	.802	1.100	1.084	1.180	1.054	1.044	13.7	AVG
Benzo(g,h,i)perylene	.873	1.170	1.128	1.235	1.084	1.098	12.5	AVG
Fluorophenol	1.237	1.342	1.287	1.190	1.158	1.243	5.9	AVG
enol-d5	1.680	1.692	1.618	1.530	1.493	1.602	5.5	AVG
Phenol-d6	1.680	1.692	1.618	1.530	1.493	1.602	5.5	AVG
Nitrobenzene-d5	.306	.389	.370	.428	.389	.376	11.8	AVG
Fluorobiphenyl	1.439	1.379	1.315	1.321	1.139	1.319	8.5	AVG
4,6-Tribromophenol	.243	.211	.225	.235	.226	.228	5.2	AVG
Terphenyl-d14	1.177	.995	1.002	.984	.902	1.012	9.9	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC35Z Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 11:38

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	39884	12.29	132426	15.72	74325	20.63
	UPPER LIMIT	79768		264852		148650	
	LOWER LIMIT	19942		66213		37163	
	EPA SAMPLE NO.						
01	SBLKWE0764	39829	12.29	139750	15.72	80119	20.63
02	076WELCS4	51821	12.30	184268	15.72	98707	20.63
03	KMMW4	41884	12.29	143414	15.71	82136	20.63
04	KMMW4MS	40229	12.31	139448	15.73	75184	20.64
05	KMMW4MSD	43058	12.33	154056	15.76	85175	20.67
06							
07							
08							
09							
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18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC35Z Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 11:38

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	127498	24.82	89904	31.82	74776	37.76
	UPPER LIMIT	254996		179808		149552	
	LOWER LIMIT	63749		44952		37388	
	EPA SAMPLE NO.						
01	SBLKWE0764	159917	24.82	112042	31.81	93612	37.75
02	076WELCS4	166732	24.83	127832	31.83	122147	37.77
03	KMMW4	156372	24.82	111435	31.81	98266	37.75
04	KMMW4MS	125979	24.84	94302	31.83	88794	37.78
05	KMMW4MSD	147463	24.87	103640	31.86	99809	37.80
06							
07							
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21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC370 DFTPP Injection Date: 03/18/97

Instrument ID: HP03301 DFTPP Injection Time: 21:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	.1 (.2)1
127	40.0 - 60.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.9
365	Greater than 1.00% of mass 198	1.85
441	Present, but less than mass 443	6.9
442	Greater than 40.0% of mass 198	47.8
443	17.0 - 23.0% of mass 442	8.9 (18.7)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
01	SSTD80	STD0737	>DC371	03/18/97	22:17
02	RB-02	2677434	>DC376	03/18/97	23:16
03	KMMW3	2677529	>DC377	03/19/97	00:12
04	KMMW5	2677535	>DC378	03/19/97	01:09
05	KMMW1	2677536	>DC379	03/19/97	02:05
06	KMW-3	2677537	>DC380	03/19/97	08:07
07	KMW23	2677538	>DC381	03/19/97	09:03
08					
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21					
22					

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

Lab File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.511	1.696	89.81	80.0	-12.3
N-Nitrosodimethylamine		.875	.985	90.09	80.0	-12.6
2-Picoline		1.500	1.540	82.11	80.0	-2.6
Phenol	*	1.594	1.510	75.79	80.0	5.3*
Aniline		1.965	1.902	77.44	80.0	3.2
bis(2-Chloroethyl)ether		1.331	1.397	83.94	80.0	-4.9
2-Chlorophenol		1.318	1.243	75.45	80.0	5.7
1,3-Dichlorobenzene		1.487	1.479	79.59	80.0	.5
1,4-Dichlorobenzene	*	1.483	1.502	81.00	80.0	-1.3*
Benzyl alcohol		.801	.745	74.48	80.0	6.9
1,2-Dichlorobenzene		1.405	1.370	78.00	80.0	2.5
2-Methylphenol		1.126	1.060	75.30	80.0	5.9
2,2'-oxybis(1-Chloropropane)		3.333	3.299	79.19	80.0	1.0
bis(2-Chloroisopropyl)ether		3.333	3.299	79.19	80.0	1.0
4-Methylphenol		1.155	1.074	74.37	80.0	7.0
3- and 4-Methylphenol		1.155	1.074	74.37	80.0	7.0
Acetophenone		3.151	2.771	68.10	80.0	14.9
N-Nitroso-di-n-propylamine	#	.990	.903	72.98	80.0	8.8#
o-Toluidine		2.027	1.769	69.80	80.0	12.7
Hexachloroethane		.608	.655	86.18	80.0	-7.7
Nitrobenzene		.408	.375	73.70	80.0	7.9
Isophorone		.787	.727	73.87	80.0	7.7
2-Nitrophenol	*	.182	.158	64.84	80.0	19.0*
2,4-Dimethylphenol		.393	.376	76.64	80.0	4.2
Benzoic acid		.266	.213	64.11	80.0	19.9
bis(2-Chloroethoxy)methane		.472	.457	77.52	80.0	3.1
2,4-Dichlorophenol	*	.322	.325	80.88	80.0	-1.1*
1,2,4-Trichlorobenzene		.365	.447	97.85	80.0	-22.3
Naphthalene		1.031	1.017	78.93	80.0	1.3
4-Chloroaniline		.478	.624	104.44	80.0	-30.6
Hexachlorobutadiene	*	.205	.229	89.22	80.0	-11.5*
4-Chloro-3-methylphenol	*	.343	.311	72.62	80.0	9.2*
2-Methylnaphthalene		.644	.612	75.95	80.0	5.1
1-Methylnaphthalene		.624	.595	76.32	80.0	4.6
Hexachlorocyclopentadiene	#	.346	.411	86.25	80.0	-7.8#
2,4,6-Trichlorophenol	*	.415	.427	82.25	80.0	-2.8*
2,4,5-Trichlorophenol		.454	.467	82.26	80.0	-2.8
2-Chloronaphthalene		1.201	1.009	67.20	80.0	16.0

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

Lab File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.447	.389	64.76	80.0	19.1
Dimethylphthalate		1.434	1.368	76.34	80.0	4.6
2,6-Dinitrotoluene		.281	.233	61.19	80.0	23.5
Acenaphthylene		1.876	1.987	84.74	80.0	-5.9
3-Nitroaniline		.354	.311	65.45	80.0	18.2
Acenaphthene	*	1.216	1.198	78.82	80.0	1.5*
2,4-Dinitrophenol	#	.129	.110	68.58	80.0	14.3#
4-Nitrophenol	#	.181	.159	70.30	80.0	12.1#
Dibenzofuran		1.689	1.661	78.68	80.0	1.7
2,4-Dinitrotoluene		.406	.342	63.57	80.0	20.5
1-Naphthylamine		1.025	.983	76.74	80.0	4.1
2-Naphthylamine		1.109	1.060	76.43	80.0	4.5
Diethylphthalate		1.455	1.317	72.40	80.0	9.5
4-Chlorophenyl-phenylether		.627	.632	80.64	80.0	-.8
Fluorene		1.250	1.179	75.47	80.0	5.7
4-Nitroaniline		.337	.277	65.78	80.0	17.8
4,6-Dinitro-2-methylphenol		.104	.100	71.73	80.0	10.3
N-Nitrosodiphenylamine (1)	*	.543	.544	80.22	80.0	-.3*
1,2-Diphenylhydrazine		1.063	.967	79.02	80.0	1.2
4-Bromophenyl-phenylether		.229	.242	84.68	80.0	-5.9
Hexachlorobenzene		.244	.281	83.11	80.0	-3.9
Pentachlorophenol	*	.164	.150	73.45	80.0	8.2*
Phenanthrene		1.096	1.084	79.13	80.0	1.1
Anthracene		1.089	1.099	80.73	80.0	-.9
Carbazole		1.004	.982	78.28	80.0	2.1
Di-n-butylphthalate		1.303	1.323	81.24	80.0	-1.5
Fluoranthene	*	1.112	1.100	79.12	80.0	1.1*
Benzidine		.832	.734	282.48	320.0	11.7
Pyrene		1.564	1.508	77.15	80.0	3.6
Butylbenzylphthalate		.791	.759	76.75	80.0	4.1
3,3'-Dichlorobenzidine		.488	.522	85.63	80.0	-7.0
Benzo(a)anthracene		1.361	1.345	79.06	80.0	1.2
bis(2-Ethylhexyl)phthalate		1.002	.974	77.83	80.0	2.7
Chrysene		1.225	1.218	79.53	80.0	.6
Di-n-octylphthalate	*	1.933	1.817	75.20	80.0	6.0*
7,12-Dimethylbenz[a]anthrace		.576	.598	83.01	80.0	-3.8
Benzo(b)fluoranthene		1.366	1.358	79.55	80.0	.6
Benzo(k)fluoranthene		1.262	1.304	82.68	80.0	-3.3

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

I Name: LANCASTER LABS Contract: _____.

L b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/18/97 Time: 22:17

I b File ID: >DC371 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene *	1.180	1.221	82.78	80.0	-3.5*
Indeno(1,2,3-cd)pyrene	1.091	1.133	83.05	80.0	-3.8
Dibenz(a,h)anthracene	1.044	1.110	85.04	80.0	-6.3
Benzo(g,h,i)perylene	1.098	1.141	83.11	80.0	-3.9
2-Fluorophenol	1.243	1.237	79.64	80.0	.4
Phenol-d5	1.602	1.547	77.24	80.0	3.4
Phenol-d6	1.602	1.547	77.24	80.0	3.4
Nitrobenzene-d5	.376	.333	70.67	80.0	11.7
2-Fluorobiphenyl	1.319	1.396	84.72	80.0	-5.9
2,4,6-Tribromophenol	.228	.199	69.69	80.0	12.9
Terphenyl-d14	1.012	.962	76.09	80.0	4.9

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC371 Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 22:17

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	61903	12.32	194935	15.74	94691	20.64
	UPPER LIMIT	123806		389870		189382	
	LOWER LIMIT	30952		97468		47346	
	EPA SAMPLE NO.						
01	RB-02	61343	12.30	212662	15.72	116265	20.63
02	KMMW3	51113	12.31	217644	15.73	89005	20.62
03	KMMW5	49112	12.31	165572	15.72	88509	20.62
04	KMMW1	48079	12.30	162008	15.72	82993	20.63
05	KMW-3	59003	12.32	64242*	15.77	90194	20.64
06	KMW23	53043	12.32	256923	16.13	81972	20.64
07							
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC371 Date Analyzed: 03/18/97

Instrument ID: HP03301 Time Analyzed: 22:17

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	150068		24.83	113033		31.80	108878		37.72
	UPPER LIMIT	300136			226066			217756		
	LOWER LIMIT	75034			56517			54439		
	EPA SAMPLE NO.									
01	RB-02	198467		24.81	141001		31.79	127811		37.70
02	KMMW3	153816		24.81	111577		31.79	102566		37.71
03	KMMW5	158175		24.81	122326		31.78	104974		37.69
04	KMMW1	141910		24.81	106351		31.79	96091		37.70
05	KMW-3	140265		24.83	104417		31.80	94112		37.71
06	KMW23	124760		24.83	88282		31.79	80851		37.70
07										
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22										

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2

1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____

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

Lab File ID: >DC390 DFTPP Injection Date: 03/19/97

Instrument ID: HP03301 DFTPP Injection Time: 11:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	54.0
70	Less than 2.0% of mass 69	.2 (.4)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 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.18
441	Present, but less than mass 443	8.9
442	Greater than 40.0% of mass 198	60.1
443	17.0 - 23.0% of mass 442	11.4 (19.0)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
01	SSTD80	STD0737	>DC391	03/19/97	11:49
02	KMW-4	2677539	>DC396	03/19/97	14:01
03	RB--1	2677540	>DC397	03/19/97	14:57
04	RB-3-	2678205	>DC398	03/19/97	15:54
05	KMW23DL	2677538DL	>DC425	03/19/97	16:51
06	KMW-3DL	2677537DL	>DC426	03/19/97	17:47
07	KMW-3RE	2677537RE	>DC427	03/19/97	18:44
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21					
22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.511	1.606	85.07	80.0	-6.3
N-Nitrosodimethylamine		.875	.979	89.47	80.0	-11.8
2-Picoline		1.500	1.541	82.15	80.0	-2.7
Phenol	*	1.594	1.594	79.98	80.0	.0*
Aniline		1.965	1.962	79.90	80.0	.1
bis(2-Chloroethyl)ether		1.331	1.324	79.61	80.0	.5
2-Chlorophenol		1.318	1.312	79.68	80.0	.4
1,3-Dichlorobenzene		1.487	1.445	77.72	80.0	2.9
1,4-Dichlorobenzene	*	1.483	1.474	79.52	80.0	.6*
Benzyl alcohol		.801	.829	82.84	80.0	-3.6
1,2-Dichlorobenzene		1.405	1.380	78.57	80.0	1.8
2-Methylphenol		1.126	1.144	81.24	80.0	-1.5
2,2'-oxybis(1-Chloropropane)		3.333	3.499	83.99	80.0	-5.0
bis(2-Chloroisopropyl)ether		3.333	3.499	83.99	80.0	-5.0
4-Methylphenol		1.155	1.171	81.08	80.0	-1.4
3- and 4-Methylphenol		1.155	1.171	81.08	80.0	-1.4
Acetophenone		3.151	2.989	75.23	80.0	6.0
N-Nitroso-di-n-propylamine	#	.990	1.007	81.37	80.0	-1.7#
o-Toluidine		2.027	1.902	75.06	80.0	6.2
Hexachloroethane		.608	.624	82.10	80.0	-2.6
Nitrobenzene		.408	.418	82.06	80.0	-2.6
Isophorone		.787	.776	78.86	80.0	1.4
2-Nitrophenol	*	.182	.195	79.43	80.0	.7*
2,4-Dimethylphenol		.393	.389	79.26	80.0	.9
Benzoic acid		.266	.286	86.05	80.0	-7.6
bis(2-Chloroethoxy)methane		.472	.476	80.66	80.0	-.8
2,4-Dichlorophenol	*	.322	.326	80.98	80.0	-1.2*
1,2,4-Trichlorobenzene		.365	.354	77.49	80.0	3.1
Naphthalene		1.031	.993	77.10	80.0	3.6
4-Chloroaniline		.478	.464	77.70	80.0	2.9
Hexachlorobutadiene	*	.205	.223	87.19	80.0	-9.0*
4-Chloro-3-methylphenol	*	.343	.344	80.29	80.0	-.4*
2-Methylnaphthalene		.644	.629	78.13	80.0	2.3
1-Methylnaphthalene		.624	.613	78.66	80.0	1.7
Hexachlorocyclopentadiene	#	.346	.447	93.48	80.0	-16.9#
2,4,6-Trichlorophenol	*	.415	.457	88.11	80.0	-10.1*
2,4,5-Trichlorophenol		.454	.488	85.94	80.0	-7.4
2-Chloronaphthalene		1.201	1.203	80.16	80.0	-.2

6-2 DK 4/97 3/19

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

	COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
	2-Nitroaniline	.447	.469	77.32	80.0	3.3
	Dimethylphthalate	1.434	1.403	78.27	80.0	2.2
	2,6-Dinitrotoluene	.281	.297	76.61	80.0	4.2
	Acenaphthylene	1.876	1.857	79.18	80.0	1.0
	3-Nitroaniline	.354	.352	73.63	80.0	8.0
*	Acenaphthene	1.216	1.176	77.40	80.0	3.2*
#	2,4-Dinitrophenol	.129	.143	89.18	80.0	-11.5#
#	4-Nitrophenol	.181	.169	74.64	80.0	6.7#
	Dibenzofuran	1.689	1.633	77.36	80.0	3.3
	2,4-Dinitrotoluene	.406	.394	72.52	80.0	9.3
	1-Naphthylamine	1.025	.961	74.98	80.0	6.3
	2-Naphthylamine	1.109	1.042	75.13	80.0	6.1
	Diethylphthalate	1.455	1.326	72.91	80.0	8.9
	4-Chlorophenyl-phenylether	.627	.623	79.45	80.0	.7
	Fluorene	1.250	1.130	72.33	80.0	9.6
	4-Nitroaniline	.337	.282	66.86	80.0	16.4
	4,6-Dinitro-2-methylphenol	.104	.125	86.33	80.0	-7.9
*	N-Nitrosodiphenylamine (1)	.543	.557	82.08	80.0	-2.6*
	1,2-Diphenylhydrazine	1.063	.978	80.10	80.0	-.1
	4-Bromophenyl-phenylether	.229	.257	89.96	80.0	-12.4
	Hexachlorobenzene	.244	.300	89.62	80.0	-12.0
*	Pentachlorophenol	.164	.176	86.08	80.0	-7.6*
	Phenanthrene	1.096	1.064	77.64	80.0	3.0
	Anthracene	1.089	1.075	78.97	80.0	1.3
	Carbazole	1.004	.905	72.08	80.0	9.9
	Di-n-butylphthalate	1.303	1.197	73.53	80.0	8.1
*	Fluoranthene	1.112	.949	68.31	80.0	14.6*
	Benzidine	.832	.775	298.04	320.0	6.9
	Pyrene	1.564	1.808	92.51	80.0	-15.6
	Butylbenzylphthalate	.791	.776	78.46	80.0	1.9
	3,3'-Dichlorobenzidine	.488	.499	81.79	80.0	-2.2
	Benzo(a)anthracene	1.361	1.337	78.57	80.0	1.8
	bis(2-Ethylhexyl)phthalate	1.002	.989	79.03	80.0	1.2
	Chrysene	1.225	1.208	78.90	80.0	1.4
*	Di-n-octylphthalate	1.933	1.934	80.06	80.0	-.1*
	7,12-Dimethylbenz[a]anthrace	.576	.599	83.24	80.0	-4.0
	Benzo(b)fluoranthene	1.366	1.375	80.53	80.0	-.7
	Benzo(k)fluoranthene	1.262	1.265	80.20	80.0	-.2

(1) Cannot be separated from Diphenylamine

624 DK 4/6/97

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/19/97 Time: 11:49

Lab File ID: >DC391 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	*	1.180	1.273	86.29	80.0	-7.9*
Indeno(1,2,3-cd)pyrene		1.091	1.102	80.81	80.0	-1.0
Dibenz(a,h)anthracene		1.044	.995	76.21	80.0	4.7
Benzo(g,h,i)perylene		1.098	1.021	74.39	80.0	7.0
2-Fluorophenol		1.243	1.253	80.66	80.0	-.8
Phenol-d5		1.602	1.625	81.15	80.0	-1.4
Phenol-d6		1.602	1.625	81.15	80.0	-1.4
Nitrobenzene-d5		.376	.396	84.05	80.0	-5.1
2-Fluorobiphenyl		1.319	1.343	81.47	80.0	-1.8
2,4,6-Tribromophenol		.228	.238	83.50	80.0	-4.4
Terphenyl-d14		1.012	1.135	89.75	80.0	-12.2

(1) Cannot be separated from Diphenylamine

Benzidine level in the 50 standard is 200 ng/uL.

625 3/19/97

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

b Name: LANCASTER LABS Contract: _____.

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

ab File ID (Standard): >DC391 Date Analyzed: 03/19/97

Instrument ID: HP03301 Time Analyzed: 11:49

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	68280	12.23	235804	15.66	125113	20.56
	UPPER LIMIT	136560		471608		250226	
	LOWER LIMIT	34140		117902		62557	
	EPA SAMPLE NO.						
01	KMW-4	63617	12.24	208232	15.66	106708	20.57
02	RB--1	60622	12.24	208487	15.67	115079	20.58
03	RB-3-	74442	12.24	257842	15.66	141394	20.57
04	KMW23DL	70672	12.24	225680	15.69	126107	20.57
05	KMW-3DL	70402	12.24	241492	15.67	124767	20.58
06	KMW-3RE	81373	12.26	81790*	15.67	142669	20.59
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC391 Date Analyzed: 03/19/97

Instrument ID: HP03301 Time Analyzed: 11:49

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	191850		24.75	101577		31.72	84174		37.57
	UPPER LIMIT	383700			203154			168348		
	LOWER LIMIT	95925			50789			42087		
	EPA SAMPLE NO.									
01	KMW-4	191110		24.76	144148		31.73	117418		37.60
02	RB--1	202218		24.77	137078		31.74	118197		37.61
03	RB-3-	252680		24.77	180376		31.74	150621		37.61
04	KMW23DL	225981		24.77	156593		31.73	137163		37.61
05	KMW-3DL	212086		24.77	150527		31.74	136840		37.61
06	KMW-3RE	215159		24.78	142582		31.75	122749		37.62
07										
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19										
20										
21										
22										

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GC180 DFTPP Injection Date: 03/18/97

Instrument ID: HP03725 DFTPP Injection Time: 10:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.7
365	Greater than 1.00% of mass 198	2.35
441	Present, but less than mass 443	9.4
442	Greater than 40.0% of mass 198	59.0
443	17.0 - 23.0% of mass 442	10.8 (18.2)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
01	SSTD160	STD0737	>GC181	03/18/97	10:39
02	SSTD120	STD0737	>GC182	03/18/97	11:51
03	SSTD05	STD0737	>GC183	03/18/97	12:55
04	SSTD50	STD0737	>GC184	03/18/97	13:59
05	SSTD80	STD0737	>GC185	03/18/97	15:03
06	SBLKWD076G	SBLKWD076	>GC186	03/18/97	16:07
07	076WDLCSG	076WDLCS	>GC187	03/18/97	17:10
08	076WDLCSD	076WDLCSD	>GC188	03/18/97	18:14
09	076WDUS	076WDUS	>GC189	03/18/97	19:18
10	076WDMS	076WDMS	>GC190	03/18/97	20:22
11	076WDMSD	076WDMSD	>GC191	03/18/97	21:25
12					
13					
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SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/18/97 03/18/97

M ___.RRF for SPEC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >GC183 RRF50 = >GC184
F80 = >GC185 RRF120= >GC182 RRF160= >GC181

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.438	1.574	1.587	1.645	1.509	1.551	5.1	AVG	
N-Nitrosodimethylamine	.711	.907	.945	.949	.898	.882	11.2	AVG	
2-Picoline	1.259	1.459	1.433	1.444	1.365	1.392	5.9	AVG	
Phenol	1.813	1.834	1.747	1.662	1.519	1.715	7.5	AVG	*
Aniline	2.156	2.255	2.166	2.078	1.944	2.120	5.5	AVG	
bis(2-Chloroethyl)ether	1.480	1.449	1.421	1.342	1.235	1.385	7.1	AVG	
2-Chlorophenol	1.376	1.430	1.364	1.318	1.193	1.336	6.7	AVG	
1,3-Dichlorobenzene	1.632	1.590	1.505	1.520	1.300	1.510	8.5	AVG	
1,4-Dichlorobenzene	1.655	1.617	1.538	1.529	1.319	1.531	8.5	AVG	*
Benzyl alcohol	.826	.928	.876	.821	.797	.850	6.1	AVG	
1,2-Dichlorobenzene	1.626	1.549	1.473	1.440	1.245	1.466	9.8	AVG	
2-Methylphenol	1.268	1.297	1.252	1.161	1.136	1.223	5.7	AVG	
bis(2-Chloroisopropyl)-oxybis(1-Chloropropane)	4.556	4.515	4.426	4.205	3.335	4.207	12.0	AVG	
bis(2-Chloroisopropyl)ether	4.556	4.515	4.426	4.205	3.335	4.207	12.0	AVG	
4-Methylphenol	1.301	1.373	1.295	1.178	1.120	1.253	8.2	AVG	
3- and 4-Methylphenol	1.301	1.373	1.295	1.178	1.120	1.253	8.2	AVG	
Acetophenone	4.027	3.778	3.486	3.141	2.829	3.452	13.9	AVG	
N-Nitroso-di-n-propylamine	1.161	1.250	1.147	.996	.855	1.082	14.4	AVG	#
Cyclohexanone	2.309	2.361	2.239	2.017	1.855	2.156	9.9	AVG	
Hexachloroethane	.769	.781	.755	.752	.667	.745	6.1	AVG	
Nitrobenzene	.406	.463	.457	.459	.413	.440	6.3	AVG	
Isophorone	.703	.803	.771	.763	.731	.754	5.1	AVG	
2-Nitrophenol	.153	.207	.204	.210	.205	.196	12.2	AVG	*
2,4-Dimethylphenol	.390	.395	.389	.384	.353	.382	4.4	AVG	
Benzoic acid	.182	.291	.307	.291	.303	.275	19.1	1STDEG	
bis(2-Chloroethoxy)methane	.496	.505	.495	.488	.443	.485	5.0	AVG	
2,4-Dichlorophenol	.294	.310	.298	.304	.283	.298	3.4	AVG	*
1,2,4-Trichlorobenzene	.370	.340	.326	.341	.303	.336	7.2	AVG	
Naphthalene	1.201	1.101	1.052	1.055	.937	1.069	8.9	AVG	
4-Chloroaniline	.454	.490	.464	.463	.435	.461	4.3	AVG	
Hexachlorobutadiene	.200	.192	.186	.201	.172	.190	6.2	AVG	*
4-Chloro-3-methylphenol	.337	.371	.350	.342	.313	.343	6.2	AVG	*
2-Methylnaphthalene	.751	.712	.666	.660	.597	.677	8.6	AVG	
1-Methylnaphthalene	.741	.708	.654	.651	.587	.668	8.8	AVG	
Hexachlorocyclopentadiene	.365	.393	.400	.444	.386	.398	7.3	AVG	#
2,4,6-Trichlorophenol	.362	.393	.384	.402	.378	.384	3.9	AVG	*
2,4,5-Trichlorophenol	.394	.429	.412	.431	.394	.412	4.3	AVG	
2-Chloronaphthalene	1.318	1.200	1.172	1.175	1.031	1.179	8.7	AVG	

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/18/97 03/18/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >GC183 RRF50 = >GC184
RRF80 = >GC185 RRF120= >GC182 RRF160= >GC181

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	%RSD	CAL. METHOD	
Nitroaniline	.415	.529	.539	.532	.480	.499	10.5	AVG	
Dimethylphthalate	1.447	1.455	1.381	1.407	1.289	1.396	4.8	AVG	
2,6-Dinitrotoluene	.237	.323	.315	.319	.311	.301	12.0	AVG	
enaphthylene	2.021	1.997	1.910	1.967	1.720	1.923	6.3	AVG	
Nitroaniline	.284	.404	.399	.398	.390	.375	13.6	AVG	
Acenaphthene *	1.428	1.340	1.258	1.278	1.088	1.278	9.8	AVG	*
2,4-Dinitrophenol #	.123	.171	.170	.168	.168	.160	12.8	AVG	#
Nitrophenol #	.168	.215	.202	.213	.192	.198	9.6	AVG	#
benzofuran	1.887	1.771	1.660	1.713	1.528	1.712	7.8	AVG	
4,6-Dinitrotoluene	.365	.471	.445	.470	.442	.439	9.9	AVG	
1-Naphthylamine	1.130	1.149	1.087	1.119	1.060	1.109	3.2	AVG	
Naphthylamine	1.275	1.264	1.203	1.222	1.206	1.234	2.7	AVG	
ethylphthalate	1.613	1.618	1.514	1.593	1.418	1.551	5.5	AVG	
Chlorophenyl-phenylether	.722	.644	.594	.622	.546	.626	10.4	AVG	
Fluorene	1.527	1.342	1.232	1.261	1.085	1.289	12.6	AVG	
Nitroaniline	.333	.406	.385	.392	.393	.382	7.4	AVG	
6-Dinitro-2-methylphenol	.049	.115	.120	.114	.116	.103	29.6	1STDEG	Flag RIJ
rosodiphenylamine (1) *	.495	.483	.485	.480	.454	.479	3.2	AVG	*
phenylhydrazine	.995	1.017	1.047	.934	.929	.984	5.2	AVG	
4-Bromophenyl-phenylether	.219	.207	.206	.207	.195	.207	4.1	AVG	
achlorobenzene	.268	.252	.250	.254	.226	.250	6.0	AVG	
ntachlorophenol *	.130	.159	.162	.162	.154	.153	8.6	AVG	*
Phenanthrene	1.238	1.147	1.107	1.074	.968	1.107	8.9	AVG	
Anthracene	1.225	1.159	1.140	1.104	.992	1.124	7.6	AVG	
bazole	1.078	1.080	1.046	1.032	.859	1.019	9.0	AVG	
n-butylphthalate	1.583	1.603	1.552	1.535	1.074	1.469	15.1	2NDDEG	
Fluoranthene *	1.398	1.319	1.242	1.243	.846	1.210	17.6	AVG	*
Benzidine	.859	.687	.668	.650	.553	.683	16.3	2NDDEG	
ene	1.492	1.382	1.403	1.366	1.197	1.368	7.9	AVG	
ylbenzylphthalate	.787	.824	.828	.808	.735	.797	4.7	AVG	
3,3'-Dichlorobenzidine	.538	.552	.549	.563	.529	.546	2.4	AVG	
Benzo(a)anthracene	1.414	1.359	1.354	1.373	1.233	1.346	5.0	AVG	
(2-Ethylhexyl)phthalate	1.151	1.214	1.211	1.191	1.094	1.172	4.3	AVG	
ysene	1.285	1.248	1.227	1.239	1.104	1.220	5.6	AVG	
n-octylphthalate *	1.812	1.991	1.941	1.949	1.750	1.889	5.4	AVG	*
Benzo(b)fluoranthene	1.335	1.325	1.286	1.338	1.239	1.305	3.2	AVG	
Benzo(k)fluoranthene	1.239	1.212	1.204	1.252	1.076	1.197	5.9	AVG	
Benzo(a)pyrene *	1.175	1.188	1.181	1.223	1.127	1.179	2.9	AVG	*

1) Cannot be separated from Diphenylamine

+ Weight used due to poor curve fit

JLL/MIS 3/19/97

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/18/97 03/18/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF5 = >GC183 RRF50 = >GC184
F80 = >GC185 RRF120= >GC182 RRF160= >GC181

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
Indeno(1,2,3-cd)pyrene	1.097	1.142	1.171	1.220	1.171	1.160	3.9	AVG
Dibenz(a,h)anthracene	1.053	1.096	1.122	1.151	1.078	1.100	3.5	AVG
Benzo(g,h,i)perylene	1.062	1.103	1.136	1.158	1.106	1.113	3.3	AVG
2-Fluorophenol	1.133	1.233	1.199	1.229	1.109	1.180	4.8	AVG
Phenol-d5	1.743	1.808	1.732	1.660	1.541	1.697	6.0	AVG
Phenol-d6	1.743	1.808	1.732	1.660	1.541	1.697	6.0	AVG
Nitrobenzene-d5	.368	.421	.433	.435	.401	.412	6.8	AVG
2-Fluorobiphenyl	1.369	1.245	1.207	1.224	1.088	1.227	8.2	AVG
2,4,6-Tribromophenol	.136	.269	.253	.265	.226	.230	24.0	2NDDEG
Terphenyl-d14	.952	.858	.862	.854	.737	.853	9.0	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GC20A DFTPP Injection Date: 03/19/97

Instrument ID: HP03725 DFTPP Injection Time: 11:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	55.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	65.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	20.4
365	Greater than 1.00% of mass 198	1.28
441	Present, but less than mass 443	7.6
442	Greater than 40.0% of mass 198	46.4
443	17.0 - 23.0% of mass 442	8.8 (19.1)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
01	SSTD80	STD0737	>GC20B	03/19/97	14:01
02	SBLKLD076G	SBLKLD076	>GC206	03/19/97	15:07
03	076LDLCSG	076LDLCS	>GC207	03/19/97	16:11
04	13-FB	2677837	>GC208	03/19/97	17:15
05					
06					
07					
08					
09					
10					
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20					
21					
22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date: 03/19/97 Time: 14:01

Lab File ID: >GC20B Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.551	1.407	72.60	80.0	9.2
N-Nitrosodimethylamine		.882	.865	78.45	80.0	1.9
2-Picoline		1.392	1.256	72.16	80.0	9.8
Phenol	*	1.715	1.638	76.41	80.0	4.5*
Aniline		2.120	2.010	75.85	80.0	5.2
bis(2-Chloroethyl)ether		1.385	1.321	76.33	80.0	4.6
2-Chlorophenol		1.336	1.366	81.78	80.0	-2.2
1,3-Dichlorobenzene		1.510	1.484	78.65	80.0	1.7
1,4-Dichlorobenzene	*	1.531	1.513	79.04	80.0	1.2*
Benzyl alcohol		.850	.911	85.78	80.0	-7.2
1,2-Dichlorobenzene		1.466	1.467	80.06	80.0	-.1
2-Methylphenol		1.223	1.292	84.55	80.0	-5.7
2,2'-oxybis(1-Chloropropane)		4.207	3.730	70.93	80.0	11.3
bis(2-Chloroisopropyl)ether		4.207	3.730	70.93	80.0	11.3
4-Methylphenol		1.253	1.337	85.31	80.0	-6.6
3- and 4-Methylphenol		1.253	1.337	85.31	80.0	-6.6
Acetophenone		3.452	3.444	79.81	80.0	.2
N-Nitroso-di-n-propylamine	#	1.082	1.011	74.74	80.0	6.6#
o-Toluidine		2.156	2.310	85.69	80.0	-7.1
Hexachloroethane		.745	.749	80.47	80.0	-.6
Nitrobenzene		.440	.406	73.85	80.0	7.7
Isophorone		.754	.733	77.76	80.0	2.8
2-Nitrophenol	*	.196	.220	89.75	80.0	-12.2*
2,4-Dimethylphenol		.382	.380	79.40	80.0	.7
Benzoic acid		.275	.350	94.80	80.0	-18.5
bis(2-Chloroethoxy)methane		.485	.459	75.73	80.0	5.3
2,4-Dichlorophenol	*	.298	.307	82.59	80.0	-3.2*
1,2,4-Trichlorobenzene		.336	.335	79.76	80.0	.3
Naphthalene		1.069	1.007	75.35	80.0	5.8
4-Chloroaniline		.461	.485	84.09	80.0	-5.1
Hexachlorobutadiene	*	.190	.185	77.67	80.0	2.9*
4-Chloro-3-methylphenol	*	.342	.358	83.71	80.0	-4.6*
2-Methylnaphthalene		.677	.688	81.23	80.0	-1.5
1-Methylnaphthalene		.668	.678	83.63	80.0	-4.5
Hexachlorocyclopentadiene	#	.398	.371	74.65	80.0	6.7#
2,4,6-Trichlorophenol	*	.384	.377	78.50	80.0	1.9*
2,4,5-Trichlorophenol		.412	.406	78.91	80.0	1.4
2-Chloronaphthalene		1.179	1.090	73.95	80.0	7.6

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date: 03/19/97 Time: 14:01

Lab File ID: >GC20B Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.499	.472	75.67	80.0	5.4
Dimethylphthalate		1.396	1.408	80.73	80.0	-.9
2,6-Dinitrotoluene		.301	.354	94.20	80.0	-17.8
Acenaphthylene		1.923	1.879	78.16	80.0	2.3
3-Nitroaniline		.375	.444	94.62	80.0	-18.3
Acenaphthene	*	1.278	1.250	78.23	80.0	2.2*
2,4-Dinitrophenol	#	.160	.235	117.43	80.0	-46.8#
4-Nitrophenol	#	.198	.226	91.19	80.0	-14.0#
Dibenzofuran		1.712	1.652	77.20	80.0	3.5
2,4-Dinitrotoluene		.439	.517	94.26	80.0	-17.8
1-Naphthylamine		1.109	1.156	83.40	80.0	-4.3
2-Naphthylamine		1.234	1.295	83.93	80.0	-4.9
Diethylphthalate		1.551	1.561	80.53	80.0	-.7
4-Chlorophenyl-phenylether		.626	.600	76.72	80.0	4.1
Fluorene		1.289	1.251	77.60	80.0	3.0
4-Nitroaniline		.382	.469	98.29	80.0	-22.9
4,6-Dinitro-2-methylphenol		.103	.151	104.64	80.0	-30.8
N-Nitrosodiphenylamine (1)	*	.479	.473	78.97	80.0	1.3*
1,2-Diphenylhydrazine		.984	.838	68.13	80.0	14.8
4-Bromophenyl-phenylether		.207	.188	72.80	80.0	9.0
Hexachlorobenzene		.250	.226	72.20	80.0	9.8
Pentachlorophenol	*	.153	.162	84.35	80.0	-5.4*
Phenanthrene		1.107	1.017	73.53	80.0	8.1
Anthracene		1.124	1.043	74.19	80.0	7.3
Carbazole		1.019	.988	77.55	80.0	3.1
Di-n-butylphthalate		1.469	1.440	79.28	80.0	.9
Fluoranthene	*	1.210	1.200	79.37	80.0	.8*
Benzidine		.683	.613	279.64	320.0	12.6
Pyrene		1.368	1.281	74.92	80.0	6.4
Butylbenzylphthalate		.797	.790	79.33	80.0	.8
3,3'-Dichlorobenzidine		.546	.562	82.36	80.0	-3.0
Benzo(a)anthracene		1.346	1.314	78.05	80.0	2.4
bis(2-Ethylhexyl)phthalate		1.172	1.143	77.98	80.0	2.5
Chrysene		1.220	1.196	78.39	80.0	2.0
Di-n-octylphthalate	*	1.889	1.820	77.09	80.0	3.6*
Benzo(b)fluoranthene		1.305	1.243	76.23	80.0	4.7
Benzo(k)fluoranthene		1.197	1.098	73.40	80.0	8.3
Benzo(a)pyrene	*	1.179	1.180	80.12	80.0	-.1*

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date: 03/19/97 Time: 14:01

Lab File ID: >GC20B Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Indeno(1,2,3-cd)pyrene	1.160	1.190	82.03	80.0	-2.5
Dibenz(a,h)anthracene	1.100	1.112	80.87	80.0	-1.1
Benzo(g,h,i)perylene	1.113	1.145	82.31	80.0	-2.9
2-Fluorophenol	1.180	1.068	72.36	80.0	9.6
Phenol-d5	1.697	1.635	77.08	80.0	3.6
Phenol-d6	1.697	1.635	77.08	80.0	3.6
Nitrobenzene-d5	.412	.394	76.45	80.0	4.4
2-Fluorobiphenyl	1.227	1.162	75.81	80.0	5.2
2,4,6-Tribromophenol	.230	.264	80.17	80.0	-.2
Terphenyl-d14	.852	.793	74.44	80.0	6.9

(1) Cannot be separated from Diphenylamine

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GC20B Date Analyzed: 03/19/97

Instrument ID: HP03725 Time Analyzed: 14:01

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	28395		12.78	124171		16.76	83745		22.51
	UPPER LIMIT	56790			248342			167490		
	LOWER LIMIT	14198			62086			41873		
	EPA SAMPLE NO.									
01	SBLKLD076G	34805		12.78	142420		16.75	89923		22.50
02	076LDLCSG	29187		12.77	89806		16.75	52155		22.50
03	13-FB	24323		12.77	95026		16.74	54546		22.49
04										
05										
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21										
22										

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GC20B Date Analyzed: 03/19/97.

Instrument ID: HP03725 Time Analyzed: 14:01

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	178313	27.34	177761	34.74	206247	41.97
	UPPER LIMIT	356626		355522		412494	
	LOWER LIMIT	89157		88881		103124	
	EPA SAMPLE NO.						
01	SBLKLD076G	191120	27.32	173519	34.71	167467	41.94
02	076LDLCSG	108563	27.33	109767	34.73	117601	41.94
03	13-FB	118780	27.33	117129	34.70	122738	41.92
04							
05							
06							
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15							
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID: >GC21Y DFTPP Injection Date: 03/20/97

I strument ID: HP03725 DFTPP Injection Time: 00:27

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	59.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	17.7
365	Greater than 1.00% of mass 198	1.42
441	Present, but less than mass 443	8.6
442	Greater than 40.0% of mass 198	48.8
443	17.0 - 23.0% of mass 442	9.1 (18.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD80	STD0737	>GC211	03/20/97	01:02
02	F-14-	2675848	>GC212	03/20/97	02:10
03	SS-06	2677436	>GC213	03/20/97	03:13
04	SS-06MS	2677437	>GC214	03/20/97	04:16
05	SS-06MSD	2677438	>GC215	03/20/97	05:19
06	SS-11	2677435	>GC216	03/20/97	06:22
07	SS-08	2677439	>GC217	03/20/97	07:25
08	SS-09	2677440	>GC218	03/20/97	08:28
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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03725 Calibration Date: 03/20/97 Time: 01:02

Lab File ID: >GC211 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.551	1.341	69.15	80.0	13.6
N-Nitrosodimethylamine		.882	.775	70.29	80.0	12.1
2-Picoline		1.392	1.218	70.01	80.0	12.5
Phenol	*	1.715	1.538	71.74	80.0	10.3*
Aniline		2.120	1.862	70.27	80.0	12.2
bis(2-Chloroethyl)ether		1.385	1.236	71.39	80.0	10.8
2-Chlorophenol		1.336	1.339	80.13	80.0	-.2
1,3-Dichlorobenzene		1.510	1.496	79.29	80.0	.9
1,4-Dichlorobenzene	*	1.531	1.521	79.44	80.0	.7*
Benzyl alcohol		.850	.827	77.84	80.0	2.7
1,2-Dichlorobenzene		1.466	1.470	80.19	80.0	-.2
2-Methylphenol		1.223	1.179	77.13	80.0	3.6
2,2'-oxybis(1-Chloropropane)		4.207	3.213	61.09	80.0	23.6
bis(2-Chloroisopropyl)ether		4.207	3.213	61.09	80.0	23.6
4-Methylphenol		1.253	1.217	77.67	80.0	2.9
3- and 4-Methylphenol		1.253	1.217	77.67	80.0	2.9
Acetophenone		3.452	3.205	74.27	80.0	7.2
N-Nitroso-di-n-propylamine	#	1.082	.890	65.82	80.0	17.7#
o-Toluidine		2.156	2.107	78.18	80.0	2.3
Hexachloroethane		.745	.718	77.15	80.0	3.6
Nitrobenzene		.440	.396	72.01	80.0	10.0
Isophorone		.754	.681	72.17	80.0	9.8
2-Nitrophenol	*	.196	.219	89.44	80.0	-11.8*
2,4-Dimethylphenol		.382	.380	79.39	80.0	.8
Benzoic acid		.275	.318	86.48	80.0	-8.1
bis(2-Chloroethoxy)methane		.485	.448	73.80	80.0	7.7
2,4-Dichlorophenol	*	.298	.314	84.44	80.0	-5.6*
1,2,4-Trichlorobenzene		.336	.354	84.15	80.0	-5.2
Naphthalene		1.069	1.044	78.12	80.0	2.4
4-Chloroaniline		.461	.475	82.40	80.0	-3.0
Hexachlorobutadiene	*	.190	.198	83.52	80.0	-4.4*
4-Chloro-3-methylphenol	*	.342	.344	80.37	80.0	-.5*
2-Methylnaphthalene		.677	.680	80.28	80.0	-.4
1-Methylnaphthalene		.668	.677	83.43	80.0	-4.3
Hexachlorocyclopentadiene	#	.398	.392	78.88	80.0	1.4#
2,4,6-Trichlorophenol	*	.384	.383	79.77	80.0	.3*
2,4,5-Trichlorophenol		.412	.416	80.78	80.0	-1.0
2-Chloronaphthalene		1.179	1.134	76.92	80.0	3.9

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

I Name: LANCASTER LABS Contract: _____.

L b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03725 Calibration Date: 03/20/97 Time: 01:02

L b File ID: >GC211 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
2-Nitroaniline		.499	.437	70.09	80.0	12.4	
Dimethylphthalate		1.396	1.378	79.02	80.0	1.2	
2,6-Dinitrotoluene		.301	.332	88.28	80.0	-10.4	
Acenaphthylene		1.923	1.926	80.12	80.0	-.1	
3-Nitroaniline		.375	.417	88.86	80.0	-11.1	
Acenaphthene	*	1.278	1.277	79.95	80.0	-.1	*
2,4-Dinitrophenol	#	.160	.217	108.56	80.0	-35.7	# Flag J/UJ
4-Nitrophenol	#	.198	.210	84.89	80.0	-6.1	#
Dibenzofuran		1.712	1.711	79.96	80.0	.1	
2,4-Dinitrotoluene		.439	.500	91.26	80.0	-14.1	
1-Naphthylamine		1.109	1.124	81.11	80.0	-1.4	
2-Naphthylamine		1.234	1.259	81.59	80.0	-2.0	
Diethylphthalate		1.551	1.525	78.67	80.0	1.7	
4-Chlorophenyl-phenylether		.626	.635	81.18	80.0	-1.5	
Fluorene		1.289	1.295	80.34	80.0	-.4	
4-Nitroaniline		.382	.428	89.66	80.0	-12.1	
4,6-Dinitro-2-methylphenol		.103	.144	99.91	80.0	-24.9	
N-Nitrosodiphenylamine (1)	*	.479	.476	79.47	80.0	.7	*
1,2-Diphenylhydrazine		.984	.794	64.51	80.0	19.4	
4-Bromophenyl-phenylether		.207	.202	78.02	80.0	2.5	
Hexachlorobenzene		.250	.241	77.24	80.0	3.5	
Pentachlorophenol	*	.153	.165	86.25	80.0	-7.8	*
Phenanthrene		1.107	1.070	77.38	80.0	3.3	
Anthracene		1.124	1.105	78.60	80.0	1.7	
Carbazole		1.019	1.023	80.35	80.0	-.4	
Di-n-butylphthalate		1.469	1.438	79.12	80.0	1.1	
Fluoranthene	*	1.210	1.308	86.54	80.0	-8.2	*
Benzidine		.683	.607	276.40	320.0	13.6	
Pyrene		1.368	1.290	75.46	80.0	5.7	
Butylbenzylphthalate		.797	.726	72.94	80.0	8.8	
3,3'-Dichlorobenzidine		.546	.557	81.51	80.0	-1.9	
Benzo(a)anthracene		1.346	1.333	79.18	80.0	1.0	
bis(2-Ethylhexyl)phthalate		1.172	1.063	72.53	80.0	9.3	
Chrysene		1.220	1.231	80.68	80.0	-.8	
Di-n-octylphthalate	*	1.889	1.784	75.58	80.0	5.5	*
Benzo(b)fluoranthene		1.305	1.341	82.22	80.0	-2.8	
Benzo(k)fluoranthene		1.197	1.219	81.53	80.0	-1.9	
Benzo(a)pyrene	*	1.179	1.194	81.03	80.0	-1.3	*

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date: 03/20/97 Time: 01:02

Lab File ID: >GC211 Init. Calib. Date(s): 03/18/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Indeno(1,2,3-cd)pyrene	1.160	1.108	76.38	80.0	4.5
Dibenz(a,h)anthracene	1.100	1.051	76.44	80.0	4.4
Benzo(g,h,i)perylene	1.113	1.054	75.77	80.0	5.3
2-Fluorophenol	1.180	1.118	75.78	80.0	5.3
Phenol-d5	1.697	1.529	72.06	80.0	9.9
Phenol-d6	1.697	1.529	72.06	80.0	9.9
Nitrobenzene-d5	.412	.385	74.84	80.0	6.5
2-Fluorobiphenyl	1.227	1.200	78.24	80.0	2.2
2,4,6-Tribromophenol	.230	.274	83.75	80.0	-4.7
Terphenyl-d14	.852	.809	75.90	80.0	5.1

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

I b File ID (Standard): >GC211 Date Analyzed: 03/20/97

Instrument ID: HP03725 Time Analyzed: 01:02

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	28053		12.79	109265		16.77	70403		22.51
	UPPER LIMIT	56106			218530			140806		
	LOWER LIMIT	14027			54633			35202		
	EPA SAMPLE NO.									
01	F-14-	29209		12.78	115354		16.75	72758		22.50
02	SS-06	31995		12.78	122443		16.75	74047		22.50
03	SS-06MS	30525		12.79	118593		16.77	69737		22.52
04	SS-06MSD	29772		12.78	117934		16.76	70568		22.51
05	SS-11	28220		12.79	110296		16.75	66009		22.51
06	SS-08	25744		12.79	98743		16.75	57602		22.51
07	SS-09	23447		12.78	90549		16.75	52604		22.50
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GC211 Date Analyzed: 03/20/97

Instrument ID: HP03725 Time Analyzed: 01:02

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	148370		27.34	161345		34.73	175301		41.97
	UPPER LIMIT	296740			322690			350602		
	LOWER LIMIT	74185			80673			87651		
	EPA SAMPLE NO.									
01	F-14-	157766		27.33	180944		34.73	188669		41.96
02	SS-06	157550		27.33	165859		34.72	164953		41.95
03	SS-06MS	145419		27.35	157719		34.74	163033		41.98
04	SS-06MSD	147562		27.34	156052		34.74	166383		41.98
05	SS-11	141372		27.34	150655		34.72	147426		41.97
06	SS-08	119765		27.34	129877		34.72	121429		41.98
07	SS-09	110192		27.33	117383		34.72	110814		41.95
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22										

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GC23A DFTPP Injection Date: 03/25/97

Instrument ID: HP03725 DFTPP Injection Time: 00:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	26.5
365	Greater than 1.00% of mass 198	3.27
441	Present, but less than mass 443	11.8
442	Greater than 40.0% of mass 198	75.6
443	17.0 - 23.0% of mass 442	14.5 (19.2)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
01	SSTD160	STD0837	>GC23B	03/25/97	01:56
02	SSTD120	STD0837	>GC232	03/25/97	02:58
03	SSTD05	STD0837	>GC233	03/25/97	04:00
04	SSTD50	STD0837	>GC234	03/25/97	05:03
05	SSTD80	STD0837	>GC235	03/25/97	06:05
06	SS-17	2678203	>GC236	03/25/97	07:34
07	SS-16	2678204	>GC237	03/25/97	08:37
08	SS-18	2678201	>GC238	03/25/97	09:39
09	SS-10	2677442	>GC239	03/25/97	10:42
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FORM V SV 1/87 Rev.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/25/97 03/25/97

_____.

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

6B FILE ID: RRF5 = >GC233 RRF50 = >GC234
RRF80 = >GC235 RRF120= >GC232 RRF160= >GC238

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.048	1.148	1.032	1.096	1.081	1.081	4.2	AVG	
N-Nitrosodimethylamine	.605	.678	.639	.680	.684	.657	5.3	AVG	
2-Picoline	.993	1.101	1.044	1.112	1.102	1.070	4.8	AVG	
Phenol	1.535	1.461	1.359	1.335	1.247	1.387	8.1	AVG	*
Aniline	1.939	1.789	1.719	1.746	1.655	1.769	6.0	AVG	
bis(2-Chloroethyl)ether	1.264	1.199	1.119	1.120	1.045	1.149	7.3	AVG	
2-Chlorophenol	1.450	1.380	1.236	1.186	1.093	1.269	11.4	AVG	
1,3-Dichlorobenzene	1.652	1.547	1.369	1.317	1.199	1.417	12.8	AVG	
1,4-Dichlorobenzene	1.683	1.583	1.415	1.342	1.213	1.447	13.0	AVG	*
Benzyl alcohol	.851	.821	.812	.824	.787	.819	2.8	AVG	
1,2-Dichlorobenzene	1.658	1.526	1.358	1.266	1.135	1.389	14.9	AVG	
2-Methylphenol	1.181	1.151	1.143	1.165	1.115	1.151	2.1	AVG	
2,2'-oxybis(1-Chloropropane)	3.404	3.245	3.096	3.156	2.947	3.170	5.4	AVG	
bis(2-Chloroisopropyl)ether	3.404	3.245	3.096	3.156	2.947	3.170	5.4	AVG	
4-Methylphenol	1.242	1.245	1.119	1.065	.960	1.127	10.8	AVG	
3 and 4-Methylphenol	1.242	1.245	1.119	1.065	.960	1.127	10.8	AVG	
Acetophenone	3.857	3.139	2.774	2.674	2.349	2.959	19.5	2NDDEG	
N-Nitroso-di-n-propylamine	1.055	.895	.767	.627	.568	.782	25.4	2NDDEG	#
Hexachloroethane	2.194	2.074	1.905	2.103	1.906	2.036	6.3	AVG	
Nitrobenzene	.699	.695	.633	.621	.568	.643	8.5	AVG	
Isophorone	.349	.339	.319	.329	.307	.328	5.0	AVG	
2-Nitrophenol	.625	.624	.625	.650	.633	.631	1.7	AVG	
2,4-Dimethylphenol	.186	.218	.218	.213	.200	.207	6.6	AVG	*
Benzoic acid	.379	.359	.344	.347	.328	.351	5.4	AVG	
bis(2-Chloroethoxy)methane	.215	.273	.313	.348	.343	.298	18.6	1STDEG	
2,4-Dichlorophenol	.453	.431	.401	.406	.374	.413	7.3	AVG	
1,2,4-Trichlorobenzene	.329	.329	.314	.315	.287	.315	5.4	AVG	*
Naphthalene	.405	.370	.340	.329	.292	.347	12.3	AVG	
4-Chloroaniline	1.124	1.039	.932	.914	.824	.967	12.0	AVG	
Hexachlorobutadiene	.514	.485	.468	.453	.417	.467	7.8	AVG	
4-Chloro-3-methylphenol	.238	.217	.204	.190	.169	.203	12.8	AVG	*
2-Methylnaphthalene	.368	.351	.343	.343	.313	.344	5.8	AVG	*
1-Methylnaphthalene	.789	.699	.642	.625	.547	.660	13.6	AVG	
Hexachlorocyclopentadiene	.764	.700	.649	.622	.548	.657	12.4	AVG	
2,4,6-Trichlorophenol	.362	.416	.384	.361	.344	.373	7.4	AVG	#
2,4,5-Trichlorophenol	.405	.419	.392	.398	.374	.398	4.2	AVG	*
2-Chloronaphthalene	.431	.454	.411	.374	.360	.406	9.6	AVG	
	1.282	1.171	1.043	.993	.906	1.079	13.8	AVG	

J(+) - No + No impact

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/25/97 03/25/97

M ___. RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

I 3 FILE ID: RRF5 = >GC233 RRF50 = >GC234
F 80 = >GC235 RRF120= >GC232 RRF160= >GC238

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
2 itroaniline	.385	.410	.406	.414	.413	.406	2.9	AVG	
Dimethylphthalate	1.564	1.443	1.352	1.332	1.263	1.391	8.4	AVG	
2 4-Dinitrotoluene	.299	.344	.339	.340	.326	.330	5.5	AVG	
A naphthylene	2.066	1.949	1.727	1.667	1.539	1.790	12.0	AVG	
3 itroaniline	.357	.413	.414	.408	.410	.400	6.1	AVG	
Acenaphthene *	1.463	1.283	1.119	1.054	.984	1.181	16.3	2NDDEG	*
2 4-Dinitrophenol #	.177	.197	.224	.219	.221	.208	9.7	AVG	#
4 itrophenol #	.188	.196	.204	.208	.199	.199	3.9	AVG	#
D enzofuran	1.934	1.774	1.524	1.426	1.281	1.588	16.6	2NDDEG	
2,4-Dinitrotoluene	.457	.502	.496	.465	.435	.471	5.9	AVG	
1-Naphthylamine	1.096	1.138	1.047	1.007	.946	1.047	7.1	AVG	
2- aphthylamine	1.211	1.292	1.179	1.130	1.070	1.177	7.1	AVG	
D chylphthalate	1.690	1.548	1.451	1.385	1.261	1.467	11.1	AVG	
4-Chlorophenyl-phenylether	.792	.683	.572	.520	.459	.605	22.0	2NDDEG	
Fluorene	1.560	1.303	1.089	1.016	.907	1.175	22.1	2NDDEG	
4- troaniline	.401	.415	.418	.427	.436	.419	3.2	AVG	
4, Dinitro-2-methylphenol	.107	.141	.150	.149	.137	.137	12.6	AVG	
N- osodiphenylamine (1) *	.509	.487	.444	.436	.384	.452	10.7	AVG	*
1, henylhydrazine	.802	.767	.694	.695	.616	.715	10.1	AVG	
omophenyl-phenylether	.242	.238	.209	.203	.175	.213	12.9	AVG	
chlorobenzene	.321	.305	.271	.252	.218	.273	15.1	2NDDEG	
e achlorophenol *	.187	.193	.186	.180	.156	.180	8.0	AVG	*
Phenanthrene	1.261	1.110	.973	.945	.805	1.019	17.0	2NDDEG	
An racene	1.264	1.149	.988	.948	.822	1.034	16.8	2NDDEG	
Ca azole	1.124	1.052	.939	.918	.815	.969	12.4	AVG	
Di -butylphthalate	1.695	1.532	1.334	1.263	1.062	1.377	17.8	2NDDEG	
Fluoranthene *	1.538	1.351	1.132	1.058	.944	1.205	19.8	2NDDEG	*
Ben idine	.770	.620	.520	.479	.435	.565	23.7	AVG	
Py ne	1.423	1.262	1.160	1.131	1.063	1.208	11.6	AVG	
Bu lbenzylphthalate	.719	.710	.683	.669	.626	.681	5.4	AVG	
3,3'-Dichlorobenzidine	.539	.591	.566	.544	.509	.550	5.6	AVG	
Benzo(a)anthracene	1.383	1.297	1.253	1.205	1.154	1.258	7.0	AVG	
bis 2-Ethylhexyl)phthalate	1.054	1.054	1.001	.974	.907	.998	6.2	AVG	
hr ene	1.243	1.198	1.126	1.087	1.023	1.135	7.7	AVG	
i-n-octylphthalate *	1.547	1.601	1.466	1.399	1.305	1.464	8.0	AVG	*
Benzo(b)fluoranthene	1.282	1.237	1.144	1.119	1.057	1.168	7.8	AVG	
Ben (k)fluoranthene	1.173	1.165	.995	.956	.827	1.023	14.4	AVG	
Ben (a)pyrene *	1.087	1.130	1.066	1.040	.990	1.063	4.9	AVG	*

) Cannot be separated from Diphenylamine

FORM VI SV-1 1/87 Rev.

6C Cont.
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03725 Calibration Date(s): 03/25/97 03/25/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >GC233 RRF50 = >GC234
RRF80 = >GC235 RRF120= >GC232 RRF160= >GC238

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
Indeno(1,2,3-cd)pyrene	1.053	1.158	1.172	1.211	1.152	1.149	5.1	AVG
Dibenz(a,h)anthracene	.923	1.102	1.044	1.053	.968	1.018	7.1	AVG
Benzo(g,h,i)perylene	.980	1.110	1.096	1.130	1.041	1.071	5.7	AVG
2-Fluorophenol	1.037	1.050	.960	.954	.887	.978	6.8	AVG
Phenol-d5	1.550	1.471	1.404	1.412	1.319	1.431	6.0	AVG
Phenol-d6	1.550	1.471	1.404	1.412	1.319	1.431	6.0	AVG
Nitrobenzene-d5	.314	.331	.324	.333	.316	.323	2.7	AVG
2-Fluorobiphenyl	1.348	1.241	1.093	1.035	.957	1.135	13.9	AVG
2,4,6-Tribromophenol	.324	.353	.347	.320	.294	.328	7.2	AVG
Terphenyl-d14	.991	.851	.757	.707	.638	.789	17.4	2NDDEG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GC235 Date Analyzed: 03/25/97

Instrument ID: HP03725 Time Analyzed: 06:05

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	29790	12.63	127127	16.60	90730	22.34
	UPPER LIMIT	59580		254254		181460	
	LOWER LIMIT	14895		63564		45365	
	EPA SAMPLE NO.						
01	SS-17	26572	12.64	109468	16.60	74033	22.33
02	SS-16	30160	12.63	123802	16.58	84460	22.33
03	SS-18	29202	12.63	113846	16.59	75519	22.35
04	SS-10	26376	12.63	103270	16.59	65686	22.33
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GC235 Date Analyzed: 03/25/97

Instrument ID: HP03725 Time Analyzed: 06:05

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	185166		27.17	189972		34.52	246108		41.55
	UPPER LIMIT	370332			379944			492216		
	LOWER LIMIT	92583			94986			123054		
	EPA SAMPLE NO.									
01	SS-17	168645		27.17	180247		34.51	188056		41.54
02	SS-16	181861		27.17	205080		34.52	241436		41.57
03	SS-18	153732		27.18	168020		34.53	190468		41.60
04	SS-10	135769		27.17	129908		34.53	145802		41.60
05										
06										
07										
08										
09										
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11										
12										
13										
14										
15										
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18										
19										
20										
21										
22										

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >HC360 DFTPP Injection Date: 03/24/97

Instrument ID: HP04629 DFTPP Injection Time: 08:54

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	64.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	19.3
365	Greater than 1.00% of mass 198	3.01
441	Present, but less than mass 443	7.0
442	Greater than 40.0% of mass 198	48.9
443	17.0 - 23.0% of mass 442	9.6 (19.7)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
01	SSTD160	STD0837	>HC361	03/24/97	09:21
02	SSTD120	STD0837	>HC362	03/24/97	10:13
03	SSTD05	STD0837	>HC363	03/24/97	11:04
04	SSTD50	STD0837	>HC364	03/24/97	11:55
05	SSTD80	STD0837	>HC365	03/24/97	12:46
06	SBLKWX078H	SBLKWX078	>HC366	03/24/97	13:37
07	078WXLCSH	078WXLCS	>HC367	03/24/97	14:28
08	078WXLCSD	078WXLCSD	>HC368	03/24/97	15:19
09	G-EFF	2678277	>HC369	03/24/97	16:10
10	G-EFFMS	2678278	>HC370	03/24/97	17:00
11	G-EFFMSD	2678279	>HC371	03/24/97	17:51
12	SEE-1	2678293	>HC372	03/24/97	18:42
13	SBLKLD076H	SBLKLD076	>HC373	03/24/97	19:33
14	076LDLCSH	076LDLCS	>HC374	03/24/97	20:24
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

a. ame: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

n rument ID: HP04629 Calibration Date(s): 03/24/97 03/24/97

in RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

L FILE ID: RRF5 = >HC363 RRF50 = >HC364
RRF80 = >HC365 RRF120= >HC362 RRF160= >HC361

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
Pyridine	1.463	1.660	1.692	1.749	1.682	1.649	6.6	AVG
N itrosodimethylamine	.822	.994	.997	1.022	.978	.963	8.3	AVG
Pl ol *	1.849	2.018	1.961	2.079	1.968	1.975	4.3	AVG *
Aniline	2.185	2.440	2.363	2.521	2.372	2.376	5.2	AVG
bis(2-Chloroethyl)ether	1.521	1.633	1.586	1.667	1.621	1.606	3.5	AVG
2 hlorophenol	1.446	1.572	1.559	1.631	1.526	1.547	4.4	AVG
1 -Dichlorobenzene	1.560	1.639	1.616	1.683	1.601	1.620	2.8	AVG
1, -Dichlorobenzene *	1.548	1.690	1.667	1.713	1.653	1.654	3.9	AVG *
Benzyl alcohol	.891	1.027	.970	1.066	1.041	.999	7.0	AVG
1 -Dichlorobenzene	1.469	1.584	1.551	1.624	1.552	1.556	3.7	AVG
2 ethylphenol	1.270	1.366	1.326	1.417	1.366	1.349	4.1	AVG
2 oxybis(1-Chloropropane)	2.584	2.803	2.666	2.819	2.731	2.721	3.6	AVG
bis(2-Chloroisopropyl)ether	2.584	2.803	2.666	2.819	2.731	2.721	3.6	AVG
4-Methylphenol	1.366	1.448	1.315	1.425	1.377	1.386	3.8	AVG
3 and 4-Methylphenol	1.366	1.448	1.315	1.425	1.377	1.386	3.8	AVG
A phenone	4.014	4.340	3.880	4.117	3.983	4.067	4.3	AVG
N oso-di-n-propylamine #	1.217	1.277	1.104	1.192	1.181	1.194	5.2	AVG #
uidine	2.114	2.284	2.100	2.298	2.278	2.215	4.5	AVG
achloroethane	.657	.724	.704	.714	.685	.697	3.8	AVG
N robenzene	.456	.483	.482	.498	.490	.482	3.2	AVG
Isophorone	.802	.862	.826	.924	.923	.868	6.4	AVG
2-Nitrophenol *	.203	.229	.228	.252	.248	.232	8.4	AVG *
2 -Dimethylphenol	.378	.410	.400	.431	.433	.410	5.5	AVG
B zoic acid	.234	.277	.289	.359	.365	.305	18.4	2NDDEG
bis(2-Chloroethoxy)methane	.458	.484	.476	.513	.510	.488	4.7	AVG
2,4-Dichlorophenol *	.267	.307	.304	.331	.325	.307	8.2	AVG *
1 ,4-Trichlorobenzene	.305	.325	.325	.341	.333	.326	4.2	AVG
N hthalene	1.046	1.117	1.096	1.186	1.169	1.123	5.0	AVG
4 hloroaniline	.427	.465	.454	.510	.505	.472	7.5	AVG
Hexachlorobutadiene *	.172	.180	.185	.190	.181	.182	3.7	AVG *
4-hloro-3-methylphenol *	.299	.327	.314	.354	.369	.333	8.6	AVG *
2 ethylnaphthalene	.628	.682	.658	.731	.714	.683	6.1	AVG
1 ethylnaphthalene	.633	.653	.627	.690	.685	.658	4.4	AVG
Hexachlorocyclopentadiene #	.290	.419	.442	.478	.456	.417	17.8	1STDEG #
2 4,6-Trichlorophenol *	.363	.416	.417	.470	.474	.428	10.7	AVG *
2 ,5-Trichlorophenol	.381	.441	.448	.492	.481	.449	9.7	AVG
2 hloronaphthalene	1.148	1.293	1.285	1.383	1.362	1.294	7.1	AVG
2-Nitroaniline	.413	.487	.468	.485	.493	.469	6.9	AVG

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

Instrument ID: HP04629 Calibration Date(s): 03/24/97 03/24/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >HC363 RRF50 = >HC364
RF80 = >HC365 RRF120= >HC362 RRF160= >HC361

COMPOUND		RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD	
imethylphthalate		1.473	1.548	1.516	1.513	1.549	1.520	2.1	AVG	
2,6-Dinitrotoluene		.308	.355	.357	.358	.370	.350	6.8	AVG	
cenaphthylene		1.921	2.062	2.048	2.219	2.180	2.086	5.7	AVG	
Nitroaniline		.367	.423	.426	.418	.442	.415	6.8	AVG	
enaphthene	*	1.179	1.285	1.268	1.330	1.314	1.275	4.6	AVG	*
2,4-Dinitrophenol	#	.183	.208	.221	.229	.247	.218	11.0	AVG	#
4-Nitrophenol	#	.219	.234	.236	.221	.233	.229	3.6	AVG	#
benzofuran		1.707	1.798	1.794	1.843	1.811	1.791	2.8	AVG	
4-Dinitrotoluene		.458	.486	.484	.443	.454	.465	4.1	AVG	
1-Naphthylamine		1.056	1.078	1.069	1.078	1.119	1.080	2.2	AVG	
2-Naphthylamine		1.162	1.069	1.073	1.099	1.170	1.115	4.4	AVG	
ethylphthalate		1.553	1.588	1.560	1.464	1.429	1.519	4.5	AVG	
Chlorophenyl-phenylether		.614	.633	.618	.624	.600	.618	1.9	AVG	
Fluorene		1.329	1.388	1.353	1.320	1.284	1.335	2.9	AVG	
4-Nitroaniline		.401	.405	.403	.364	.403	.395	4.5	AVG	
6-Dinitro-2-methylphenol		.140	.173	.177	.191	.192	.175	12.0	AVG	
Nitrosodiphenylamine (1)	*	.511	.558	.558	.646	.633	.581	9.7	AVG	*
iphenylhydrazine		1.015	1.134	1.114	1.270	1.226	1.152	8.7	AVG	
mophenyl-phenylether		.189	.224	.224	.259	.252	.230	12.1	AVG	
xachlorobenzene		.234	.254	.251	.274	.276	.258	6.8	AVG	
ntachlorophenol	*	.123	.146	.154	.172	.179	.155	14.4	AVG	*
enanthrene		1.077	1.155	1.146	1.201	1.185	1.153	4.1	AVG	
Anthracene		1.064	1.148	1.127	1.180	1.156	1.135	3.9	AVG	
rbazole		1.006	1.047	1.050	1.055	1.056	1.043	2.0	AVG	
-n-butylphthalate		1.565	1.629	1.637	1.581	1.580	1.598	2.0	AVG	
uoranthene	*	1.083	1.115	1.111	1.101	1.105	1.103	1.1	AVG	*
Benzidine		1.228	.989	.991	.961	.928	1.020	11.7	AVG	
Pyrene		1.625	1.750	1.741	1.677	1.696	1.698	3.0	AVG	
tylbenzylphthalate		.856	1.014	1.019	.988	1.010	.977	7.1	AVG	
3'-Dichlorobenzidine		.461	.513	.525	.623	.628	.550	13.2	AVG	
Benzo(a)anthracene		1.352	1.472	1.466	1.493	1.408	1.438	4.0	AVG	
bis(2-Ethylhexyl)phthalate		1.284	1.350	1.356	1.273	1.199	1.292	5.0	AVG	
rysene		1.155	1.245	1.262	1.358	1.372	1.279	7.0	AVG	
-n-octylphthalate	*	2.175	2.456	2.526	2.790	2.680	2.525	9.3	AVG	*
Benzo(b)fluoranthene		1.317	1.458	1.474	1.635	1.611	1.499	8.6	AVG	
Benzo(k)fluoranthene		1.210	1.316	1.298	1.464	1.414	1.340	7.5	AVG	
nzo(a)pyrene	*	1.067	1.283	1.292	1.376	1.387	1.281	10.0	AVG	*
deno(1,2,3-cd)pyrene		.943	1.093	1.091	.949	.967	1.009	7.6	AVG	

(1) Cannot be separated from Diphenylamine

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

Instrument ID: HP04629 Calibration Date(s): 03/24/97 03/24/97

___.

RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >HC363 RRF50 = >HC364
RF80 = >HC365 RRF120= >HC362 RRF160= >HC361

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
benz(a,h)anthracene	.918	.991	1.007	.884	.881	.936	6.4	AVG
Benzo(g,h,i)perylene	.961	1.051	1.075	.906	.886	.976	8.7	AVG
Fluorophenol	1.400	1.531	1.535	1.604	1.521	1.518	4.9	AVG
enol-d5	1.814	2.073	2.001	2.162	2.033	2.017	6.4	AVG
Phenol-d6	1.814	2.073	2.001	2.162	2.033	2.017	6.4	AVG
Nitrobenzene-d5	.416	.449	.453	.475	.471	.453	5.2	AVG
Fluorobiphenyl	1.296	1.457	1.460	1.580	1.543	1.467	7.5	AVG
4,6-Tribromophenol	.185	.203	.205	.195	.206	.199	4.4	AVG
Terphenyl-d14	.992	1.087	1.090	1.042	1.066	1.055	3.8	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >HC365 Date Analyzed: 03/24/97

Instrument ID: HP04629 Time Analyzed: 12:46

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	377822		11.86	1317296		15.49	589907		20.71
	UPPER LIMIT	755644			2634592			1179814		
	LOWER LIMIT	188911			658648			294954		
	EPA SAMPLE NO.									
01	SBLKWX078H	396533		11.86	1349129		15.49	594617		20.71
02	078WXLCSH	371239		11.86	1367649		15.49	641194		20.71
03	078WXLCSD	370086		11.86	1282411		15.49	605024		20.71
04	G-EFF	407400		11.86	1370534		15.49	608125		20.71
05	G-EFFMS	388876		11.86	1453322		15.49	720759		20.72
06	G-EFFMSD	373611		11.86	1270027		15.49	584142		20.71
07	SEE-1	446615		11.86	1565270		15.49	699311		20.72
08	SBLKLD076H	430426		11.86	1635642		15.49	753111		20.71
09	076LDLCSH	401779		11.87	1478724		15.49	697606		20.72
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >HC365 Date Analyzed: 03/24/97

Instrument ID: HP04629 Time Analyzed: 12:46

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	932402		25.19	589941		31.86	535325		35.96
	UPPER LIMIT	1864804			1179882			1070650		
	LOWER LIMIT	466201			294971			267663		
	EPA SAMPLE NO.									
01	SBLKWX078H	954677		25.18	688815		31.85	613887		35.95
02	078WXLCSH	1037857		25.19	579267		31.86	509957		35.96
03	078WXLCSD	1007717		25.19	639606		31.86	559905		35.97
04	G-EFF	952254		25.19	669332		31.86	593791		35.96
05	G-EFFMS	1225874		25.19	809778		31.87	771169		35.96
06	G-EFFMSD	950403		25.19	601833		31.86	544724		35.96
07	SEE-1	1087265		25.19	735669		31.85	652016		35.96
08	SBLKLD076H	1107610		25.18	729944		31.85	624084		35.95
09	076LDLCSH	1206889		25.19	697583		31.86	605978		35.96
10										
11										
12										
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22										

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

5B

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

Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >HC380 DFTPP Injection Date: 03/24/97

Instrument ID: HP04629 DFTPP Injection Time: 22:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	70.9
70	Less than 2.0% of mass 69	.4 (.5)1
127	40.0 - 60.0% of mass 198	51.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	17.8
365	Greater than 1.00% of mass 198	2.90
441	Present, but less than mass 443	7.2
442	Greater than 40.0% of mass 198	47.0
443	17.0 - 23.0% of mass 442	8.7 (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
01	SSTD80	STD0837	>HC381	03/24/97	23:03
02	SS-27	2677446	>HC387	03/25/97	00:01
03	SS-15	2678198	>HC389	03/25/97	00:52
04	SS-12	2677445	>HC391	03/25/97	01:42
05	SS-03	2677447	>HC393	03/25/97	02:33
06	SS-2-	2678202	>HC395	03/25/97	03:25
07	SS-1-	2678197	>HC397	03/25/97	04:16
08	SS-13	2678200	>HC399	03/25/97	05:08
09	SS-07	2677443	>HC401	03/25/97	06:03
10	SS-14	2678199	>HC402	03/25/97	06:53
11	SS-05	2677444	>HC403	03/25/97	07:44
12	SS-04	2677441	>HC404	03/25/97	08:40
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20					
21					
22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP04629 Calibration Date: 03/24/97 Time: 23:03

Lab File ID: >HC381 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.649	1.685	81.75	80.0	-2.2
N-Nitrosodimethylamine		.963	.983	81.66	80.0	-2.1
Phenol	*	1.975	1.820	73.73	80.0	7.8*
Aniline		2.376	2.200	74.08	80.0	7.4
bis(2-Chloroethyl)ether		1.606	1.556	77.55	80.0	3.1
2-Chlorophenol		1.547	1.458	75.42	80.0	5.7
1,3-Dichlorobenzene		1.620	1.630	80.51	80.0	-.6
1,4-Dichlorobenzene	*	1.654	1.662	80.38	80.0	-.5*
Benzyl alcohol		.999	.899	71.99	80.0	10.0
1,2-Dichlorobenzene		1.556	1.543	79.34	80.0	.8
2-Methylphenol		1.349	1.255	74.43	80.0	7.0
2,2'-oxybis(1-Chloropropane)		2.721	2.519	74.07	80.0	7.4
bis(2-Chloroisopropyl)ether		2.721	2.519	74.07	80.0	7.4
4-Methylphenol		1.386	1.288	74.33	80.0	7.1
3- and 4-Methylphenol		1.386	1.288	74.33	80.0	7.1
Acetophenone		4.067	3.820	75.15	80.0	6.1
N-Nitroso-di-n-propylamine	#	1.194	1.094	73.30	80.0	8.4#
o-Toluidine		2.215	2.046	73.91	80.0	7.6
Hexachloroethane		.697	.695	79.85	80.0	.2
Nitrobenzene		.482	.472	78.40	80.0	2.0
Isophorone		.868	.848	78.21	80.0	2.2
2-Nitrophenol	*	.232	.232	80.07	80.0	-.1*
2,4-Dimethylphenol		.410	.409	79.80	80.0	.3
Benzoic acid		.305	.282	74.05	80.0	7.4
bis(2-Chloroethoxy)methane		.488	.486	79.69	80.0	.4
2,4-Dichlorophenol	*	.307	.305	79.47	80.0	.7*
1,2,4-Trichlorobenzene		.326	.329	80.87	80.0	-1.1
Naphthalene		1.123	1.130	80.50	80.0	-.6
4-Chloroaniline		.472	.469	79.52	80.0	.6
Hexachlorobutadiene	*	.182	.187	82.16	80.0	-2.7*
4-Chloro-3-methylphenol	*	.333	.338	81.40	80.0	-1.7*
2-Methylnaphthalene		.683	.683	80.09	80.0	-.1
1-Methylnaphthalene		.658	.659	80.14	80.0	-.2
Hexachlorocyclopentadiene	#	.417	.398	70.89	80.0	11.4#
2,4,6-Trichlorophenol	*	.428	.411	76.84	80.0	3.9*
2,4,5-Trichlorophenol		.449	.454	81.00	80.0	-1.2
2-Chloronaphthalene		1.294	1.260	77.87	80.0	2.7
2-Nitroaniline		.469	.486	82.92	80.0	-3.7

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP04629 Calibration Date: 03/24/97 Time: 23:03

Lab File ID: >HC381 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Dimethylphthalate	1.520	1.553	81.78	80.0	-2.2
2,6-Dinitrotoluene	.350	.370	84.65	80.0	-5.8
Acenaphthylene	2.086	2.099	80.50	80.0	-.6
3-Nitroaniline	.415	.444	85.56	80.0	-7.0
Acenaphthene	1.275	1.352	84.84	80.0	-6.0*
2,4-Dinitrophenol #	.218	.229	84.03	80.0	-5.0#
4-Nitrophenol #	.229	.250	87.58	80.0	-9.5#
Dibenzofuran	1.791	1.810	80.88	80.0	-1.1
2,4-Dinitrotoluene	.465	.526	90.58	80.0	-13.2
1-Naphthylamine	1.080	1.155	85.57	80.0	-7.0
2-Naphthylamine	1.115	1.204	86.38	80.0	-8.0
Diethylphthalate	1.519	1.643	86.56	80.0	-8.2
4-Chlorophenyl-phenylether	.618	.652	84.38	80.0	-5.5
Fluorene	1.335	1.418	84.96	80.0	-6.2
4-Nitroaniline	.395	.442	89.55	80.0	-11.9
4,6-Dinitro-2-methylphenol	.175	.178	81.59	80.0	-2.0
N-Nitrosodiphenylamine (1) *	.581	.561	77.17	80.0	3.5*
1,2-Diphenylhydrazine	1.152	1.080	75.04	80.0	6.2
4-Bromophenyl-phenylether	.230	.222	77.45	80.0	3.2
Hexachlorobenzene	.258	.246	76.35	80.0	4.6
Pentachlorophenol *	.155	.154	79.44	80.0	.7*
Phenanthrene	1.153	1.135	78.76	80.0	1.5
Anthracene	1.135	1.143	80.53	80.0	-.7
Carbazole	1.043	1.064	81.59	80.0	-2.0
Di-n-butylphthalate	1.598	1.639	82.03	80.0	-2.5
Fluoranthene *	1.103	1.143	82.91	80.0	-3.6*
Benzidine	1.020	.988	310.21	320.0	3.1
Pyrene	1.698	1.743	82.15	80.0	-2.7
Butylbenzylphthalate	.977	.985	80.63	80.0	-.8
3,3'-Dichlorobenzidine	.550	.533	77.58	80.0	3.0
Benzo(a)anthracene	1.438	1.440	80.14	80.0	-.2
bis(2-Ethylhexyl)phthalate	1.292	1.320	81.73	80.0	-2.2
Chrysene	1.279	1.241	77.63	80.0	3.0
Di-n-octylphthalate *	2.525	2.392	75.79	80.0	5.3*
Benzo(b)fluoranthene	1.499	1.429	76.26	80.0	4.7
Benzo(k)fluoranthene	1.340	1.311	78.22	80.0	2.2
Benzo(a)pyrene *	1.281	1.278	79.80	80.0	.3*
Indeno(1,2,3-cd)pyrene	1.009	1.090	86.48	80.0	-8.1

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP04629 Calibration Date: 03/24/97 Time: 23:03

Lab File ID: >HC381 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Dibenz(a,h)anthracene	.936	.986	84.25	80.0	-5.3
Benzo(g,h,i)perylene	.976	1.054	86.40	80.0	-8.0
2-Fluorophenol	1.518	1.553	81.84	80.0	-2.3
Phenol-d5	2.017	1.892	75.04	80.0	6.2
Phenol-d6	2.017	1.892	75.04	80.0	6.2
Nitrobenzene-d5	.453	.457	80.73	80.0	-.9
2-Fluorobiphenyl	1.467	1.402	76.44	80.0	4.4
2,4,6-Tribromophenol	.199	.219	88.14	80.0	-10.2
Terphenyl-d14	1.055	1.093	82.88	80.0	-3.6

(1) Cannot be separated from Diphenylamine

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >HC381 Date Analyzed: 03/24/97

Instrument ID: HP04629 Time Analyzed: 23:03

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	329884	11.87	1110863	15.49	545339	20.72
	UPPER LIMIT	659768		2221726		1090678	
	LOWER LIMIT	164942		555432		272670	
	EPA SAMPLE NO.						
01	SS-27	453127	11.86	1632009	15.49	720012	20.72
02	SS-15	396145	11.86	1553917	15.49	750044	20.71
03	SS-12	353590	11.86	1368552	15.48	642373	20.71
04	SS-03	441102	11.86	1691414	15.48	844643	20.71
05	SS-2-	548433	11.86	2099836	15.49	1000348	20.72
06	SS-1-	421866	11.87	1548828	15.49	794734	20.71
07	SS-13	510551	11.87	1998155	15.49	1005054	20.71
08	SS-07	532096	11.86	2108149	15.49	1080033	20.72
09	SS-14	473459	11.86	1773674	15.49	754359	20.71
10	SS-05	434204	11.86	1671943	15.49	898515	20.71
11	SS-04	470397	11.87	1762136	15.49	922443	20.72
12							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >HC381 Date Analyzed: 03/24/97

Instrument ID: HP04629 Time Analyzed: 23:03

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	919123	25.19	583656	31.86	527997	35.96
	UPPER LIMIT	1838246		1167312		1055994	
	LOWER LIMIT	459562		291828		263999	
	EPA SAMPLE NO.						
01	SS-27	1161806	25.19	612601	31.85	393013	35.95
02	SS-15	1229260	25.19	694695	31.86	407814	35.96
03	SS-12	992947	25.19	573714	31.86	417509	35.96
04	SS-03	1380357	25.19	654990	31.86	511190	35.97
05	SS-2-	1349675	25.19	747620	31.86	395625	35.97
06	SS-1-	1250121	25.19	623908	31.87	416613	35.97
07	SS-13	1289073	25.19	792066	31.87	431700	35.98
08	SS-07	1720565	25.20	652146	31.86	510244	35.96
09	SS-14	1194868	25.19	666913	31.86	427883	35.96
10	SS-05	1569542	25.19	649717	31.86	448991	35.96
11	SS-04	1569400	25.19	708882	31.86	427497	35.97
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17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWE0764

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWE076

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >DC356

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/18/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWE0764

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWE076

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >DC356

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/18/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLD076G

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLD076

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >GC206

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/19/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
108-95-2	Phenol		33	U
111-44-4	bis(2-Chloroethyl)ether		67	U
95-57-8	2-Chlorophenol		33	U
541-73-1	1,3-Dichlorobenzene		33	U
106-46-7	1,4-Dichlorobenzene		33	U
95-50-1	1,2-Dichlorobenzene		33	U
95-48-7	2-Methylphenol		67	U
108-60-1	2,2'-oxybis(1-Chloropropane)		100	U
106-44-5	4-Methylphenol		100	U
621-64-7	N-Nitroso-di-n-propylamine		67	U
67-72-1	Hexachloroethane		67	U
98-95-3	Nitrobenzene		33	U
78-59-1	Isophorone		67	U
88-75-5	2-Nitrophenol		67	U
105-67-9	2,4-Dimethylphenol		67	U
111-91-1	bis(2-Chloroethoxy)methane		33	U
120-83-2	2,4-Dichlorophenol		33	U
120-82-1	1,2,4-Trichlorobenzene		33	U
91-20-3	Naphthalene		33	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		67	U
59-50-7	4-Chloro-3-methylphenol		67	U
91-57-6	2-Methylnaphthalene		33	U
77-47-4	Hexachlorocyclopentadiene		170	U
88-06-2	2,4,6-Trichlorophenol		67	U
95-95-4	2,4,5-Trichlorophenol		67	U
91-58-7	2-Chloronaphthalene		33	U
88-74-4	2-Nitroaniline		67	U
131-11-3	Dimethylphthalate		33	U
606-20-2	2,6-Dinitrotoluene		67	U
208-96-8	Acenaphthylene		33	U
99-09-2	3-Nitroaniline		67	U
83-32-9	Acenaphthene		33	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLD076G

b Name: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLD076

ample wt/vol: 30.0 (g/mL) G Lab File ID: >GC206

Level: (low/med) LOW Date Received:

Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/19/97

PC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
51-28-5	2,4-Dinitrophenol		170	U
100-02-7	4-Nitrophenol		170	U
132-64-9	Dibenzofuran		33	U
121-14-2	2,4-Dinitrotoluene		67	U
84-66-2	Diethylphthalate		67	U
7005-72-3	4-Chlorophenyl-phenylether		67	U
86-73-7	Fluorene		33	U
100-01-6	4-Nitroaniline		100	U
534-52-1	4,6-Dinitro-2-methylphenol		170	U
86-30-6	N-Nitrosodiphenylamine (1)		67	U
101-55-3	4-Bromophenyl-phenylether		100	U
118-74-1	Hexachlorobenzene		100	U
87-86-5	Pentachlorophenol		170	U
85-01-8	Phenanthrene		33	U
120-12-7	Anthracene		33	U
86-74-8	Carbazole		33	U
84-74-2	Di-n-butylphthalate		33	U
206-44-0	Fluoranthene		33	U
129-00-0	Pyrene		67	U
85-68-7	Butylbenzylphthalate		67	U
91-94-1	3,3'-Dichlorobenzidine		130	U
56-55-3	Benzo(a)anthracene		33	U
117-81-7	bis(2-Ethylhexyl)phthalate		67	U
218-01-9	Chrysene		33	U
117-84-0	Di-n-octylphthalate		67	U
205-99-2	Benzo(b)fluoranthene		67	U
207-08-9	Benzo(k)fluoranthene		130	U
50-32-8	Benzo(a)pyrene		67	U
193-39-5	Indeno(1,2,3-cd)pyrene		67	U
53-70-3	Dibenz(a,h)anthracene		67	U
191-24-2	Benzo(g,h,i)perylene		67	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLD076H

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLD076

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >HC373

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/24/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
108-95-2	Phenol		33	U
111-44-4	bis(2-Chloroethyl)ether		67	U
95-57-8	2-Chlorophenol		33	U
541-73-1	1,3-Dichlorobenzene		33	U
106-46-7	1,4-Dichlorobenzene		33	U
95-50-1	1,2-Dichlorobenzene		33	U
95-48-7	2-Methylphenol		67	U
108-60-1	2,2'-oxybis(1-Chloropropane)		100	U
106-44-5	4-Methylphenol		100	U
621-64-7	N-Nitroso-di-n-propylamine		67	U
67-72-1	Hexachloroethane		67	U
98-95-3	Nitrobenzene		33	U
78-59-1	Isophorone		67	U
88-75-5	2-Nitrophenol		67	U
105-67-9	2,4-Dimethylphenol		67	U
111-91-1	bis(2-Chloroethoxy)methane		33	U
120-83-2	2,4-Dichlorophenol		33	U
120-82-1	1,2,4-Trichlorobenzene		33	U
91-20-3	Naphthalene		33	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		67	U
59-50-7	4-Chloro-3-methylphenol		67	U
91-57-6	2-Methylnaphthalene		33	U
77-47-4	Hexachlorocyclopentadiene		170	U
88-06-2	2,4,6-Trichlorophenol		67	U
95-95-4	2,4,5-Trichlorophenol		67	U
91-58-7	2-Chloronaphthalene		33	U
88-74-4	2-Nitroaniline		67	U
131-11-3	Dimethylphthalate		33	U
606-20-2	2,6-Dinitrotoluene		67	U
208-96-8	Acenaphthylene		33	U
99-09-2	3-Nitroaniline		67	U
83-32-9	Acenaphthene		33	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLD076H

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLD076

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >HC373

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/17/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/24/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
51-28-5	2,4-Dinitrophenol	170	U
100-02-7	4-Nitrophenol	170	U
132-64-9	Dibenzofuran	33	U
121-14-2	2,4-Dinitrotoluene	67	U
84-66-2	Diethylphthalate	67	U
7005-72-3	4-Chlorophenyl-phenylether	67	U
86-73-7	Fluorene	33	U
100-01-6	4-Nitroaniline	100	U
534-52-1	4,6-Dinitro-2-methylphenol	170	U
86-30-6	N-Nitrosodiphenylamine (1)	67	U
101-55-3	4-Bromophenyl-phenylether	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	170	U
85-01-8	Phenanthrene	33	U
120-12-7	Anthracene	33	U
86-74-8	Carbazole	33	U
84-74-2	Di-n-butylphthalate	33	U
206-44-0	Fluoranthene	33	U
129-00-0	Pyrene	67	U
85-68-7	Butylbenzylphthalate	67	U
91-94-1	3,3'-Dichlorobenzidine	130	U
56-55-3	Benzo(a)anthracene	33	U
117-81-7	bis(2-Ethylhexyl)phthalate	67	U
218-01-9	Chrysene	33	U
117-84-0	Di-n-octylphthalate	67	U
205-99-2	Benzo(b)fluoranthene	67	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	67	U
193-39-5	Indeno(1,2,3-cd)pyrene	67	U
53-70-3	Dibenz(a,h)anthracene	67	U
191-24-2	Benzo(g,h,i)perylene	67	U

(1) - Cannot be separated from Diphenylamine

Water QC Windows

Compound Name	Water LCS	Water MS/MSD
Phenol	26.3 - 60.5	28.7 - 57.5
bis(2-Chloroethyl)ether	64.2 - 110.4	66.2 - 110.6
2-Chlorophenol	58.7 - 100.7	58.7 - 100.7
1,3-Dichlorobenzene	48.8 - 101	54.5 - 98.9
1,4-Dichlorobenzene	53.6 - 105.8	55.3 - 101.5
1,2-Dichlorobenzene	54.6 - 106.8	59.4 - 106.8
2-Methylphenol	41.7 - 104.1	45.8 - 106.4
2,2'-oxybis(1-Chloropropane)	41.2 - 97.9	48.0 - 92.9
4-Methylphenol	33.8 - 98.6	29.8 - 104.8
N-Nitroso-di-n-propylamine	59.2 - 126.8	64.3 - 123.7
Hexachloroethane	36.4 - 92.2	41.4 - 91.8
Nitrobenzene	64.8 - 108.1	65.8 - 107.8
Isophorone	63.3 - 103.6	63.5 - 104.3
2-Nitrophenol	60.5 - 116.9	60.3 - 119.1
2,4-Dimethylphenol	29.6 - 99.8	29.3 - 98.9
bis(2-chloroethoxy)methane	62.7 - 107.1	62.9 - 109.1
2,4-Dichlorophenol	63 - 100.2	0 - 267.6
1,2,4-Trichlorobenzene	29.1 - 125.1	57.1 - 100.9
Naphthalene	34 - 120.4	63.1 - 97.3
4-Chloroaniline	22.6 - 102	9.9 - 106.5
Hexachlorobutadiene	24.6 - 96	34.6 - 91.3
4-Chloro-3-methylphenol	62.7 - 104.7	61.2 - 105
2-Methylnaphthalene	48.9 - 108.1	63.7 - 98.5
Hexachlorocyclopentadiene	0 - 98.6	0 - 101.9
2,4,6-Trichlorophenol	49.3 - 121.3	43.2 - 124.8
2,4,5-Trichlorophenol	67.2 - 106.8	66.4 - 107.2
2-Chloronaphthalene	65.6 - 108.2	67.2 - 107.4
2-Nitroaniline	59.4 - 112.2	59.5 - 112.3
Dimethylphthalate	0 - 117.2	1.4 - 115.4
2,6-Dinitrotoluene	71.2 - 116.2	71.7 - 114.9
Acenaphthylene	35.1 - 121.5	65.6 - 96.2
3-Nitroaniline	37.5 - 104.9	35.6 - 107.4
Acenaphthene	35.5 - 122.5	64.3 - 98.5
2,4-Dinitrophenol	29.9 - 116.9	27.4 - 112.6

Compound Name	Water LCS	Water MS/MSD
4-Nitrophenol	18 - 63	13.3 - 62.5
Dibenzofuran	68 - 104.6	67.7 - 104.3
2,4-Dinitrotoluene	70.4 - 120.2	68.1 - 119.1
Diethylphthalate	38.3 - 122.3	41.6 - 119.6
4-Chlorophenyl phenylether	65.6 - 110.6	65.7 - 110.1
Fluorene	63.1 - 103.9	63.7 - 104.5
4-Nitroaniline	49.9 - 123.1	50 - 120.8
4,6-Dinitro-2-methylphenol	52.8 - 130.8	51.4 - 136.6
N-Nitrosodiphenylamine	64 - 114.4	63.6 - 115.2
4-Bromophenyl phenylether	64.9 - 117.7	66.9 - 116.1
Hexachlorobenzene	53.1 - 139.5	52.4 - 140.6
Pentachlorophenol	44.9 - 112.7	31.1 - 116.3
Phenanthrene	37.2 - 127.2	69 - 101.4
Anthracene	33.6 - 118.8	60.2 - 97.4
Carbazole	73.2 - 113.3	72.3 - 114.5
Di-n-butylphthalate	62.3 - 115.7	62.8 - 116.2
Fluoranthene	36.2 - 129.8	63.9 - 107.1
Pyrene	33.2 - 133.4	58.3 - 110.5
Butylbenzylphthalate	51.2 - 116.6	49.9 - 116.5
3,3'-Dichlorobenzidine	44.9 - 118.1	51.7 - 111.7
Benzo(a)anthracene	37 - 128.8	64.6 - 104.8
bis(2-ethylhexyl)phthalate	42 - 142.8	58.7 - 128.3
Chrysene	36.5 - 130.7	62 - 107.6
Di-n-octylphthalate	58.8 - 129.6	61.3 - 123.7
Benzo(b)fluoranthene	34.3 - 127.3	61.6 - 104.2
Benzo(k)fluoranthene	35.4 - 130.2	63.8 - 107
Benzo(a)pyrene	32.8 - 121	57.3 - 99.9
Indeno(1,2,3-cd)pyrene	34.2 - 133.8	56.3 - 116.3
Dibenz(a,h)anthracene	59.8 - 114.4	58.4 - 114.8
Benzo(g,h,i)perylene	31.1 - 136.1	55.2 - 116.4

Soil QC Windows

Compound Name	Soil LCS	Soil MS/MSD
Phenol	16.8 - 136.8	23.7 - 131.1
bis(2-Chloroethyl)ether	16.7 - 143.3	24.7 - 138.1
2-Chlorophenol	21.3 - 129.3	16.6 - 135.4
1,3-Dichlorobenzene	14.1 - 135.3	23.2 - 126.4
1,4-Dichlorobenzene	14.8 - 136	23 - 118.4
1,2-Dichlorobenzene	14.4 - 142.8	27 - 127.8
2-Methylphenol	68.1 - 105.9	54.8 - 109.4
2,2'-oxybis(1-Chloropropane)	40.4 - 95.4	29.1 - 101.9
4-Methylphenol	61.2 - 105	53.2 - 100.6
N-Nitroso-di-n-propylamine	20.6 - 153.8	32.5 - 146.5
Hexachloroethane	13.4 - 138.2	18.2 - 131.6
Nitrobenzene	18.5 - 140.3	33.1 - 129.7
Isophorone	29.4 - 126.6	18.6 - 134.4
2-Nitrophenol	16.2 - 144.6	21.6 - 138
2,4-Dimethylphenol	0 - 125.5	0 - 123.6
bis(2-chloroethoxy)methane	18.2 - 138.2	28. - 130.6
2,4-Dichlorophenol	18.8 - 135.2	24.5 - 125.9
1,2,4-Trichlorobenzene	18.3 - 137.1	54.6 - 103.2
Naphthalene	21.3 - 128.7	20.9 - 127.7
4-Chloroaniline	0 - 81.1	0 - 92.1
Hexachlorobutadiene	17.3 - 143.9	26.1 - 134.1
4-Chloro-3-methylphenol	18.6 - 145.2	28.8 - 133.2
2-Methylnaphthalene	74.1 - 91.3	53.9 - 104.3
Hexachlorocyclopentadiene	0 - 106	0 - 115.4
2,4,6-Trichlorophenol	14 - 146.6	6.9 - 146.1
2,4,5-Trichlorophenol	78.9 - 104.1	53.7 - 113.7
2-Chloronaphthalene	20 - 143.6	32.8 - 131.8
2-Nitroaniline	74.8 - 115.6	62.2 - 118.6
Dimethylphthalate	21 - 145.8	34.1 - 134.3
2,6-Dinitrotoluene	25.9 - 148.9	35.6 - 139.4
Acenaphthylene	16.2 - 133.8	19 - 131.2
3-Nitroaniline	20.8 - 86.5	16.0 - 69.5
Acenaphthene	16.6 - 136.6	18.2 - 134.6
2,4-Dinitrophenol	5.4 - 136.2	0 - 127.9
4-Nitrophenol	15 - 149.4	17 - 142.4
Dibenzofuran	76.8 - 97.8	57.8 - 106.4
2,4-Dinitrotoluene	20.4 - 157.8	31.8 - 142.2
Diethylphthalate	20.6 - 156.2	33.2 - 140.6
4-Chlorophenyl phenylether	18.3 - 149.1	30.7 - 134.5
Fluorene	38.3 - 121.1	16 - 139
4-Nitroaniline	46.7 - 111.5	32.5 - 106.9
4,6-Dinitro-2-methylphenol	7.9 - 142.3	11.8 - 128.8
N-Nitrosodiphenylamine	20.1 - 146.7	32.9 - 135.5
4-Bromophenyl phenylether	20.6 - 152.6	34.1 - 141.5
Hexachlorobenzene	16.6 - 160.6	27.8 - 151.4
Pentachlorophenol	9.6 - 141.6	9.3 - 137.7
Phenanthrene	18.2 - 141.2	0 - 179.4
Anthracene	16 - 133	14.2 - 133.6
Carbazole	70.8 - 109.8	57.8 - 115.2
Di-n-butylphthalate	18.5 - 157.7	26.7 - 146.7
Fluoranthene	17.1 - 144.3	0 - 197
Pyrene	15.1 - 148.3	0 - 240.7
Butylbenzylphthalate	23.2 - 154	32.2 - 149.8
3,3'-Dichlorobenzidine	5.1 - 141.3	0 - 142.9
Benzo(a)anthracene	43.9 - 121.9	0 - 178.6
bis(2-ethylhexyl)phthalate	10.6 - 170.2	20.6 - 156.8
Chrysene	42.7 - 123.7	0 - 197.8
Di-n-octylphthalate	10.4 - 164	26.8 - 154.6
Benzo(b)fluoranthene	42.1 - 122.6	0 - 169.9
Benzo(k)fluoranthene	43.4 - 125	26.7 - 139.5
Benzo(a)pyrene	42.7 - 121.3	0 - 176.6
Indeno(1,2,3-cd)pyrene	37.7 - 130.7	2.2 - 153.4
Dibenz(a,h)anthracene	41.2 - 128.2	0 - 163.5
Benzo(g,h,i)perylene	10.8 - 147	0 - 165.2

Duplicate Analysis
Miscellaneous Wet Chemistry

Matrix: SOIL

Sample Information		Duplicate Analysis											
Sample Number	Sample Code	Parameter	Method	Analysis Date	1st Dup Desig.	1st Dup Result	LOQ	2nd Dup Desig.	2nd Dup Result	Units	RPD (%)	Control Limit % </=
2677435	SS-11	Moisture	OD	03/17/97	2677436	15.3	0.5	2677438	15.1	%	1	18.9
2677436	SS-06											
2677437	SS-06											
2677438	SS-06											
2677439	SS-08											
2677440	SS-09											
2677441	SS-04											
2677442	SS-10											
2677443	SS-07											
2677444	SS-05											
2677445	SS-12											
2677446	SS-27											
2677447	SS-03											
2678197	SS-1-											
2678198	SS-15											
2678199	SS-14											
2678200	SS-13											
2678201	SS-18											
202	SS-2-											
2678203	SS-17											
2678204	SS-16											

Comments: If the background and/or the duplicate result are < the limit of quantitation, the RPD is not required.

Sample results are rounded to be consistent with the limit of quantitation.

ABBREVIATION KEY

CO = Colorimetric	ND = Not Detected
DI = Distillation	J = Estimated Value < LOQ
G = Gravimetric	< = Less Than
IR = Infrared Spectrophotometry	LOQ = Limit of Quantitation
M = Meter	NA = Not Applicable
OD = Oven Dried	ME = Method
TI = Titration	* = Out of Specification

Quality Control Summary

Laboratory Control Standard
Laboratory Control Standard Duplicate
Miscellaneous Wet Chemistry

Sample Information || Laboratory Control Standards

Matrix: SOIL

Sample Number	Sample Code	Parameter	Analysis Date	True LCS/D Value	LCS Result	LCSD Result	LOQ	Units	LCS/D Acceptance Range	% RPD Result	% RPD Acceptance < / =
2677435	SS-11	Moisture	03/17/97	89.5	89.4	89.4	0.5	%	89.07 - 90.33	0	20
2677436	SS-06										
2677437	SS-06										
2677438	SS-06										
2677439	SS-08										
2677440	SS-09										
2677441	SS-04										
2677442	SS-10										
2677443	SS-07										
2677444	SS-05										
2677445	SS-12										
2677446	SS-27										
2677447	SS-03										
2678197	SS-1-										
2678198	SS-15										
[illegible]78199	SS-14										
8200	SS-13										
2678201	SS-18										
2678202	SS-2-										
2678203	SS-17										
2678204	SS-16										

mments: LCS/LCSD results are rounded to be consistent with the limit of quantitation.

Moisture >Oven Dry #8200 — Batch #97076-8200-02 — Table 1 of 2

#	Sample	Replicate	2.Analysis Scheduled 111 or 1353	Analysis 118	Analysis 121	3.Pre-Drying Weights Tare Wt (g)	Sample Wt(g)	4. Dry Wt. (g)
1	89.5% LCS		a *****	a *****	a *****	a 1.0726	a 5.0639	a 1.6096
2	89.5% LCSD		a *****	a *****	a *****	a 1.081	a 5.0117	a 1.6117
3	2677435		a 1	a 0	a 0	a 1.0813	a 5.4332	a 5.6322
4	2677436 BK		a 1	a 0	a 0	a 1.0774	a 6.8628	a 6.891
5	2677437 MS		a 0	a 1	a 0	a *****	a *****	a *****
6	2677438 MD		a 0	a 1	a 1	a 1.0718	a 5.1973	a 5.4827
7	2677439		a 1	a 0	a 0	a 1.0858	a 8.55	a 7.4992
8	2677440		a 1	a 0	a 0	a 1.0844	a 8.1599	a 7.7358
9	2677441		a 1	a 0	a 0	a 1.0787	a 5.8503	a 6.1071
10	2677442		a 1	a 0	a 0	a 1.0769	a 8.1718	a 7.8871
11	2677443		a 1	a 0	a 0	a 1.0821	a 6.2979	a 5.7386
12	2677444		a 1	a 0	a 0	a 1.0803	a 6.0197	a 6.3804
13	2677445		a 1	a 0	a 0	a 1.0717	a 5.8365	a 6.0331
14	2677446		a 1	a 0	a 0	a 1.0818	a 6.4516	a 6.0354
15	2677446 DUP		a 1	a 0	a 0	a 1.0768	a 5.7942	a 5.5064
16	2677447		a 1	a 0	a 0	a 1.0763	a 5.9568	a 6.1995
17	2678197		a 1	a 0	a 0	a 1.0771	a 6.1964	a 6.5075
18	2678198		a 1	a 0	a 0	a 1.0727	a 5.2573	a 5.6682
	2678199		a 1	a 0	a 0	a 1.0808	a 5.7928	a 5.941
20	2678200		a 1	a 0	a 0	a 1.0762	a 6.8715	a 6.816
21	2678201		a 1	a 0	a 0	a 1.0764	a 7.3874	a 7.6178
22	2678202		a 1	a 0	a 0	a 1.0723	a 5.4671	a 5.9962
23	2678203		a 1	a 0	a 0	a 1.0717	a 5.1075	a 5.3849
24	2678204		a 1	a 0	a 0	a 1.077	a 6.4614	a 5.9577

Moisture >Oven Dry #8200 — Batch #97076-8200-02 — Table 2 of 2

#	Sample	Replicate	5.Calculate/Transmit Dup. Diff.	% Rel. Diff.	% Moisture
1	89.5% LCS		a *****	a *****	a 89.39552
2	89.5% LCSD		a *****	a *****	a 89.41077
3	2677435		a *****	a *****	a 16.23905
4	2677436 BK		a *****	a *****	a 15.28822
5	2677437 MS		a *****	a *****	a *****
6	2677438 MD		a *****	a *****	a 15.13093
7	2677439		a *****	a *****	a 24.98948
8	2677440		a *****	a *****	a 18.48675
9	2677441		a *****	a *****	a 14.04885
	677442		a *****	a *****	a 16.66217

100%
100% R=0
(15) R=1%

VRH/355 3/18/97

Moisture >Oven Dry #8200 Batch #97076-8200-02 Table 2 of 2

	Sample	Replicate	5.Calculate/Transmit Dup. Diff.	% Rel. Diff.	% Moisture
11	2677443		a *****	a *****	a 25.74509
12	2677444		a *****	a *****	a 11.95408
13	2677445		a *****	a *****	a 14.99358
14	2677446		a *****	a *****	a 23.21905
15	2677446 DUP		a .3320866	a 1.420078	a 23.55113 R = 1
16	2677447		a *****	a *****	a 13.99409
17	2678197		a *****	a *****	a 12.36202
18	2678198		a *****	a *****	a 12.58821
19	2678199		a *****	a *****	a 16.0993
20	2678200		a *****	a *****	a 16.46948
21	2678201		a *****	a *****	a 11.45193
22	2678202		a *****	a *****	a 9.935798
23	2678203		a *****	a *****	a 15.55164
24	2678204		a *****	a *****	a 24.46374

JRH/355 3/18/97

Moisture >Oven Dry #8200 Batch #97076-8200-02 Table 1 of 2

#	Sample	Replicate	2.Analysis Scheduled 111 or 1353	Analysis 118	Analysis 121	3.Pre-Drying Weights Tare Wt (g)	Sample Wt(g)	4. Dry Wt. (g)
1	89.5% LCS		a *****	a *****	a *****	a 1.0726	a 5.0639	a 1.6096
2	89.5% LCSD		a *****	a *****	a *****	a 1.081	a 5.0117	a 1.6117
3	2677435		a 1	a 0	a 0	a 1.0813	a 5.4332	a 5.6322
4	2677436 BK		a 1	a 0	a 0	a 1.0774	a 6.8628	a 6.891
5	2677437 MS		a 0	a 1	a 0	a *****	a *****	a *****
6	2677438 MD		a 0	a 1	a 1	a 1.0718	a 5.1973	a 5.4827
7	2677439		a 1	a 0	a 0	a 1.0858	a 8.55	a 7.4992
8	2677440		a 1	a 0	a 0	a 1.0844	a 8.1599	a 7.7358
9	2677441		a 1	a 0	a 0	a 1.0787	a 5.8503	a 6.1071
0	2677442		a 1	a 0	a 0	a 1.0769	a 8.1718	a 7.8871
1	2677443		a 1	a 0	a 0	a 1.0821	a 6.2979	a 5.7386
12	2677444		a 1	a 0	a 0	a 1.0803	a 6.0197	a 6.3804
3	2677445		a 1	a 0	a 0	a 1.0717	a 5.8365	a 6.0331
14	2677446		a 1	a 0	a 0	a 1.0818	a 6.4516	a 6.0354
5	2677446 DUP		a 1	a 0	a 0	a 1.0768	a 5.7942	a 5.5064
6	2677447		a 1	a 0	a 0	a 1.0763	a 5.9568	a 6.1995
17	2678197		a 1	a 0	a 0	a 1.0771	a 6.1964	a 6.5075
8	2678198		a 1	a 0	a 0	a 1.0727	a 5.2573	a 5.6682
	2678199		a 1	a 0	a 0	a 1.0808	a 5.7928	a 5.941
0	2678200		a 1	a 0	a 0	a 1.0762	a 6.8715	a 6.816
1	2678201		a 1	a 0	a 0	a 1.0764	a 7.3874	a 7.6178
22	2678202		a 1	a 0	a 0	a 1.0723	a 5.4671	a 5.9962
3	2678203		a 1	a 0	a 0	a 1.0717	a 5.1075	a 5.3849
24	2678204		a 1	a 0	a 0	a 1.077	a 6.4614	a 5.9577

Moisture >Oven Dry #8200 Batch #97076-8200-02 Table 2 of 2

#	Sample	Replicate	5.Calculate/Transmit Dup. Diff.	Z Rel. Diff.	Z Moisture	
1	89.5% LCS		a *****	a *****	a 89.39552	100%
2	89.5% LCSD		a *****	a *****	a 89.41077	100% R=0
3	2677435		a *****	a *****	a 16.23905	
4	2677436 BK		a *****	a *****	a 15.28822	
5	2677437 MS		a *****	a *****	a *****	(15) R=1%
6	2677438 MD		a *****	a *****	a 15.13093	
7	2677439		a *****	a *****	a 24.98948	
8	2677440		a *****	a *****	a 18.48675	
	2677441		a *****	a *****	a 14.04885	
	2677442		a *****	a *****	a 16.66217	

VRH 355 3/18/97

Moisture >Oven Dry #8200 Batch #97076-8200-02 Table 1 of 2

#	Sample	Replicate	2.Analysis Scheduled 111 or 1353	Analysis 118	Analysis 121	3.Pre-Drying Weights Tare Wt (g)	Sample Wt(g)	4. Dry Wt. (g)
1	89.5% LCS		a *****	a *****	a *****	a 1.0726	a 5.0639	a 1.6096
2	89.5% LCSD		a *****	a *****	a *****	a 1.081	a 5.0117	a 1.6117
3	2677435		a 1	a 0	a 0	a 1.0813	a 5.4332	a 5.6322
4	2677436 BK		a 1	a 0	a 0	a 1.0774	a 6.8628	a 6.891
5	2677437 MS		a 0	a 1	a 0	a *****	a *****	a *****
6	2677438 MD		a 0	a 1	a 1	a 1.0718	a 5.1973	a 5.4827
7	2677439		a 1	a 0	a 0	a 1.0858	a 8.55	a 7.4992
8	2677440		a 1	a 0	a 0	a 1.0844	a 8.1599	a 7.7358
9	2677441		a 1	a 0	a 0	a 1.0787	a 5.8503	a 6.1071
10	2677442		a 1	a 0	a 0	a 1.0769	a 8.1718	a 7.8871
11	2677443		a 1	a 0	a 0	a 1.0821	a 6.2979	a 5.7586
12	2677444		a 1	a 0	a 0	a 1.0803	a 6.0197	a 5.3804
13	2677445		a 1	a 0	a 0	a 1.0717	a 5.8365	a 6.0331
14	2677446		a 1	a 0	a 0	a 1.0818	a 6.4516	a 6.0354
15	2677446 DUP		a 1	a 0	a 0	a 1.0768	a 5.7942	a 5.5064
16	2677447		a 1	a 0	a 0	a 1.0763	a 5.9568	a 6.1995
17	2678197		a 1	a 0	a 0	a 1.0771	a 6.1964	a 6.5075
18	2678198		a 1	a 0	a 0	a 1.0727	a 5.2573	a 5.6682
	2678199		a 1	a 0	a 0	a 1.0808	a 5.7928	a 5.941
20	2678200		a 1	a 0	a 0	a 1.0762	a 6.8715	a 6.816
21	2678201		a 1	a 0	a 0	a 1.0764	a 7.3874	a 7.6178
22	2678202		a 1	a 0	a 0	a 1.0723	a 5.4671	a 5.9962
23	2678203		a 1	a 0	a 0	a 1.0717	a 5.1075	a 5.3849
24	2678204		a 1	a 0	a 0	a 1.077	a 6.4614	a 5.9577

Moisture >Oven Dry #8200 Batch #97076-8200-02 Table 2 of 2

#	Sample	Replicate	5.Calculate/Transmit Dup. Diff.	% Rel. Diff.	% Moisture
1	89.5% LCS		a *****	a *****	a 89.39552
2	89.5% LCSD		a *****	a *****	a 89.41077
3	2677435		a *****	a *****	a 16.23905
4	2677436 BK		a *****	a *****	a 15.28822
5	2677437 MS		a *****	a *****	a *****
6	2677438 MD		a *****	a *****	a 15.13093
7	2677439		a *****	a *****	a 24.98948
8	2677440		a *****	a *****	a 18.48675
9	2677441		a *****	a *****	a 14.04885
	2677442		a *****	a *****	a 16.66217

100%

100% R=0

(IS) R=1%

JRH/355 3/18/97

Organic Extraction Batchlog

Prep Analysis # 00813 BNA Water Extraction
Prep Group # 603 TC8 Water Dept: 26

Verified:
Start Date: 3-17-97
Start Time: 11:40
Tech 1: S. Durkin
Tech 2:

BATCH NO. 97076WAE026 | 0178 KERR

QC	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKWB	1000	SS97051A ~~X~~	1.0			1.0	N/A	DI H_2O
LCS6	LCSRH	1000	SS97051A ~~X~~	1.0	MS97073C	1.0	↓	↓	↓
2677532MS	KMMW4MS	1000	SS97051A ~~X~~	1.0	MS97073C	1.0	↓	↓	ISTC84
2677533MSD	KMMW4MSD	1000	SS97051A ~~X~~	1.0	MS97073C	1.0	↓	↓	↓

SLD 3-17-97

	Sample #	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2677434	RB-02	1000	SS97051A ~~X~~	1.0	1.0	N/A		4678 4679	3/28/97	N
2	2677529	KMMW3	1000	SS97051A ~~X~~	1.0	↓	↓	yellow milky centrifuged	4678 4679	3/28/97	N
3	2677530 bkg	KMMW4	1000	SS97051A ~~X~~	1.0	↓	↓	light Brown milky	4678 4679	3/28/97	N
4	2677535	KMMW5	1000	SS97051A ~~X~~	1.0	↓	↓	Brown milky centrifuged	4678 4679	3/28/97	N
5	2677536	KMMW1	1000	SS97051A ~~X~~	1.0	↓	↓	light milky centrifuged	4678 4679	3/28/97	N
6	2677537	KMW-3	1000	SS97051A ~~X~~	1.0	↓	↓	slightly cloudy centrifuged	4678 4679	3/28/97	N
7	2677538	KMW23	1000	SS97051A ~~X~~	1.0	↓	↓	↓ centrifuged	4678 4679	3/28/97	N
	2677539	KMW-4	1000	SS97051A ~~X~~	1.0	↓	↓	milky centrifuged	4678 4679	3/28/97	N
	2677540	RB-1	1000	SS97051A ~~X~~	1.0	↓	↓		4678 4679	3/28/97	N
10	2678205	RB-3 -	1000	SS97051A	1.0	↓	↓				
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

SLD 3-17-97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Spike Solutions:
~~SS97051A~~ SS97051A SLD 3-17-97 BNA SURROGATE STD.
MS97073C LCS SPIKE (100)

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	B11759	H_2SO_4	K35243
Na_2SO_4	960505		
NaOH	960778H		
rnal Standar	LA1360CT	Balance #	

S-Evap/bath	°C	S-Evap/bath	°C	N-Evap	°C

762

Organic Extraction Batchlog

Prep Analysis # 00381 BNA Soil Extraction

Prep Group # 702 TC8 - Soil/Solid

Dept: 26

Verified:

Start Date: 3-17-97

Start Time: 1100

Tech 1: L.J.O. TQ

Tech 2: D.T. JJT

BATCH NO. 97076SLD026 0712 KERR GPC

QC	Sample Code	Amt (g)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKWF	30.0	SS97051A	1.0			10.0		
LCS6	LCSRL	30.0	SS97051A	1.0	MS97073C	1.0			
2677437MS	SS-06MS	30.0	SS97051A	1.0	MS97073C	1.0			HMS@1
2677438MSD	SS-06MSD	30.0	SS97051A	1.0	MS97073C	1.0			

	Sample #	Sample Code	Amt (g)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2677435	SS-11	30.0	SS97051A	1.0	10.0		HMS@1	4688 4689	3/28/97	N
2	2677436 bbg	SS-06	30.0	SS97051A	1.0				4688 4689	3/28/97	N
3	2677439	SS-08	30.0	SS97051A	1.0				4688 4689	3/28/97	N
4	2677440	SS-09	30.0	SS97051A	1.0				4688 4689	3/28/97	N
5	2677441	SS-04	30.0	SS97051A	1.0				4688 4689	3/28/97	N
6	2677442	SS-10	30.0	SS97051A	1.0				4688 4689	3/28/97	N
	2677443	SS-07	30.0	SS97051A	1.0				4688 4689	3/28/97	N
	2677444	SS-05	30.0	SS97051A	1.0				4688 4689	3/28/97	N
9	2677445	SS-12	30.0	SS97051A	1.0				4688 4689	3/28/97	N
10	2677446	SS-27	30.0	SS97051A	1.0				4688 4689	3/28/97	N
11	2677447	SS-03	30.0	SS97051A	1.0				4688 4689	3/28/97	N
12	2678197	SS-1-	30.0	SS97051A	1.0				4688 4689	3/31/97	N
13	2678198	SS-15	30.0	SS97051A	1.0				4688 4689	3/31/97	N
14	2678199	SS-14	30.0	SS97051A	1.0				4688 4689	3/31/97	N
15	2678200	SS-13	30.0	SS97051A	1.0				4688 4689	3/31/97	N
16	2678201	SS-18	30.0	SS97051A	1.0				4688 4689	3/31/97	N
17	2678202	SS-2-	30.0	SS97051A	1.0				4688 4689	3/31/97	N
18	2678203	SS-17	30.0	SS97051A	1.0				4688 4689	3/31/97	N
19	2678204	SS-16	30.0	SS97051A	1.0				4688 4689	3/31/97	N
20											

Additional Comment:

0712 3774

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
DCM	[illegible]		
Acetone	[illegible]		
MeOH	[illegible]		
Internal Standar		Balance #	[illegible]
S-Evap/bath	°C	S-Evap/bath	°C
N-Evap	°C		

Spike Solutions:

SS97051A BNA SURROGATE STD.

MS97073C LCS SPIKE (100)

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst_____ *** Shift #2 Analyst: D. Hilton

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = 1 or X) T = Injected outside valid tune period

S-PT 9228

Other problems or comments are as follows:

_____
_____
_____
_____

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date Injected	Time Injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>0C35A	DFTPP	50NG/UL	03/18/97	09:50			
1	>0C351	SSTD80	STD0737	03/18/97	10:31			
1	>0C35Z	SSTD80	STD0737	03/18/97	11:38			
2	>0C352	SSTD160	STD0737	03/18/97	12:55			
3	>0C353	SSTD05	STD0737	03/18/97	13:52			
4	>0C354	SSTD50	STD0737	03/18/97	14:49			
5	>0C355	SSTD120	STD0737	03/18/97	15:45			
6	>0C356	SBLKWE0764	SBLKWE076	03/18/97	16:42	97076WAE		
7	>0C357	076WELCS4	076WELCS	03/18/97	17:38	97076WAE		
8	>0C358	KMMW4	2677530	03/18/97	18:35	97076WAE		
9	>0C359	KMMW4MS	2677532	03/18/97	19:31	97076WAE		
10	>0C360	KMMW4MSD	2677533	03/18/97	20:28	97076WAE		
1	>0C370	DFTPP	50NG/UL	03/18/97	21:36			V

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst: JKG *** Shift #2 Analyst: DJE

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

* Autosampler error following injection of >DC379 *
*
*
*

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date Injected	Time Injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC370	DFTPP	50NG/UL	03/18/97	21:36			MR
1	>DC371	SSTD80	STD0737	03/18/97	22:17			MR
6	>DC376	RB-02	2677434	03/18/97	23:16	97076WAE		MR
7	>DC377	KMW3	2677529	03/19/97	00:12	97076WAE		MR
8	>DC378	KMW5	2677535	03/19/97	01:09	97076WAE		MR
9	>DC379	KMW1	2677536	03/19/97	02:05	97076WAE		MR
10	>DC380	KMW-3	2677537	03/19/97	08:07	97076WAE		F MR
11	>DC381	KMW23	2677538	03/19/97	09:03	97076WAE		F MR
1	>DC390	DFTPP	50NG/UL	03/19/97	11:20			MR

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Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst DKG *** Shift #2 Analyst: DJE

Comment Code:
R = Reinjection necessary
S = Surrogate problem
NU = Not used
MR = Meets requirements
Cz = Confirms z, (z = I or X)
X = Sample sent to be reextracted
I = Internal Standard problem
F = Further dilution required
IUO = Internal use only
T = Injected outside valid tune period

Other problems or comments are as follows:

*

*

*

*

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC390	DFTPP	50NG/UL	03/19/97	11:20			MR
1	>DC391	SSTD80	STD0737	03/19/97	11:49			MR
7	>DC397	RB--1	2677540	03/19/97	14:57	97076WAE		MR
8	>DC398	RB-3-	2678205	03/19/97	15:54	97076WAE		MR
9	>DC425	KMW23DL	2677538DL	03/19/97	16:51	97076WAE	10	OK/FS
10	>DC426	KMW-3DL	2677537DL	03/19/97	17:47	97076WAE	40	MR
11	>DC427	KMW-3RE	2677537RE	03/19/97	18:44	97076WAE		IC
9	>DC428	KMW23DL2	2677538DL2	03/19/97	19:41	97076WAE	40	NLL
1	>DC430	DFTPP	50NG/UL	03/20/97	07:59			MR

DC396 KMW-4 2677539 3/19/97 14:01 97076WAE

lmw 3/27/97

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Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03725 **HP #07**

** Shift #1 Analyst: lw *** Shift #2 Analyst:

Comment Code:

R =	Reinjection necessary	X =	Sample sent to be reextracted
S =	Surrogate problem	I =	Internal Standard problem
NU =	Not used	F =	Further dilution required
MR =	Meets requirements	IUO =	Internal use only
Cz =	Confirms z, (z = I or X)	T =	Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date Injected	Time Injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>GC180	DFTPP	50NG/UL	03/18/97	10:11			
1	>GC181	SSTD160	STD0737	03/18/97	10:39			
2	>GC182	SSTD120	STD0737	03/18/97	11:51			
3	>GC183	SSTD05	STD0737	03/18/97	12:55			
4	>GC184	SSTD50	STD0737	03/18/97	13:59			
5	>GC185	SSTD80	STD0737	03/18/97	15:03			
6	>GC186	SBLKWD076G	SBLKWD076	03/18/97	16:07	97076WAD		
7	>GC187	076WDLCSG	076WDLCS	03/18/97	17:10	97076WAD		
8	>GC188	076WDLCSD	076WDLCSD	03/18/97	18:14	97076WAD		
9	>GC189	076WDUS	076WDUS	03/18/97	19:18	97076WAD		
10	>GC190	076WDMS	076WDMS	03/18/97	20:22	97076WAD		
11	>GC191	076WDMSD	076WDMSD	03/18/97	21:25	97076WAD		
12	>GC192	13-FB	2677837	03/18/97	22:29	97076WAD		
13	>GC193	F-14-	2675848	03/18/97	23:33	97076WAD	20	
1	>GC200	DFTPP	50NG/UL	03/19/97	10:43			
1	>GC20A	DFTPP	50NG/UL	03/19/97	11:23			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03725 **HP #07**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

8270B

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>GC20A	DFTPP	50NG/UL	03/19/97	11:23			
1	>GC20B	SSTD80	STD0737	03/19/97	14:01			
6	>GC206	SBLKLD076G	SBLKLD076	03/19/97	15:07	97076SLD		
7	>GC207	076LDLCSG	076LDLCS	03/19/97	16:11	97076SLD		
8	>GC208	13-FB	2677837	03/19/97	17:15	97076WAD		
1	>GC210	DFTPP	50NG/UL	03/19/97	22:56			
1	>GC212	DFTPP	50NG/UL	03/19/97	23:45			
1	>GC21Y	DFTPP	50NG/UL	03/20/97	00:27			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03725 **HP #07**

*** Shift #1 Analyst: dw *** Shift #2 Analyst: Linh

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>GC21Y	DFTPP	50NG/UL	03/20/97	00:27			
1	>GC211	SSTD80	STD0737	03/20/97	01:02			
9	>GC212	F-14-	2675848	03/20/97	02:10	97076WAD	20	
10	>GC213	SS-06	2677436	03/20/97	03:13	97076SLD		
11	>GC214	SS-06MS	2677437	03/20/97	04:16	97076SLD		
12	>GC215	SS-06MSD	2677438	03/20/97	05:19	97076SLD		
13	>GC216	SS-11	2677435	03/20/97	06:22	97076SLD		
14	>GC217	SS-08	2677439	03/20/97	07:25	97076SLD		
15	>GC218	SS-09	2677440	03/20/97	08:28	97076SLD		
1	>GC220	DFTPP	50NG/UL	03/20/97	10:59			
1	>GC22A	DFTPP	50NG/UL	03/20/97	11:47			
1	>GC22B	DFTPP	50NG/UL	03/20/97	12:10			
1	>GC22C	DFTPP	50NG/UL	03/20/97	13:22			
1	>GC22D	DFTPP	50NG/UL	03/20/97	13:52			
1	>GC22E	DFTPP	50NG/UL	03/20/97	14:22			
1	>GC22F	DFTPP	50NG/UL	03/20/97	14:49			
1	>GC22G	DFTPP	50NG/UL	03/20/97	23:40			
1	>GC22H	DFTPP	50NG/UL	03/21/97	00:29			
1	>GC22I	DFTPP	50NG/UL	03/21/97	01:41			
1	>GC22J	DFTPP	50NG/UL	03/21/97	02:15			
1	>GC22K	DFTPP	50NG/UL	03/21/97	02:38			
1	>GC22L	DFTPP	50NG/UL	03/21/97	03:02			
1	>GC22M	W24CP	2680330	03/21/97	09:31	97079WAF07BAW	20	
1	>GC230	DFTPP	50NG/UL	03/24/97	23:42			
1	>GC23A	DFTPP	50NG/UL	03/25/97	00:06			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03725 **HP #07**

** Shift #1 Analyst: lw *** Shift #2 Analyst: lmb

Comment Code:

R = Reinjection necessary		X = Sample sent to be reextracted	
S = Surrogate problem		I = Internal Standard problem	
NU = Not used		F = Further dilution required	
MR = Meets requirements		IUO = Internal use only	
Cz = Confirms z, (z = I or X)		T = Injected outside valid tune period	

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date Injected	Time Injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>GC23A	DFTPP	50NG/UL	03/25/97	00:06			
1	>GC231	SSTD160	STD0837	03/25/97	00:43			
1	>GC238	SSTD160	STD0837	03/25/97	01:56			
2	>GC232	SSTD120	STD0837	03/25/97	02:58			
3	>GC233	SSTD05	STD0837	03/25/97	04:00			
4	>GC234	SSTD50	STD0837	03/25/97	05:03			
5	>GC235	SSTD80	STD0837	03/25/97	06:05			
6	>GC236	SS-17	2678203	03/25/97	07:34	97076SLD		
7	>GC237	SS-16	2678204	03/25/97	08:37	97076SLD		
8	>GC238	SS-18	2678201	03/25/97	09:39	97076SLD		
9	>GC239	SS-10	2677442	03/25/97	10:42	97076SLD		
1	>GC240	DFTPP	50NG/UL	03/25/97	13:10			
1	>GC24A	DFTPP	50NG/UL	03/25/97	13:40			
1	>GC24B	DFTPP	50NG/UL	03/25/97	14:23			
1	>GC24C	DFTPP	50NG/UL	03/26/97	01:09			
1	>GC24D	DFTPP	50NG/UL	03/26/97	01:50			
1	>GC24E	DFTPP	50NG/UL	03/26/97	02:41			
1	>GC24F	DFTPP	50NG/UL	03/26/97	03:19			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP04629 **HP #08**

*** Shift #1 Analyst: lw *** Shift #2 Analyst: lmh

Comment Code:

R =	Reinjection necessary	X =	Sample sent to be reextracted
S =	Surrogate problem	I =	Internal Standard problem
NU =	Not used	F =	Further dilution required
MR =	Meets requirements	IUO =	Internal use only
Cz =	Confirms z, (z = I or X)	T =	Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>HC360	DFTPP	50NG/UL	03/24/97	08:54			
1	>HC361	SSTD160	STD0837	03/24/97	09:21			
2	>HC362	SSTD120	STD0837	03/24/97	10:13			
3	>HC363	SSTD05	STD0837	03/24/97	11:04			
4	>HC364	SSTD50	STD0837	03/24/97	11:55			
5	>HC365	SSTD80	STD0837	03/24/97	12:46			
6	>HC366	SBLKWX078H	SBLKWX078	03/24/97	13:37	97078WAX		
7	>HC367	078WXLCSH	078WXLCS	03/24/97	14:28	97078WAX		
8	>HC368	078WXLCSD	078WXLCSD	03/24/97	15:19	97078WAX		
9	>HC369	G-EFF	2678277	03/24/97	16:10	97078WAX		
10	>HC370	G-EFFMS	2678278	03/24/97	17:00	97078WAX		
11	>HC371	G-EFFMSD	2678279	03/24/97	17:51	97078WAX		
12	>HC372	SEE-1	2678293	03/24/97	18:42	97078WAX		
13	>HC373	SBLKLD076H	SBLKLD076	03/24/97	19:33	97076SLD		
14	>HC374	076LDLCSH	076LDLCS	03/24/97	20:24	97076SLD		
1	>HC380	DFTPP	50NG/UL	03/24/97	22:28			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP04629 **HP #08**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____

Comment Code:

R = Reinjection necessary		X = Sample sent to be reextracted	
S = Surrogate problem		I = Internal Standard problem	
NU = Not used		F = Further dilution required	
MR = Meets requirements		IUO = Internal use only	
Cz = Confirms z, (z = I or X)		T = Injected outside valid tune period	

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>HC380	DFTPP	50NG/UL	03/24/97	22:28			
1	>HC381	SSTD80	STD0837	03/24/97	23:03			
6	>HC387	SS-27	2677446	03/25/97	00:01	97076SLD	9707	
7	>HC389	SS-15	2678198	03/25/97	00:52	97076SLD	9707	
8	>HC391	SS-12	2677445	03/25/97	01:42	97076SLD	9707	
9	>HC393	SS-03	2677447	03/25/97	02:33	97076SLD	9707	
10	>HC395	SS-2-	2678202	03/25/97	03:25	97076SLD	9707	
11	>HC397	SS-1-	2678197	03/25/97	04:16	97076SLD	9707	
12	>HC399	SS-13	2678200	03/25/97	05:08	97076SLD	9707	
13	>HC401	SS-07	2677443	03/25/97	06:03	97076SLD	9707	
14	>HC402	SS-14	2678199	03/25/97	06:53	97076SLD	9707	
15	>HC403	SS-05	2677444	03/25/97	07:44	97076SLD	9707	
16	>HC404	SS-04	2677441	03/25/97	08:40	97076SLD	9707	
1	>HC410	DFTPP	50NG/UL	03/25/97	10:50			

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GPC Runlog

Date: 3-17-97

Inst. ID: 04485

Technician: W.O 712

Calibration Date: 3-12-97

Technician:

Tube #	LL Number	Comments
1	mB	07650
2	LCS	07650
3	2077436	
4	2077437	
5	2077438	
6	2077435	
7	2077439	
8	2077440	
9	2077441	
10	2077442	
11	2077443	
12	2077444	
13	2077445	
14	2077446	
15	2077447	
16	2078197	
17	2078198	
18	2078199	
19	2078200	
20	2078201	
21	2078202	
22	2078203	
23	2078204	

Odd Tube Column ID: 14

Even Tube Column ID: 14

48

Calibration Date: 3-12-97

Column ID: 14

Analyst: M.D.

Room-Temp: 72 °F

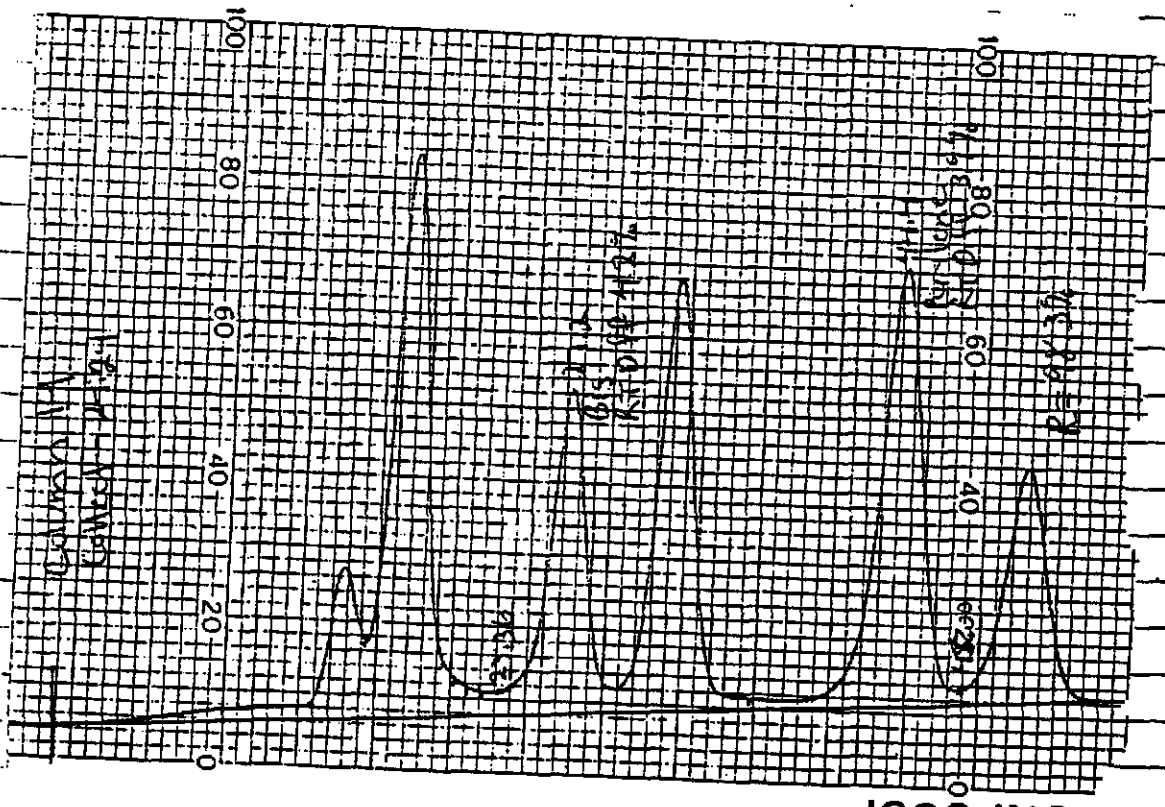
Volume Collected: 10 ml

System Pressure: 9 psi

Flow: 4.9 ml/min

3:16PM 0.630

3:18PM 0.775mA



ISCO INC.

LINCOLN, NE, U.S.A. PART NO. 69-0943-11

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SECTION 4

PROJECT CASE NARRATIVES AND

CHAIN-OF-CUSTODY RECORDS

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 267743 47 Sample # 7802

Please print. Instructions on reverse side correspond with circled numbers.

Client: Kerr McGee Acct. #:
Project Name/#: Gulf States Creosoting PWSID #:
Project Manager: Dave Upthegrove P.O.#
Sampler: Dave Angle Quote #:
Name of state where samples were collected: Mississippi

For lab use only
FSC:
SCR #: 096165

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	TCL Semivolatile	Remarks
RB-2	3/13/97	1645	x			x		2	✓	
SS-11 0-12"	3/13/97	1320		x	x			1	✓	
SS-6 MS/MSD 0-12"	3/13/97	1425		x	x			1	✓	
SS-8 0-12"	3/13/97	1448		x	x			1	✓	
SS-6 0-12"	3/13/97	1425		x	x			1	✓	
SS-9 0-12"	3/13/97	1335		x	x			1	✓	
SS-4 0-12"	3/13/97	1412		x	x			1	✓	
SS-10 0-12"	3/13/97	1450		x	x			1	✓	
SS-7 0-12"	3/13/97	1345		x	x			1	✓	
SS-5 0-12"	3/13/97	1400		x	x			1	✓	

Turnaround Time Requested (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

Data Package Options (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	03-?-97	1200	[signature]	3-4-97	1515
[signature]	3-13-97	0700	[signature]	3/13/97	700
[signature]	3/13/97	1715	Fed Ex: 4336747914	3/13/97	1715
			[signature] 3/14/97		945

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 7802 Sample # 2677434-47

Please print. Instructions on reverse side correspond with circled numbers.

Client: Kerr McGee Acct. #:
Project Name/#: Gulf States Creosoting PWSID #:
Project Manager: Dave Applegate P.O.#
Sampler: Dave Angle Quote #:
Name of state where samples were collected: Mississippi

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water (GW/WW/DW)	Other	Total # of Containers	TCL Semivolatiles	Remarks
SS-12 0-12"	3/13/97	1505		X	X			1	✓	
SS-27 0-12'	3/13/97	1345		X	X			1	✓	
SS-3 0-12"	3/13/97	1608		X	X			1	✓	

Analyses requested (4) (5) (6)
For lab use only
FSC:
SCR #: 109466

Turnaround Time Requested (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

Data Package Options (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No
Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	3-13-97	1100		3-14-97	1515
	3-13-97	0700		3/13/97	700
	3/13/97	1715	Fed Ex: 433674791 4	3/13/97	1715
				3-14-97	945

(9)

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 7802 Sample # 263897 - 205

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Kerr McGee Acct. #:
Project Name/#: Gulf States Creosote PWSID #:
Project Manager: Dave Whitegrove P.O.#
Sampler: Dave Angle Quote #:
Name of state where samples were collected: Mississippi

(3) (4) (5) Analyses Requested

For lab use only
FSC:
SCR #: 109943

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	(4) Matrix: Potable Water	Non-Potable Water	Other	Total # Containers	TCL Semi-volatiles							(6) Remarks	(8) Lab #
SS-1 0-12	3/14/97	1017	X		X			1	X								
SS-15 0-12	3/14/97	955	X		X			1	X								
SS-14 0-12	3/14/97	855	X		X			1	X								
SS-13 0-12	3/14/97	910	X		X			1	X								
SS-18 0-12	3/14/97	1045	X		X			1	X								
SS-2 0-12	3/14/97	0943	X		X			1	X								
SS-17 0-12	3/14/97	1035	X		X			1	X								
SS-16 0-12	3/14/97	1005	X		X			1	X								
RB-3	3/14/97	1155		X		X		2	X								

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	3-27	1500		3-4-97	1515
	3-14-97	0760		3/14/97	760
	3/14/97	1205	FED EX: 433674 7903	3/14/97	1205
				3-15-97	1015

(9)

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Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee

COC Seal: Present / Not Present on cooler

Date of Receipt: 3-14-97

Broken / Intact

Time of Receipt: 945

Package: Chilled / Not Chilled

Source Code: 50-1

Unpacker Emp. No.: 128

Temperature of Samples	
#1	**#2**
Thermometer ID: 10103	Thermometer ID:
Corrected Temp.: 6.4	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N
#3	**#4**
Thermometer ID:	Thermometer ID:
Corrected Temp.:	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	3-14-97	1210	Unpacking
Anneliese Hutchison	3/14/97	1300	Place in Storage or Entry
Anneliese Hutchison	3/14/97	1425	Remove from Storage Entry
			Place in Storage or Entry
			Entry

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Sample Administration Receipt Documentation Log

Client/Project: Kerr McGee

COC Seal: Present / (Not Present on) cooler

Date of Receipt: 3-15-97

Broken / Intact

Time of Receipt: 1015

Package: (Chilled) / Not Chilled

Source Code: 50-1

Unpacker Emp. No.: 920

Temperature of Samples	
#1	**#2**
Thermometer ID: 10103	Thermometer ID:
Corrected Temp.: 2.6°	Corrected Temp.:
(Temp. Bottle) / Surface Temp.	Temp. Bottle / Surface Temp.
(Wet Ice) / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? (Y) / N	Ice Present? Y / N
#3	**#4**
Thermometer ID:	Thermometer ID:
Corrected Temp.:	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Chain of Custody

Name	Date	Time	Reason for Transfer
K. Hunt	3-15-97	11:15	Unpacking
M. Brubaker	3/15/97	1130	Place in Storage or Entry
R. Stum	3/15/97	1315	Remove from Storage / Entry
			Place in Storage or Entry
			Entry

CASE NARRATIVE

Client: Kerr-McGee Corporation
SDG #: HMS01

LANCASTER LABORATORIES
SEMIVOLATILES BY GC/MS

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2677434	RB-02		X	Client Blank
2677435	SS-11	X		
2677436	SS-06	X		Unspiked
2677437	SS-06MS	X		Matrix Spike
2677438	SS-06MSD	X		Matrix Spike Dup
2677439	SS-08	X		
2677440	SS-09	X		
2677441	SS-04	X		
2677442	SS-10	X		
2677443	SS-07	X		
2677444	SS-05	X		
2677445	SS-12	X		
2677446	SS-27	X		
2677447	SS-03	X		
2678197	SS-1-	X		
2678198	SS-15	X		
2678199	SS-14	X		
2678200	SS-13	X		
2678201	SS-18	X		
2678202	SS-2-	X		
2678203	SS-17	X		
2678204	SS-16	X		
2678205	RB-3-		X	Client Blank

LABORATORY SUBMITTED QC:

SBLKWE076	SBLKWE0764		X	Method Blank
SBLKLD076	SBLKLD076G	X		Method Blank
+SBLKLD076	SBLKLD076H	X		Method Blank

Case Narrative
SDG #: HMS01 continued

LABORATORY SUBMITTED QC continued:

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
076WELCS	076WELCS4		X	Lab Control Sample
076LDLCS	076LDLCSG	X		Lab Control Sample
076LDLCS	076LDLCSH	X		Lab Control Sample

SAMPLE PREPARATION:

No problems were encountered during the extraction of these samples.

ANALYSIS:

The method used for analysis was EPA SW-846 Method 8270B.

No problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Statistical windows are included in the QC summary section of this data package.

All QC was within specifications.

DATA INTERPRETATION:

Only non-conformances for client requested compounds are addressed in this case narrative.

Case Narrative
SDG #: HMS01 continued

Due to poor curve fit, a number of compounds were calculated using an average response factor. Refer to the calibration reports for more information

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Christine M. Ratcliff Date: 4/7/97

Christine M. Ratcliff,
Group Leader, GC/MS Semivolatiles

ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

May 21, 1997

Mr. David Upthegrove
Michael Pisani & Associates
1430 Energy Center
1100 Poydras Street
New Orleans, LA 70163

Dear Mr. Upthegrove:

Enclosed is the quality assurance review for the samples collected on March 13, 1997, as part of the Gulf States Creosoting project. The samples were grouped by the laboratory into sample delivery group (SDG) HMS03 and were collectively analyzed for volatile organic compounds and semivolatile organic compounds.

Overall, the data quality is acceptable (data is usable). However, all of the organic data have been qualified as estimated due to calibration issues, temperature of samples upon receipt at the laboratory, and results reported at concentrations below the quantitation limit.

If you have any questions/comments, or if I can be of further assistance, please feel free to call.

Sincerely,

Kathleen A. Blaine
Quality Assurance Specialist/Principal

KAB:cr/ko

Enc.

1140 Valley Forge Road
P.O. Box 911
Valley Forge, PA 19482-0911
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VALLEY FORGE, PA

Internet
OffNPL@EnvStd.com

1111 Kennedy Place
Suite 2
Davis, CA 95616
916•758•1903

ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

QUALITY ASSURANCE REVIEW OF SAMPLES COLLECTED FOR GULF STATES CREOSOTING

May 21, 1997

Prepared for:

MICHAEL PISANI & ASSOCIATES
1430 Energy Center
1100 Poydras Street
New Orleans, LA 70163

Prepared by:

ENVIRONMENTAL STANDARDS, INC.
1140 Valley Forge Road
P.O. Box 911
Valley Forge, PA 19482-0911

TABLE OF CONTENTS

Introduction

This quality assurance (QA) review is based upon a rigorous examination of the data generated from the samples collected on March 13, 1997, as part of the Gulf States Creosoting project. The samples that have undergone the QA review are presented on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Organic Data Review" (United States Environmental Protection Agency [US EPA], 2/94).

The reported analytical results are presented in Section 2. Data were examined to determine the usability of the analytical results and compliance relative to requirements specified in the analytical methods. Qualifier codes have been placed next to the results so the data user can quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data end-user to best understand the usability of the analytical results. It should be understood that data that have not been qualified in this report should be considered valid based on the quality control (QC) criteria that have been reviewed. Details of this QA review are presented in the narrative section of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
MW-1	2677693	HMS03	3/13/97	VOA, SVOA
MW-1DL (Dilution of MW-1)	2677693DL	HMS03	3/13/97	SVOA
MW-1MS (Matrix Spike)	2677693MS	HMS03	3/13/97	SVOA
MW-1MSD (Matrix Spike Duplicate)	2677693MSD	HMS03	3/13/97	SVOA
MW-2	2677694	HMS03	3/13/97	VOA, SVOA
MW-2DL (Dilution of MW-2)	2677694DL	HMS03	3/13/97	SVOA
MW-2RE (Reinjection of MW-2)	2677694RE	HMS03	3/13/97	SVOA
TB-2 (Trip Blank)	2677695	HMS03	3/13/97	VOA

NOTES:

SVOA - Semi-volatile organic compounds by SW-846 Method 8270B.
VOA - Volatile Organic Compounds by SW-846 Method 8240B.

Section 1 Quality Assurance Review

A. Organic Data

The organic analysis of eight aqueous samples (inclusive of QC samples and sample reanalyses) was performed by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. These eight aqueous samples were analyzed for volatile organic compounds by SW-846 Method 8240B and semivolatile organic compounds by SW-846 Method 8270B, as indicated on Table 1. The analytical results are presented in Section 2 of this report.

The findings in this report are based upon a rigorous review of sample holding times, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike and matrix spike duplicate results, surrogate recoveries, gas chromatography/mass spectroscopy (GC/MS) instrument mass tuning, calibrations, sample preparation, internal standard performance, analytical sequence, and the quantitation of positive results.

In the Data Support Documentation (Section 3) of this report, the data reviewer has included copies of all relevant raw data, QC forms, and other documentation needed to support any changes made to the data package. It should be emphasized that the following items do not necessarily affect data usability. Usability issues are addressed in a subsequent section. This report has been prepared according to sections that provide information that applies to specific analyses performed on the project samples.

Correctable Deficiencies

1. The raw data and associated summary forms for the volatile multipoint initial calibration analyzed on 3/19/97, instrument HP02700, were not included in the data package supplied by the laboratory. The information was requested from the laboratory but had not been received at the time this validation was completed. As a result, the data validator was unable to determine the acceptability of this calibration. This calibration is associated with samples MW-1 and MW-2.

2. The LCS summary page lists control limits which are outdated. The laboratory supplied an updated QC summary control limit page, and the data reviewer has evaluated the LCS recoveries against the updated control limits. It should be noted that the volatile LCS had a recovery for vinyl acetate of 151%. This limit exceeded the laboratory-updated derived control limits of 55-142%. None of the sample delivery group (SDG) samples are reported to contain vinyl acetate; therefore, no qualification of the data is required.

Noncorrectable Deficiency

- According to the Sample Administration Receipt Documentation Log, the samples were received at the laboratory in one cooler at a temperature of 8.1°C and all of the ice had melted. All organic samples should be transported and stored at 4±2°C following sample collection. (See subsequent data qualifiers for impact on data usability.)

Comments

1. As noted in the laboratory case narrative, the volatile analysis of samples MW-1 and MW-2 were analyzed by medium level. The quantitation limits were raised accordingly. In addition, both samples and associated QC samples were analyzed at a secondary 125-fold dilution due to high concentrations of target compounds present in the samples. The laboratory reported only results from the dilution analyses of MW-1 and MW-2 on the sample analysis reports.

2. Due to interferences in the matrix, resulting in secondary dilutions of the volatile fraction of samples MW-1 and MW-2, the volatile surrogate compounds were diluted out. Surrogate recoveries measure laboratory performance on a sample-specific basis. Based on these surrogate recoveries, the data reviewer was not able to evaluate the purging efficiency for the aforementioned analyses. Therefore, the data was not qualified based on the reported recoveries for the surrogate compounds.

3. A non-project sample was used for the volatile matrix spike/matrix spike duplicate analysis associated with this data set. High recoveries were reported for tetrachloroethene in the matrix spike and matrix spike duplicate samples. However, since the unspiked sample is not a Kerr-McGee project sample, qualification of the data is not warranted.

4. Due to interferences in the matrix, resulting in secondary dilutions of the semivolatile fraction of samples MW-1DL and MW-2DL, the semivolatile surrogate compounds were diluted out. Surrogate recoveries measure laboratory performance on a sample-specific basis. Based on these surrogate recoveries, the data reviewer was not able to evaluate the extraction efficiency for the aforementioned analyses. Therefore, the data was not qualified based on 0% recoveries reported for the surrogate compounds in these samples.

5. Numerous compounds within the semivolatile matrix spike sample and matrix spike duplicate samples (MW-1MS and MW-1MSD) had recoveries outside the laboratory-established control limits. This is a result of matrix interferences due to high levels of target and non-target compounds in the unspiked samples. The following compounds had recoveries outside the laboratory derived control limits, but were not detected in

the unspiked, undiluted sample. These compounds included *bis*(2-chloroethyl)ether (143%), nitrobenzene (347% and 256%), isophorone (186% and 160%), 2-nitrophenol (152% and 137%), bis(2-chloroethoxy)methane (323% and 294%), 2,4-dichlorophenol (179% and 160%), hexachlorobutadiene (203% and 184%), 4-chloro-3-methylphenol (178% and 159%), 2,4-dinitrotoluene (158%), 4-chloroaniline (17%), 4-nitroaniline (420% and 271%), and N-nitrosodiphenylamine (306% and 336%). Numerous other compounds also had spike recoveries outside the laboratory-derived control limits but were detected at concentrations in the unspiked sample that exceeded 4 times the spike concentration added, with the exception of 2,4-dimethylphenol. As a result, the spike recoveries for these compounds, with the exception of 2,4-dimethylphneol, provide limited meaningful information and would not be used to qualify the data. However, since only the results from the dilution analyses have been reported (see Comment 10), and since the precision and accuracy information from the matrix spike/matrix spike duplicate analyses of the initial analysis provide little meaningful information of the usability of the 125-fold dilution analysis of the unspiked sample, data have not been qualified based upon the results of the initial dilution matrix spike/matrix spike duplicate results.

6. Low internal standard responses were obtained for the undiluted analyses, reanalyses, and matrix spike analyses of samples MW-1 and MW-2. Low responses were noted for the internal standards naphthalene-d_8, phenanthrene-d_{10}, chrysene-d_{12}, and perylene-d_{12} in these samples. Consequently, the laboratory appropriately reanalyzed samples MW-1 and MW-2. Sample-specific matrix effects were demonstrated for sample MW-1 as observed by the low internal standard areas for the associated matrix spike and matrix spike duplicate analyses.

7. As noted in the laboratory case narratives for both the volatile and semivolatile analyses, due to a poor curve fit, a number of compound concentrations were calculated using an average response factor.

8. The data usability results for the LCS and matrix spike/matrix spike duplicate analyses were evaluated utilizing the laboratory-generated precision and accuracy limits.

9. The laboratory reported "not-detected" results down to the method detection limits (MDLs). In addition, positive results less than the quantitation limit, but greater than the MDL, were qualified by the laboratory as estimated ("J").

10. Although the laboratory provided the raw data for the semivolatile analyses of samples MW-1 (initial and dilution analyses) and MW-2 (initial analysis, reanalysis, and secondary dilution analysis), the laboratory only reported the results from the dilution analyses since these were product samples. The data validator has qualified only the results reported by the laboratory.

11. All results are reported on a wet-weight basis on the data tables according to instructions from Michael Pisani & Associates personnel.

With regard to data usability, the principal areas of concern are calibration issues, low internal standard responses, temperature of samples upon receipt at the laboratory, concentrations which exceeded the calibration range of the instrument, and quantitation of results below the quantitation limit. Based upon a review of the data package provided, the following data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- The analyses for the compounds in the samples listed below are unusable, and the "not-detected" results have been flagged "R" on the data tables. Very low (<0.050) relative response factors (RRFs) were observed for these compounds in the associated initial multipoint calibration standards.

Compound	Sample(s) With Unusable Quantitation Limits ("R")
vinyl acetate	TB-2
4,6-dinitro-2-methylphenol	MW-1 and MW-2

- The analysis for vinyl acetate in sample TB-2 should be considered unreliable, and the "not-detected" result has been flagged "R" on the data tables. A very low (<0.050) average RRF was observed for this compound in the associated continuing calibration standard.

- The reported positive results for all volatile and semivolatile sample results in this SDG have been flagged "J" on the data tables. In addition, all "not-detected" results have been flagged "UJ" (unless previously qualified "R"). The samples were received at the laboratory at a temperature of 8.1°C.

- The actual reporting limits for the following compounds in the associated samples may be higher than reported, and the "not-detected" results for these compounds have been flagged "UJ" on the data tables. High percent differences (25.0% < %D≤90.0%) were obtained

between the average RRFs of the associated initial calibrations and the RRFs in the associated continuing calibrations.

Compound	Sample(s) With Biased Reporting Limits ("UJ")
2-hexanone	TB-2
2,4-dinitrophenol	MW-1 and MW-2

- According to reporting conventions, all positive results reported below the sample-specific quantitation limits should be considered estimated and have been flagged "J" on the data tables.

A complete support documentation of this organic data QA review is presented in Section 3 of this report.

C. Conclusions

This QA review has identified several aspects of the analytical data that required qualification. The majority of the data are acceptable. However, all of the organic data has been qualified due to calibration issues, sample receipt temperature, and quantitation of results below the quantitation limit. To confidently use any of the analytical data within these sample sets, the data user should understand the qualifications and limitations of the results.

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Organic Qualifiers

U Compound was not detected.

U* This compound should be considered "not-detected" since it was detected in a field, trip, and/or laboratory blank at a similar level.

J Quantitation is estimated due to limitations identified during the quality assurance review (data validation).

R Unusable result; analyte may or may not be present in the sample.

UJ This compound was not detected, but the Quantitation limit may or may not be higher due to a bias identified during the quality assurance review.

Kerr McGee Corp, Final

			HMS03					
			MW-1 Product Sample			MW-2 Product Sample		
			2677693			2677694		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	5,000	UJ	5,000	130,000	J	10,000
2	bis (2-chloroethyl) ether	111-44-4	10,000	UJ	10,000	10,000	UJ	10,000
3	2-chlorophenol	95-57-8	5,000	UJ	5,000	5,000	UJ	5,000
4	1,3-dichlorobenzene	541-73-1	5,000	UJ	5,000	5,000	UJ	5,000
5	1,4-dichlorobenzene	106-46-7	5,000	UJ	5,000	5,000	UJ	5,000
6	1,2-dichlorobenzene	95-50-1	5,000	UJ	5,000	5,000	UJ	5,000
7	2-methylphenol	95-48-7	10,000	UJ	10,000	400,000	J	20,000
8	2,2-oxybis (1-chloropropane)	108-60-1	15,000	UJ	15,000	15,000	UJ	15,000
9	4-methylphenol	106-44-5	15,000	UJ	15,000	810,000	J	30,000
10	N-nitrosodi-n-propylamine	621-64-7	10,000	UJ	10,000	10,000	UJ	10,000
11	hexachloroethane	67-72-1	10,000	UJ	10,000	10,000	UJ	10,000
12	nitrobenzene	98-95-3	5,000	UJ	5,000	5,000	UJ	5,000
13	isophorone	78-59-1	10,000	UJ	10,000	10,000	UJ	10,000
14	2-nitrophenol	88-75-5	10,000	UJ	10,000	10,000	UJ	10,000
15	2,4-dimethylphenol	105-67-9	140,000	J	20,000	2,900,000	J	20,000
16	bis (2-chloroethoxy) methan	111-91-1	5,000	UJ	5,000	5,000	UJ	5,000
17	2,4-dichlorophenol	120-83-2	5,000	UJ	5,000	5,000	UJ	5,000
18	1,2,4-trichlorobenzene	120-82-1	5,000	UJ	5,000	5,000	UJ	5,000
19	naphthalene	91-20-3	62,000,000	J	400,000	96,000,000	J	800,000
20	4-chloroaniline	106-47-8	15,000	UJ	15,000	15,000	UJ	15,000
21	hexachlorobutadiene	87-68-3	10,000	UJ	10,000	10,000	UJ	10,000
22	4-chloro-3-methylphenol	59-50-7	10,000	UJ	10,000	10,000	UJ	10,000

			HMS03					
			MW-1 Product Sample			MW-2 Product Sample		
			2677693			2677694		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	28,000,000	J	400,000	27,000,000	J	800,000
24	hexachlorocyclopentadiene	77-47-4	25,000	UJ	25,000	25,000	UJ	25,000
25	2,4,6-trichlorophenol	88-06-2	10,000	UJ	10,000	10,000	UJ	10,000
26	2,4,5-trichlorophenol	95-95-4	10,000	UJ	10,000	10,000	UJ	10,000
27	2-chloronaphthalene	91-58-7	5,000	UJ	5,000	5,000	UJ	5,000
28	2-nitroaniline	88-74-4	10,000	UJ	10,000	10,000	UJ	10,000
29	dimethyl phthalate	131-11-3	5,000	UJ	5,000	5,000	UJ	5,000
30	2,6-dinitrotoluene	606-20-2	10,000	UJ	10,000	10,000	UJ	10,000
31	acenaphthylene	208-96-8	720,000	J	10,000	1,100,000	J	10,000
32	3-nitroaniline	99-09-2	10,000	UJ	10,000	10,000	UJ	10,000
33	acenaphthene	83-32-9	18,000,000	J	400,000	17,000,000	J	800,000
34	2,4-dinitrophenol	51-28-5	25,000	UJ	25,000	25,000	UJ	25,000
35	4-nitrophenol	100-02-7	25,000	UJ	25,000	25,000	UJ	25,000
36	dibenzofuran	132-64-9	15,000,000	J	400,000	15,000,000	J	800,000
37	2,4-dinitrotoluene	121-14-2	10,000	UJ	10,000	10,000	UJ	10,000
38	diethyl phthalate	84-66-2	10,000	UJ	10,000	10,000	UJ	10,000
39	4-chlorophenyl phenyl ether	7005-72-3	10,000	UJ	10,000	10,000	UJ	10,000
40	fluorene	86-73-7	18,000,000	J	400,000	18,000,000	J	800,000
41	4-nitroaniline	100-01-6	15,000	UJ	15,000	15,000	UJ	15,000
42	4,6-dinitro-2-methylphenol	534-52-1	25,000	R	25,000	25,000	R	25,000
43	N-nitrosodiphenylamine	86-30-6	10,000	UJ	10,000	10,000	UJ	10,000
44	4-bromophenyl phenyl ether	101-55-3	15,000	UJ	15,000	15,000	UJ	15,000

			HMS03					
			MW-1 Product Sample			MW-2 Product Sample		
			2677693			2677694		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A		
			SW-846 8270B			SW-846 8270B		
			WATER			WATER		
			SVOA			SVOA		
			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	15,000	UJ	15,000	15,000	UJ	15,000
46	pentachlorophenol	87-86-5	25,000	UJ	25,000	25,000	UJ	25,000
47	phenanthrene	85-01-8	41,000,000	J	400,000	47,000,000	J	800,000
48	anthracene	120-12-7	4,600,000	J	400,000	6,500,000	J	800,000
49	carbazole	86-74-8	2,300,000	J	400,000	3,000,000	J	800,000
50	di-n-butyl phthalate	84-74-2	5,000	UJ	5,000	5,000	UJ	5,000
51	fluoranthene	206-44-0	21,000,000	J	400,000	19,000,000	J	800,000
52	pyrene	129-00-0	15,000,000	J	800,000	14,000,000	J	1,600,000
53	butyl benzyl phthalate	85-68-7	10,000	UJ	10,000	10,000	UJ	10,000
54	3,3'-dichlorobenzidine	91-94-1	20,000	UJ	20,000	20,000	UJ	20,000
55	benzo (a) anthracene	56-55-3	4,600,000	J	400,000	3,900,000	J	800,000
56	chrysene	218-01-9	3,900,000	J	400,000	3,100,000	J	800,000
57	bis (2-ethylhexyl) phthalate	117-81-7	10,000	UJ	10,000	10,000	UJ	10,000
58	di-n-octyl phthalate	117-84-0	10,000	UJ	10,000	10,000	UJ	10,000
59	benzo (b) fluoranthene	205-99-2	2,100,000	J	800,000	1,800,000	J	1,600,000
60	benzo (k) fluoranthene	207-08-9	1,000,000	J	40,000	850,000	J	40,000
61	benzo (a) pyrene	50-32-8	1,500,000	J	800,000	1,800,000	J	20,000
62	indeno (1,2,3-cd) pyrene	193-39-5	700,000	J	20,000	740,000	J	20,000
63	dibenz (a,h) anthracene	53-70-3	180,000	J	20,000	210,000	J	20,000
64	benzo (ghi) perylene	191-24-2	490,000	J	20,000	530,000	J	20,000

Kerr McGee Corp, Final

			HMS03								
			MW-1 Product Sample			MW-2 Product Sample			TB-2 Trip Blank Water Sample		
			2677693			2677694			2677695		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	19,000	UJ	19,000	19,000	UJ	19,000	2	R	2
1	Chloromethane	74-87-3	13,000	UJ	13,000	13,000	UJ	13,000	3	UJ	3
2	Vinyl Chloride	75-01-4	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
3	Bromomethane	74-83-9	19,000	UJ	19,000	19,000	UJ	19,000	3	UJ	3
4	Chloroethane	75-00-3	19,000	UJ	19,000	19,000	UJ	19,000	3	UJ	3
5	1,1-Dichloroethene	75-35-4	13,000	UJ	13,000	13,000	UJ	13,000	1	UJ	1
6	Acetone	67-64-1	44,000	UJ	44,000	44,000	UJ	44,000	6	UJ	6
7	Carbon Disulfide	75-15-0	19,000	UJ	19,000	19,000	UJ	19,000	3	UJ	3
8	Methylene Chloride	75-09-2	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
9	trans-1,2-Dichloroethene	156-60-5	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
10	1,1-Dichloroethane	75-34-3	6,300	UJ	6,300	6,300	UJ	6,300	2	UJ	2
11	cis-1,2-Dichloroethene	156-59-2	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
12	2-Butanone	78-93-3	44,000	UJ	44,000	44,000	UJ	44,000	3	UJ	3
14	Chloroform	67-66-3	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
15	1,1,1-Trichloroethane	71-55-6	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
16	Carbon Tetrachloride	56-23-5	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
17	Benzene	71-43-2	36,000	J	6,300	92,000	J	6,300	1	UJ	1
18	1,2-Dichloroethane	107-06-2	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
19	Trichloroethene	79-01-6	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
20	1,2-Dichloropropane	78-87-5	19,000	UJ	19,000	19,000	UJ	19,000	1	UJ	1
21	Bromodichloromethane	75-27-4	13,000	UJ	13,000	13,000	UJ	13,000	1	UJ	1
22	cis-1,3-Dichloropropene	10061-01-5	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1

			HMS03								
			MW-1 Product Sample			MW-2 Product Sample			TB-2 Trip Blank Water Sample		
			2677693			2677694			2677695		
			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM			3/13/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	19,000	UJ	19,000	19,000	UJ	19,000	5	UJ	5
24	Toluene	108-88-3	190,000	J	6,300	350,000	J	6,300	2	UJ	2
25	trans-1,3-Dichloropropene	10061-02-6	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
26	1,1,2-Trichloroethane	79-00-5	13,000	UJ	13,000	13,000	UJ	13,000	2	UJ	2
27	Tetrachloroethene	127-18-4	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
28	2-Hexanone	591-78-6	19,000	UJ	19,000	19,000	UJ	19,000	7	UJ	7
29	Dibromochloromethane	124-48-1	6,300	UJ	6,300	6,300	UJ	6,300	2	UJ	2
31	Chlorobenzene	108-90-7	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
32	Ethylbenzene	100-41-4	180,000	J	6,300	230,000	J	6,300	2	UJ	2
33	Xylene (total)	1330-20-7	1,000,000	J	6,300	1,100,000	J	6,300	1	UJ	1
35	Styrene	100-42-5	120,000	J	6,300	240,000	J	6,300	1	UJ	1
36	Bromoform	75-25-2	6,300	UJ	6,300	6,300	UJ	6,300	1	UJ	1
37	1,1,2,2-Tetrachloroethane	79-34-5	6,300	UJ	6,300	6,300	UJ	6,300	2	UJ	2

SECTION 3

ORGANIC DATA SUPPORT DOCUMENTATION

Organic Analyses Support Documentation

Environmental Standards Project Name: Gulf States
Sample Collection Dates: 3/13/97
Job Number: 1970405525
Project Manager: M. Blanc
Laboratory: Lancaster

Reviewed By: M. Blanc
Approved By: [illegible]
Completion Date: 5/97

Applicable Sample No's.: [X] Refer to Table 1 in the Quality Assurance Review

Sample No.	Lab. Control No.
SAG HMS03	

Deliverables:
- CLP [X]
- Tier I [ ]
- Tier II [ ]
- Limited [ ]
- Other _____

The following table indicates criteria which were examined, the identified problems, and support documentation attachments.

	Criteria Examined in Detail (Check (✓) If Yes or Footnote Letter for Comments Below)				Problems Identified (Check (✓) If Yes or Footnote Number for Comments Below)				Support Documentation Attachments (Check (✓) If Yes -- or Identify Attachment No.)			
	VOA Method 8260	BNA Method 8270	PEST / PCB Method	Other Method(s)	VOA Method	BNA Method	PEST / PCB Method	Other Method(s)	VOA Method	BNA Method	PEST / PCB Method	Other Method(s)
Holding Times	✓	✓							✓	✓		
Blank Analysis Results: Target Compounds	✓	✓							✓	✓		
Blank Analysis Results: TICs												
System Mntr. Cmpds. &/or Surrogate Spike Rslts.	✓	✓			✓	✓			✓	✓		
Matrix Spike / Matrix Spike Duplicate Results	✓	✓				✓			✓	✓		
Blank Spike Results	✓	✓			✓				✓	✓		
Duplicate Analysis Results [ ] Field [ ] Lab												
Qualitative Identification: Target Compounds	✓	✓										
Qualitative Identification: TICs												
DFTPP & BFB Mass Tuning	✓	✓							✓	✓		
GC Instrument Performance												
Initial Calibrations	✓	✓			✓	✓			✓	✓		
Continuing Calibrations	✓	✓			✓	✓			✓	✓		
Quantitation of Results	✓	✓										
DDT / Endrin Breakdown												
Surrogate Retention Time Shifts												
Internal Standards Performance	✓	✓				✓			✓	✓		
Resolution Check Standards												
Analytical Sequence	✓	✓							✓			
Florisil Cartridge Check & (GPC Calibration)		✓										
GC Column Agreement												
Others: Temp upon receipt	✓	✓			✓	✓			✓	✓		

Comments: _____

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
V	S	MB	VB1KD41	none			
V	S	MB	VB1KD42	none			
V	S	MB	VB1KD45	none			
V	~~S~~ Aq	MB	VB1KK40	none			
V	Aq	TB	TB-2	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

* = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

\+ = Contaminant observed on one column only.

Notes: _____

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
S	S	MB	SBLKMA 0712	none			

1 - V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 - MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

• = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

SOIL VOLATILE SURROGATE RECOVERY

2B

LAB NAME: LANCASTER LABS SDG No: HMS03

LEVEL:MED

	EPA SAMPLE NO.	S1 (DCA) #	S2 (TOL) #	S3 (BFB) #	OTHER	TOT OUT
01	MW-1-	27 D	67 D	78		
02	MW-2-	68 D	76 D	89		
03						
04	LAB QC					
05	VBLKD41	99	99	102		
06	VBLKD42	103	102	100		
07	VBLKD45	100	99	99		
08	K2-BR	98	97	98		
09	K2-BRMS	98	100	102		
10	K2-BRMSD	101	101	105		
11	LCS-42	107	109	108		
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Low recoveries due to sample dilutions as a result of matrix interference

				QC LIMITS
S1	(DCA)	=	1,2-Dichloroethane-d4	70 - 121
S2	(TOL)	=	Toluene-d8	81 - 117
S3	(BFB)	=	4-Bromofluorobenzene	74 - 121

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

WATER VOLATILE SURROGATE RECOVERY

2A

Lab Name: LANCASTER LABS SDG No: HMS03

	EPA SAMPLE NO.	S1 (DCA) #	S2 (TOL) #	S3 (BFB) #	OTHER	TOT OUT
01	TB-2-	102	103	110		
02						
03	LAB QC					
04	VBLKK43	103	106	109		
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

				QC LIMITS
S1	(DCA)	=	1,2-Dichloroethane-d4	76 - 114
S2	(TOL)	=	Toluene-d8	88 - 110
S3	(BFB)	=	4-Bromofluorobenzene	86 - 115

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

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A subsidiary of Thermo TerraTech Inc., a Thermo Electron company

QC Limits for Scan #4593 Generated May, 1996

#	Name	MS/MSD	LCS/LCSD
3434	Chloromethane	32-146	35-158
3435	Bromomethane	20-160	54-130
3436	Vinyl Chloride	40-153	46-158
3437	Chloroethane	1-179	19-139
3440	Methylene Chloride	58-142	69-143
4074	Acetone	16-169	44-132
4076	Carbon Disulfide	1-184	1-208
1180	1,1-Dichloroethene	53-163	66-158
3442	1,1-Dichloroethane	62-144	67-147
3444	Chloroform	1-227	78-136
3445	1,2-Dichloroethane	67-131	72-132
4085	2-Butanone	16-169	50-133
3446	1,1,1-Trichloroethane	72-138	82-130
3447	Carbon Tetrachloride	64-144	79-135
4091	Vinyl Acetate	1-165	55-142
3448	Bromodichloromethane	73-123	80-122
3450	1,2-Dichloropropane	72-130	72-134
3454	cis-1,3-Dichloropropene	70-124	75-127
1181	Trichloroethene	53-161	78-132
3452	Dibromochloromethane	67-125	77-121
3453	1,1,2-Trichloroethane	67-128	73-124
1182	Benzene	61-139	74-134
3451	trans-1,3-Dichloroethene	68-123	77-122
3456	Bromoform	53-129	62-125
4108	4-Methyl-2-pentanone	48-148	52-132
4107	2-Hexanone	40-152	46-136
3457	Tetrachloroethene	34-188	72-144
3449	1,1,2,2-Tetrachloroethane	1-205	65-127
1183	Toluene	58-150	68-140
1184	Chlorobenzene	40-155	77-127
3458	Ethylbenzene	8-214	80-136
4117	Styrene	67-133	80-130
3355	Xylene (total)	1-256	81-133
6187	trans-1,2-Dichloroethene	55-151	66-150
6277	cis-1,2-Dichloroethene	69-139	71-143

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: ^DMJ07
K2-8R 2677287
Method: 3991/3992 +SPECIALS
Instrument: HP02700

Matrix spike: ^DMJ08
K2-8RMS 2677287
Matrix/Level: SM
Dilution Factor: 1.0

not part of KR data set

Spike Duplicate: ^DMJ09
K2-8RMSD 2677287
Batch: D970781AA
Moisture: 0

COMPOUND NAME	SPIKE LEVEL	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
D hlorodifluoromethane	2500.00	0.00	2339.74	2431.33	94	97	-3	24-157	YES
Chloromethane	2500.00	0.00	2440.41	2568.09	98	103	-5	1-273	YES
Vinyl Chloride	2500.00	0.00	2511.12	2628.01	100	105	-5	1-251	YES
B momethane	2500.00	0.00	2449.74	2566.25	98	103	-5	1-242	YES
C oroethane	2500.00	0.00	2089.93	2210.75	84	88	-5	14-230	YES
Trichlorofluoromethane	2500.00	0.00	1489.35	1685.74	60	67	-11	17-181	YES
Ethyl Ether	2500.00	0.00	2513.79	2567.88	100	103	-3	67-123	YES
A olein	18750.00	0.00	2647.75	0.00	14	0	N/C	22-169	NO - not compa
1, -Dichloroethene	2500.00	0.00	2513.63	2578.09	100	103	-3	1-234	YES
Freon 113	2500.00	0.00	2372.66	2437.02	95	97	-2	72-174	YES . of infor
A tone	18750.00	0.00	16288.26	17996.21	87	96	-10	19-150	YES
M hyl Iodide	2500.00	0.00	2302.27	2373.52	92	95	-3	45-130	YES
Ca bon Disulfide	18750.00	0.00	17084.78	17150.33	91	91	0	29-183	YES
2-Propanol	18750.00	0.00	16388.96	20822.16	87	111	-24	30-200	YES
A yl Chloride	2500.00	0.00	2782.37	2840.21	111	114	-3	55-142	YES
M lene Chloride	2500.00	0.00	2584.02	2652.18	103	106	-3	1-221	YES
t l Alcohol	25000.00	0.00	22825.90	22543.79	91	90	1	25-195	YES
ylonitrile	18750.00	0.00	18608.91	19067.16	99	102	-3	51-138	YES
hyl t-Butyl Ether	2500.00	0.00	2346.79	2288.42	94	92	2	80-123	YES
t ns-1,2-Dichloroethene	2500.00	0.00	2486.59	2569.73	99	103	-4	54-156	YES
n-Hexane	2500.00	0.00	2671.46	2792.13	107	112	-4	30-200	YES
1 1-Dichloroethane	2500.00	0.00	2570.78	2627.52	103	105	-2	59-155	YES
2 hloro-1,3-Butadiene	2500.00	0.00	2804.27	2939.68	112	118	-5	77-129	YES
c -1,2-Dichloroethene	2500.00	0.00	2466.98	2621.00	99	105	-6	54-156	YES
Propionitrile	18750.00	0.00	18623.93	18429.48	99	98	1	56-139	YES
M hacrylonitrile	18750.00	0.00	17522.41	18330.11	93	98	-5	69-128	YES
T rahydrofuran	2500.00	0.00	2417.97	2233.40	97	89	9	30-200	YES
Chloroform	2500.00	0.00	2595.08	2674.78	104	107	-3	51-138	YES
Cyclohexane	2500.00	0.00	2579.56	2658.43	103	106	-3	30-200	YES
1 -Dichloroethane	2500.00	0.00	2538.41	2588.48	102	104	-2	49-155	YES
V yl Acetate	12500.00	0.00	976.51	0.00	8	0	N/C	19-190	NO
2-Butanone	18750.00	0.00	18125.52	19194.68	97	102	-5	22-167	YES
1,1,1-Trichloroethane	2500.00	0.00	2748.22	2904.40	110	116	-5	52-162	YES
C bon Tetrachloride	2500.00	0.00	2579.23	2777.78	103	111	-7	70-140	YES
I butyl Alcohol	62500.00	0.00	38231.18	44332.04	61	71	-15	1-234	YES

N/C = Could not calculate

L-- Chronicle: _____ Ent. by _____.

- _____ Ver. by _____.

_____.

* for this compound exceeds method specified limit.

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: ^DMJ07
K2-BR 2677287
Method: 3991/3992 +SPECIALS
Instrument: HP02700

Matrix spike: ^DMJ08
K2-BRMS 2677287
Matrix/Level: SM
Dilution Factor: 1.0

Spike Duplicate: ^DMJ09
K2-BRMSD 2677287
Batch: D970781AA
Moisture: 0

COMPOUND NAME	SPIKE LEVEL	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC	
E izene	2500.00	0.00	2596.30	2738.07	104	110	-6	37-151	YES	
r ieptane	2500.00	0.00	3133.99	3214.62	125	128	-2	30-200	YES	
n-Butanol	62500.00	0.00	53483.38	57186.87	86	91	-6	30-200	YES	
Trichloroethene	2500.00	0.00	2723.32	2868.85	109	115	-5	71-157	YES	
1 :-Dichloropropane	2500.00	0.00	2573.57	2688.95	103	108	-5	1-210	YES	
M hyl Methacrylate	2500.00	0.00	2359.76	2564.61	94	102	-8	66-131	YES	
Dibromomethane	2500.00	0.00	2671.20	2774.50	107	111	-4	76-136	YES	
1 4-Dioxane	62500.00	0.00	32995.61	60475.56	53	97	-59	3-164	YES	
r ropyl Acetate	2500.00	0.00	2735.56	2865.24	109	115	-5	30-200	YES	
B. omodichloromethane	2500.00	0.00	2619.67	2801.32	105	112	-6	35-155	YES	
2-Nitropropane	2500.00	0.00	2447.91	2666.26	98	107	-9	54-106	(NO)	not compd of interest
2 hloroethyl Vinyl Ether	2500.00	0.00	2573.29	2628.68	103	105	-2	1-305	YES	
c -1,3-Dichloropropene	2500.00	0.00	2578.12	2669.38	103	107	-4	1-227	YES	
trans-1,3-Dichloropropene	2500.00	0.00	2507.94	2641.41	100	106	-6	17-183	YES	
1,1,2-Trichloroethane	2500.00	0.00	2585.50	2728.62	103	109	-6	52-150	YES	
D romochloromethane	2500.00	0.00	2574.45	2800.83	103	112	-8	53-149	YES	
B form	2500.00	0.00	2511.69	2721.11	100	109	-9	45-169	YES	
t -1,4-Dichloro-2-Buten	18750.00	0.00	18310.26	19443.12	98	104	-6	56-141	YES	
Methyl-2-Pentanone	12500.00	0.00	10710.49	11387.22	86	91	-6	50-124	YES	
uene	2500.00	0.00	2647.25	2678.28	106	107	-1	47-150	YES	
E yl Methacrylate	2500.00	0.00	2337.73	2485.71	94	99	-5	68-270	YES	
Tetrachloroethene	2500.00	0.00	4312.02	4740.36	172	190	-10	64-148	(NO)	
2-Hexanone	12500.00	0.00	11093.94	11995.60	89	96	-8	52-140	YES	
1 :-Dibromoethane	2500.00	0.00	2655.83	2760.77	106	110	-4	45-135	YES	
C orobenzene	2500.00	0.00	2643.22	2708.14	106	108	-2	37-160	YES	
1,1,1,2-Tetrachloroethane	2500.00	0.00	2703.99	2790.24	108	112	-4	23-149	YES	
E ylbenzene	2500.00	0.00	2712.46	2775.80	108	111	-3	37-162	YES	
X ene (total)	7500.00	0.00	7957.20	8262.44	106	110	-4	61-165	YES	
Styrene	2500.00	0.00	2571.91	2643.90	103	106	-3	74-136	YES	
Isopropylbenzene	2500.00	0.00	2675.98	2763.00	107	110	-3	30-200	YES	
C lohexanone	62500.00	0.00	62698.80	65558.77	100	105	-5	43-123	YES	
1 ,2,2-Tetrachloroethane	2500.00	0.00	2474.06	2518.30	99	101	-2	46-157	YES	
1,2,3-Trichloropropane	2500.00	0.00	2574.90	2689.21	103	108	-5	72-125	YES	
Pentachloroethane	2500.00	0.00	900.92	560.79	36	22	48	56-132	NO	not compd of interest
1 -Dichlorobenzene	2500.00	0.00	2636.94	2794.67	105	112	-6	59-156	YES	

N/C = Could not calculate

L Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

* [illegible] for this compound exceeds method specified limit.

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: ^DMJ07
K2-BR 2677287
Method: 3991/3992 +SPECIALS
Instrument: HP02700

Matrix spike: ^DMJ08
K2-BRMS 2677287
Matrix/Level: SM
Dilution Factor: 1.0

Spike Duplicate: ^DMJ09
K2-BRMSD 2677287
Batch: D970781AA
Moisture: 0

COMPOUND NAME	SPIKE LEVEL	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
*-Dichlorobenzene	2500.00	0.00	2612.16	2736.71	104	109	-5	18-190	YES
*-Dichlorobenzene	2500.00	0.00	2612.54	2764.08	104	110	-6	18-190	YES
1,2-Dibromo-3-Chloropropan	2500.00	0.00	1849.74	2022.40	74	81	-9	40-154	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

* RPD for this compound exceeds method specified limit.

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: ^DMK01 Injected: 03/20/97 at 02:36 Method: 1177
Inst: HP02700 Sample: LCS-42 LCS-42 Matrix/level: SM
Dilution Factor: 1.0 Batch: D970781AB

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/KG	LCS REC %	RANGE LOWER-UPPER	IN SPEC
Dichlorodifluoromethane	2500	2833	113	24- 157	YES
Chloromethane	2500	2740	110	~~1-273~~ 35-158	YES
Vinyl Chloride	2500	2850	114	~~1-251~~ 46-158	YES
Bromomethane	2500	2796	112	~~1-242~~ 54-130	YES
Chloroethane	2500	2675	107	~~14-230~~ 49-139	YES
Trichlorofluoromethane	2500	2436	97	17- 181	YES
Ethyl Ether	2500	2728	109	67- 123	YES
Acrolein	18750	17174	92	22- 169	YES
1,1-Dichloroethene	2500	2881	115	1- 234	YES
Freon 113	2500	2668	107	72- 174	YES
Acetone	18750	16544	88	19- 150	YES
Methyl Iodide	2500	2532	101	45- 130	YES
Carbon Disulfide	18750	20232	108	29- 183	YES
2-Propanol	18750	11472	61	30- 200	YES
Allyl Chloride	2500	3068	123	55- 142	YES
Methylene Chloride	2500	2803	112	1- 221	YES
t-Butyl Alcohol	25000	18526	74	25- 195	YES
ylonitrile	18750	19743	105	51- 138	YES
ethyl t-Butyl Ether	2500	2483	99	80- 123	YES
trans-1,2-Dichloroethene	2500	2803	112	54- 156	YES
n-Hexane	2500	3175	127	30- 200	YES
1,1-Dichloroethane	2500	2859	114	59- 155	YES
2-Chloro-1,3-Butadiene	2500	3226	129	77- 129	YES
cis-1,2-Dichloroethene	2500	2780	111	54- 156	YES
Propionitrile	18750	18495	99	56- 139	YES
Methacrylonitrile	18750	19248	103	69- 128	YES
Tetrahydrofuran	2500	3119	125	30- 200	YES
Chloroform	2500	2816	113	51- 138	YES
Cyclohexane	2500	2898	116	30- 200	YES
1,2-Dichloroethane	2500	2746	110	49- 155	YES
Vinyl Acetate	12500	18863	151	~~19-190~~ 65-142	YES
2-Butanone	18750	20027	107	22- 167	YES
1,1,1-Trichloroethane	2500	3018	121	52- 162	YES
Carbon Tetrachloride	2500	2786	111	70- 140	YES
Isobutyl Alcohol	62500	45925	73	1- 234	YES

Lab Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: ^DMK01 Injected: 03/20/97 at 02:36 Method: 1177
Inst: HP02700 Sample: LCS-42 LCS-42 Matrix/level: SM
Dilution Factor: 1.0 Batch: D970781AB

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/KG	LCS REC %	RANGE LOWER-UPPER	IN SPEC
Benzene	2500	2864	114	37- 151	YES
n-Heptane	2500	3491	140	30- 200	YES
n-Butanol	62500	32003	51	30- 200	YES
Trichloroethene	2500	2879	115	71- 157	YES
1,2-Dichloropropane	2500	2738	110	1- 210	YES
Methyl Methacrylate	2500	2613	104	66- 131	YES
Dibromomethane	2500	2813	112	76- 136	YES
1,4-Dioxane	62500	33883	54	3- 164	YES
n-Propyl Acetate	2500	2983	119	30- 200	YES
Bromodichloromethane	2500	2797	112	35- 155	YES
2-Nitropropane	2500	2137	85	54- 106	YES
2-Chloroethyl Vinyl Ether	2500	2791	112	1- 305	YES
cis-1,3-Dichloropropene	2500	2769	111	1- 227	YES
trans-1,3-Dichloropropene	2500	2674	107	17- 183	YES
1,1,2-Trichloroethane	2500	2724	109	52- 150	YES
Dibromochloromethane	2500	2778	111	53- 149	YES
Bromoform	2500	2506	100	45- 169	YES
trans-1,4-Dichloro-2-Buten	18750	18641	99	56- 141	YES
-Methyl-2-Pentanone	12500	12001	96	50- 124	YES
oluene	2500	2848	114	47- 150	YES
Ethyl Methacrylate	2500	2610	104	68- 270	YES
Tetrachloroethene	2500	3036	121	64- 148	YES
2-Hexanone	12500	12607	101	52- 140	YES
1,2-Dibromoethane	2500	2844	114	45- 135	YES
Chlorobenzene	2500	2818	113	37- 160	YES
1,1,1,2-Tetrachloroethane	2500	2882	115	23- 149	YES
Ethylbenzene	2500	2828	113	37- 162	YES
Xylene (total)	7500	8497	113	61- 165	YES
Styrene	2500	2713	108	74- 136	YES
Isopropylbenzene	2500	2825	113	30- 200	YES
Cyclohexanone	62500	56891	91	43- 123	YES
1,1,2,2-Tetrachloroethane	2500	2679	107	46- 157	YES
1,2,3-Trichloropropane	2500	2659	106	72- 125	YES
Pentachloroethane	2500	2854	114	56- 132	YES
1,3-Dichlorobenzene	2500	2602	104	59- 156	YES

Lab Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: ^DMK01 Injected: 03/20/97 at 02:36 Method: 1177
Inst: HP02700 Sample: LCS-42 LCS-42 Matrix/level: SM
Dilution Factor: 1.0 Batch: D970781AB

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/KG	LCS REC %	RANGE LOWER-UPPER	IN SPEC
1,4-Dichlorobenzene	2500	2565	102	18- 190	YES
1,2-Dichlorobenzene	2500	2497	100	18- 190	YES
1,2-Dibromo-3-Chloropropan	2500	1952	78	40- 154	YES

Lab Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

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4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID: >DMJB3 Lab Sample ID: VBLKD41

ate Analyzed: 03/19/97 Time Analyzed: 18:54

Matrix: (soil/water) SOIL Level:(low/med) MED

nstrument ID: HP02700

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	K2-BR	2677287	>DMJ07	19:38
02	K2-BRMS	2677287	>DMJ08	20:11
03	K2-BRMSD	2677287	>DMJ09	20:46
04	K2-BRMS1	2677287	>DMJ10	21:20
05	K2-BRMSD1	2677287	>DMJ11	21:53
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OMMENTS: _____

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD41

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD41

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMJB3

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/19/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
75-71-8	Dichlorodifluoromethane	250	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	250	U
74-83-9	Bromomethane	380	U
75-00-3	Chloroethane	380	U
75-69-4	Trichlorofluoromethane	250	U
60-29-7	Ethyl Ether	120	U
107-02-8	Acrolein	2500	U
75-35-4	1,1-Dichloroethene	250	U
76-13-1	Freon 113	250	U
67-64-1	Acetone	880	U
74-88-4	Methyl Iodide	380	U
75-15-0	Carbon Disulfide	380	U
67-63-0	2-Propanol	7500	U
75-05-8	Acetonitrile	3100	U
107-05-1	Allyl Chloride	120	U
75-09-2	Methylene Chloride	250	U
75-65-0	t-Butyl Alcohol	2500	U
107-13-1	Acrylonitrile	1200	U
1634-04-4	Methyl t-Butyl Ether	120	U
156-60-5	trans-1,2-Dichloroethene	250	U
110-54-3	n-Hexane	120	U
75-34-3	1,1-Dichloroethane	120	U
108-20-3	di-Isopropyl Ether	120	U
126-99-8	2-Chloro-1,3-Butadiene	250	U
594-20-7	2,2-Dichloropropane	120	U
156-59-2	cis-1,2-Dichloroethene	250	U
107-12-0	Propionitrile	3800	U
141-78-6	Ethyl Acetate	380	U
126-98-7	Methacrylonitrile	620	U
109-99-9	Tetrahydrofuran	500	U
67-66-3	Chloroform	120	U
110-82-7	Cyclohexane	120	U
563-58-6	1,1-Dichloropropene	120	U
107-06-2	1,2-Dichloroethane	250	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD41

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD41

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMJB3

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/19/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
108-05-4	Vinyl Acetate		380	U
78-93-3	2-Butanone		880	U
71-55-6	1,1,1-Trichloroethane		120	U
56-23-5	Carbon Tetrachloride		120	U
78-83-1	Isobutyl Alcohol		12000	U
71-43-2	Benzene		120	U
142-82-5	n-Heptane		380	U
71-36-3	n-Butanol		14000	U
79-01-6	Trichloroethene		120	U
78-87-5	1,2-Dichloropropane		380	U
80-62-6	Methyl Methacrylate		120	U
74-95-3	Dibromomethane		120	U
123-91-1	1,4-Dioxane		8800	U
109-60-4	n-Propyl Acetate		250	U
75-27-4	Bromodichloromethane		250	U
79-46-9	2-Nitropropane		750	U
110-75-8	2-Chloroethyl Vinyl Ether		250	U
10061-01-5	cis-1,3-Dichloropropene		120	U
10061-02-6	trans-1,3-Dichloropropene		120	U
79-00-5	1,1,2-Trichloroethane		250	U
124-48-1	Dibromochloromethane		120	U
75-25-2	Bromoform		120	U
110-57-6	trans-1,4-Dichloro-2-Butene		1200	U
108-10-1	4-Methyl-2-Pentanone		380	U
108-88-3	Toluene		120	U
97-63-2	Ethyl Methacrylate		120	U
127-18-4	Tetrachloroethene		120	U
142-28-9	1,3-Dichloropropane		120	U
591-78-6	2-Hexanone		380	U
106-93-4	1,2-Dibromoethane		120	U
108-90-7	Chlorobenzene		120	U
630-20-6	1,1,1,2-Tetrachloroethane		250	U
100-41-4	Ethylbenzene		120	U
1330-20-7	Xylene (total)		120	U
100-42-5	Styrene		120	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD41

Lab Name: LANCASTER LABS Contract: _____.

I b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD41

S mple wt/vol: 4.0 (g/mL) G Lab File ID: >DMJB3

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/19/97

C~lumn: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
98-82-8	Isopropylbenzene		380	U
108-94-1	Cyclohexanone		3100	U
79-34-5	1,1,2,2-Tetrachloroethane		120	U
108-86-1	Bromobenzene		120	U
96-18-4	1,2,3-Trichloropropane		120	U
103-65-1	n-Propylbenzene		120	U
95-49-8	2-Chlorotoluene		120	U
108-67-8	1,3,5-Trimethylbenzene		120	U
106-43-4	4-Chlorotoluene		120	U
98-06-6	tert-Butylbenzene		120	U
76-01-7	Pentachloroethane		120	U
95-63-6	1,2,4-Trimethylbenzene		120	U
135-98-8	sec-Butylbenzene		120	U
541-73-1	1,3-Dichlorobenzene		250	U
99-87-6	p-Isopropyltoluene		120	U
106-46-7	1,4-Dichlorobenzene		250	U
104-51-8	n-Butylbenzene		120	U
95-50-1	1,2-Dichlorobenzene		250	U
96-12-8	1,2-Dibromo-3-Chloropropane		250	U

4A

VOLATILE METHOD BLANK SUMMARY

a.. Name: LANCASTER LABS Contract: _____.

a- Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

a. File ID: >DMKB1 Lab Sample ID: VBLKD42

e e Analyzed: 03/20/97 Time Analyzed: 01:35

atrix: (soil/water) SOIL Level:(low/med) MED

n trument ID: HP02700

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-42	LCS-42	>DMK01	02:36
02	LCSD-42	LCSD-42	>DMK03	04:45
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD42

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD42

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMKB1

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/20/97

GC Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
75-71-8	Dichlorodifluoromethane		250	U
74-87-3	Chloromethane		250	U
75-01-4	Vinyl Chloride		250	U
74-83-9	Bromomethane		380	U
75-00-3	Chloroethane		380	U
75-69-4	Trichlorofluoromethane		250	U
60-29-7	Ethyl Ether		120	U
107-02-8	Acrolein		2500	U
75-35-4	1,1-Dichloroethene		250	U
76-13-1	Freon 113		250	U
67-64-1	Acetone		880	U
74-88-4	Methyl Iodide		380	U
75-15-0	Carbon Disulfide		380	U
67-63-0	2-Propanol		7500	U
107-05-1	Allyl Chloride		120	U
75-09-2	Methylene Chloride		250	U
75-65-0	t-Butyl Alcohol		2500	U
107-13-1	Acrylonitrile		1200	U
1634-04-4	Methyl t-Butyl Ether		120	U
156-60-5	trans-1,2-Dichloroethene		250	U
110-54-3	n-Hexane		120	U
75-34-3	1,1-Dichloroethane		120	U
126-99-8	2-Chloro-1,3-Butadiene		250	U
156-59-2	cis-1,2-Dichloroethene		250	U
107-12-0	Propionitrile		3800	U
126-98-7	Methacrylonitrile		620	U
109-99-9	Tetrahydrofuran		500	U
67-66-3	Chloroform		120	U
110-82-7	Cyclohexane		120	U
107-06-2	1,2-Dichloroethane		250	U
108-05-4	Vinyl Acetate		380	U
78-93-3	2-Butanone		880	U
71-55-6	1,1,1-Trichloroethane		120	U
56-23-5	Carbon Tetrachloride		120	U
78-83-1	Isobutyl Alcohol		12000	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD42

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD42

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMKB1

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
71-43-2	Benzene	120	U
142-82-5	n-Heptane	380	U
71-36-3	n-Butanol	14000	U
79-01-6	Trichloroethene	120	U
78-87-5	1,2-Dichloropropane	380	U
80-62-6	Methyl Methacrylate	120	U
74-95-3	Dibromomethane	120	U
123-91-1	1,4-Dioxane	8800	U
109-60-4	n-Propyl Acetate	250	U
75-27-4	Bromodichloromethane	250	U
79-46-9	2-Nitropropane	750	U
110-75-8	2-Chloroethyl Vinyl Ether	250	U
10061-01-5	cis-1,3-Dichloropropene	120	U
10061-02-6	trans-1,3-Dichloropropene	120	U
79-00-5	1,1,2-Trichloroethane	250	U
124-48-1	Dibromochloromethane	120	U
75-25-2	Bromoform	120	U
110-57-6	trans-1,4-Dichloro-2-Butene	1200	U
108-10-1	4-Methyl-2-Pentanone	380	U
108-88-3	Toluene	120	U
97-63-2	Ethyl Methacrylate	120	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	380	U
106-93-4	1,2-Dibromoethane	120	U
108-90-7	Chlorobenzene	120	U
630-20-6	1,1,1,2-Tetrachloroethane	250	U
100-41-4	Ethylbenzene	120	U
1330-20-7	Xylene (total)	120	U
100-42-5	Styrene	120	U
98-82-8	Isopropylbenzene	380	U
108-94-1	Cyclohexanone	3100	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
96-18-4	1,2,3-Trichloropropane	120	U
76-01-7	Pentachloroethane	120	U
541-73-1	1,3-Dichlorobenzene	250	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD42

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD42

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMKB1

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
106-46-7	1,4-Dichlorobenzene		250	U
95-50-1	1,2-Dichlorobenzene		250	U
96-12-8	1,2-Dibromo-3-Chloropropane		250	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DMLB1 Lab Sample ID: VBLKD45

Date Analyzed: 03/21/97 Time Analyzed: 02:40

Matrix: (soil/water) SOIL Level:(low/med) MED

Instrument ID: HP02700

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW-2-	2677694	>DML02	04:19
02	MW-1-	2677693	>DML03	05:09
03				
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COMMENTS: _____.

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKD45

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKD45

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >DMLB1

Level: (low/med) MED Date Received: _____.

% Moisture: not dec. _____ Date Analyzed: 03/21/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
74-87-3	Chloromethane		250	U
75-01-4	Vinyl Chloride		250	U
74-83-9	Bromomethane		380	U
75-00-3	Chloroethane		380	U
75-35-4	1,1-Dichloroethene		250	U
67-64-1	Acetone		880	U
75-15-0	Carbon Disulfide		380	U
75-09-2	Methylene Chloride		250	U
156-60-5	trans-1,2-Dichloroethene		250	U
75-34-3	1,1-Dichloroethane		120	U
156-59-2	cis-1,2-Dichloroethene		250	U
67-66-3	Chloroform		120	U
107-06-2	1,2-Dichloroethane		250	U
108-05-4	Vinyl Acetate		380	U
78-93-3	2-Butanone		880	U
71-55-6	1,1,1-Trichloroethane		120	U
56-23-5	Carbon Tetrachloride		120	U
71-43-2	Benzene		120	U
79-01-6	Trichloroethene		120	U
78-87-5	1,2-Dichloropropane		380	U
75-27-4	Bromodichloromethane		250	U
10061-01-5	cis-1,3-Dichloropropene		120	U
10061-02-6	trans-1,3-Dichloropropene		120	U
79-00-5	1,1,2-Trichloroethane		250	U
124-48-1	Dibromochloromethane		120	U
75-25-2	Bromoform		120	U
108-10-1	4-Methyl-2-Pentanone		380	U
108-88-3	Toluene		120	U
127-18-4	Tetrachloroethene		120	U
591-78-6	2-Hexanone		380	U
108-90-7	Chlorobenzene		120	U
100-41-4	Ethylbenzene		120	U
1330-20-7	Xylene (total)		120	U
100-42-5	Styrene		120	U
79-34-5	1,1,2,2-Tetrachloroethane		120	U

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKB1 Lab Sample ID: VBLKK43

Date Analyzed: 03/20/97 Time Analyzed: 04:15

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: HP03973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	KMW-4	2677539	>KMK01	05:07
02	RB--1	2677540	>KMK02	05:42
03	RB-4-	2679085	>KMK03	06:17
04	RB-5-	2679086	>KMK04	06:52
05	FB-1-	2679087	>KMK05	07:28
06	TB-2-	2677695	>KMK06	08:28
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COMMENTS: _____.

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
74-87-3	Chloromethane		3	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-69-4	Trichlorofluoromethane		2	U
107-02-8	Acrolein		40	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		6	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		2	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		2	U
78-93-3	2-Butanone		3	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		1	U
75-27-4	Bromodichloromethane		1	U
110-75-8	2-Chloroethyl Vinyl Ether		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		2	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		5	U
108-88-3	Toluene		2	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		7	U
108-90-7	Chlorobenzene		1	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
100-41-4	Ethylbenzene		2	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		2	U

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DMGT1 BFB Injection Date: 03/16/97

Instrument ID: HP02700 BFB Injection Time: 23:23

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.9
75	30.0 - 60.0% of mass 95	45.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	80.0
175	5.0 - 9.0% of mass 174	5.7 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.1 (100.2)1
177	5.0 - 9.0% of mass 176	5.0 (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
01	VSTD004	004ppb IC	>DMGI2	03/17/97	00:32
02	VSTD020	020ppb IC	>DMGI3	03/17/97	01:06
03	VSTD100	100ppb IC	>DMGI5	03/17/97	02:22
04	VSTD300	300 PPB IC	>DMGI6	03/17/97	02:59
05	VSTD050	050ppb IC	>DMGI7	03/17/97	04:26
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: ____.

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

Instrument ID: HP02700 Calibration Date(s): 03/17/97 03/17/97

Calibration Times: 0032 0426

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

___.

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

8 FILE ID: RRF 4= >DMGI2 RRF 20= >DMGI3
RRF 50= >DMGI7 RRF100= >DMGI5 RRF300= >DMGI6

	COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	%RSD	CAL. METHOD	
	Dichlorodifluoromethane	2.226	1.991	2.106	2.275	2.227	2.165	5.3	AVG	
	Chloromethane	# .791	.722	.709	.735	.759	.743	4.4	AVG	#
	Vinyl Chloride	* .797	.740	.739	.809	.794	.776	4.3	AVG	*
	Bromomethane	1.217	1.070	1.026	1.025	1.000	1.068	8.2	AVG	
	Chloroethane	.460	.431	.421	.362	.342	.403	12.3	AVG	
	Trichlorofluoromethane	1.758	1.569	1.605	1.679	1.365	1.595	9.3	AVG	
	Ethyl Ether	.431	.406	.409	.413	.410	.414	2.4	AVG	
	Acrolein	.086	.087	.092	.092	.091	.089	3.1	AVG	
	1,1-Dichloroethene	* 1.000	.943	.973	1.003	.964	.976	2.6	AVG	*
	Freon 113	2.377	2.109	2.205	2.329	2.258	2.256	4.7	AVG	
	Acetone	.181	.140	.144	.129	.118	.143	16.9	2NDDEG	
	Methyl Iodide	4.156	4.042	4.075	4.202	4.214	4.138	1.8	AVG	
	Carbon Disulfide	3.664	2.802	2.810	2.941	2.965	3.036	11.8	AVG	
	2-Propanol	.026	.024	.023	.022	.022	.023	7.8	AVG	
	Allyl Chloride	1.000	.866	.873	.922	.931	.918	5.9	AVG	
	Methylene Chloride	1.511	1.113	1.058	1.077	1.073	1.166	16.6	1STDEG	
	t-Butyl Alcohol	.050	.048	.059	.058	.055	.054	9.0	AVG	
	Acrylonitrile	.127	.127	.135	.138	.135	.132	4.0	AVG	
	Methyl t-Butyl Ether	1.873	1.627	1.618	1.584	1.460	1.632	9.2	AVG	
	trans-1,2-Dichloroethene	1.016	.972	1.050	1.052	1.035	1.025	3.2	AVG	
	n-Hexane	.775	.622	.699	.789	.762	.730	9.5	AVG	
	1,1-Dichloroethane	# 1.782	1.698	1.750	1.791	1.809	1.766	2.5	AVG	#
	2-Chloro-1,3-Butadiene	1.161	1.162	1.167	1.239	1.242	1.194	3.5	AVG	
	2,2-Dichloropropane	1.457	1.329	1.275	1.329	1.200	1.318	7.1	AVG	
	cis-1,2-Dichloroethene	1.157	1.101	1.124	1.145	1.102	1.126	2.2	AVG	
	Propionitrile	.048	.047	.048	.048	.049	.048	1.6	AVG	
	Methacrylonitrile	.195	.185	.181	.179	.183	.185	3.4	AVG	
	Tetrahydrofuran	.157	.129	.146	.145	.141	.144	6.9	AVG	
	Chloroform	* 2.457	2.312	2.328	2.362	2.385	2.369	2.4	AVG	*
	Cyclohexane	1.045	.945	.971	1.017	.987	.993	3.9	AVG	
	1,2-Dichloropropene	1.351	1.312	1.365	1.420	1.344	1.358	2.9	AVG	
	1,2-Dichloroethene	1.322	1.266	1.278	1.301	1.309	1.295	1.8	AVG	
	Vinyl Acetate	.031	.034	.039	.038	.039	.036	9.6	AVG	
	2-Butanone	.073	.069	.069	.067	.066	.069	3.8	AVG	

← out of Control, but not compd of interest

← RO, JD

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date(s): 03/17/97 03/17/97

Calibration Times: 0032 0426

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

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF 4= >DMGI2 RRF 20= >DMGI3
RRF 50= >DMGI7 RRF100= >DMGI5 RRF300= >DMGI6

COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,1-Trichloroethane	.562	.550	.552	.567	.562	.558	1.3	AVG
rbon Tetrachloride	.508	.499	.490	.519	.513	.506	2.3	AVG
Isobutyl Alcohol	.005	.004	.004	.004	.003	.004	13.7	AVG
Benzene	.708	.649	.667	.656	.666	.669	3.4	AVG
Heptane	.149	.125	.142	.162	.161	.148	10.5	AVG
Butanol	.003	.003	.003	.003	.003	.003	6.6	AVG
Trichloroethene	.451	.445	.456	.458	.452	.452	1.1	AVG
1 2-Dichloropropane *	.366	.342	.343	.345	.343	.348	3.0	AVG *
thyl Methacrylate	.172	.156	.162	.155	.152	.159	5.0	AVG
romomethane	.550	.516	.513	.505	.498	.516	3.9	AVG
, Dioxane	.002	.002	.002	.002	.002	.002	3.8	AVG
Propyl Acetate	.086	.077	.084	.078	.082	.081	4.8	AVG
omodichloromethane	.856	.837	.848	.838	.862	.848	1.3	AVG
2-Nitropropane	.079	.068	.067	.065	.055	.067	12.8	AVG
2-Chloroethyl Vinyl Ether	.171	.169	.183	.179	.180	.176	3.5	AVG
s-1,3-Dichloropropene	.512	.498	.514	.506	.523	.511	1.8	AVG
ans-1,3-Dichloropropene	.455	.434	.451	.441	.459	.448	2.3	AVG
1,1,2-Trichloroethane	.381	.360	.363	.349	.350	.361	3.6	AVG
Dibromochloromethane	.866	.887	.869	.879	.877	.876	1.0	AVG
omoform #	.704	.690	.733	.731	.698	.711	2.8	AVG #
ans-1,4-Dichloro-2-Butene	.091	.091	.096	.096	.097	.094	2.9	AVG
4-Methyl-2-Pentanone	.379	.263	.290	.283	.285	.300	15.0	AVG
luene *	.907	.944	.979	1.004	1.030	.973	5.0	AVG *
yl Methacrylate	.432	.416	.454	.439	.453	.439	3.6	AVG
Tetrachloroethene	.558	.551	.589	.608	.580	.577	4.0	AVG
1,3-Dichloropropane	.600	.606	.630	.614	.622	.614	2.0	AVG
Hexanone	.152	.156	.168	.167	.167	.162	4.6	AVG
-Dibromoethane	.857	.889	.927	.923	.939	.907	3.7	AVG
Chlorobenzene #	.865	.879	.916	.932	.947	.908	3.8	AVG #
1 1,1,2-Tetrachloroethane	.577	.612	.636	.625	.612	.612	3.6	AVG
Ethylbenzene *	.329	.315	.336	.337	.326	.329	2.7	AVG *
p-Xylene	.410	.409	.428	.430	.423	.420	2.4	AVG
o-Xylene	.407	.410	.431	.424	.416	.418	2.4	AVG
Styrene	.701	.718	.761	.772	.766	.743	4.3	AVG

RRFs out of control, but not compds. of interest

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

.ame: LANCASTER LABS Contract: _____.

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

I trument ID: HP02700 Calibration Date(s): 03/17/97 03/17/97

Calibration Times: 0032 0426

M rix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

___.

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF 4= >DMGI2 RRF 20= >DMGI3
RRF 50= >DMGI7 RRF100= >DMGI5 RRF300= >DMGI6

COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
opropylbenzene	1.119	1.162	1.196	1.244	1.270	1.198	5.1	AVG
clohexanone	.017	.012	.023	.030	.028	.022	34.5	1STDEG
1,1,2,2-Tetrachloroethane #	.774	.765	.791	.746	.713	.758	3.9	AVG #
Bromobenzene	.600	.627	.648	.643	.613	.626	3.2	AVG
2,3-Trichloropropane	.161	.152	.163	.160	.152	.158	3.3	AVG
Propylbenzene	1.562	1.410	1.474	1.565	1.564	1.515	4.7	AVG
2-Chlorotoluene	.345	.347	.360	.366	.370	.358	3.2	AVG
* 3,5-Trimethylbenzene	.959	.945	.979	.980	.981	.969	1.6	AVG
Chlorotoluene	.353	.358	.372	.373	.362	.364	2.4	AVG
Butylbenzene	1.399	1.412	1.404	1.408	1.355	1.396	1.6	AVG
.achloroethane	.487	.510	.502	.485	.466	.490	3.5	AVG
2,4-Trimethylbenzene	.963	.970	1.006	1.023	.980	.988	2.6	AVG
c-Butylbenzene	1.301	1.279	1.348	1.389	1.413	1.346	4.2	AVG
1,3-Dichlorobenzene	.738	.790	.849	.853	.863	.819	6.5	AVG
p-Isopropyltoluene	.994	1.000	1.045	1.064	1.033	1.027	2.9	AVG
4-Dichlorobenzene	.885	.913	.962	1.008	.997	.953	5.6	AVG
Butylbenzene	.946	.915	1.012	1.060	1.048	.996	6.4	AVG
1,2-Dichlorobenzene	.784	.816	.849	.830	.804	.816	3.0	AVG
* 2-Dibromo-3-Chloropropane	.144	.150	.164	.145	.150	.151	5.3	AVG
2,4-Trichlorobenzene	.340	.379	.431	.352	.364	.373	9.6	AVG
..xachlorobutadiene	.384	.385	.382	.309	.271	.346	15.3	2NDDEG
Naphthalene	.395	.428	.448	.327	.322	.384	14.9	AVG
2,3-Trichlorobenzene	.267	.280	.301	.196	.191	.247	20.5	2NDDEG
1,2-Dichloroethane-d4	1.230	1.210	1.186	1.207	1.212	1.209	1.3	AVG
Toluene-d8	.964	1.047	1.026	1.007	1.026	1.014	3.1	AVG
Bromofluorobenzene	.916	.961	.967	.946	.961	.950	2.2	AVG

RRFs - out of control, but not compd of interest

Calibration Report

Supporting Data
KF 4/3/97

Title: Calibration File for 8240 Waters - Instr. HP02700
Calibrated: 970317 05:15

Comp No.	Compound	Files: >DMGI2 RF 4.00	>DMGI3 RF 20.00	>DMGI7 RF 50.00	>DMGI5 RF 100.00	>DMGI6 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
1)	Dichlorodifluoromethane	2.22624	1.99067	2.10617	2.27470	2.22693	2.16494	5.341	.999884	.999905	1.03	1.90	
2)	Chloromethane	.79109	.72152	.70944	.73496	.75916	.74323	4.373	.999909	.999987	1.78	.0253	
3)	Vinyl Chloride	.79651	.74018	.73941	.80902	.79362	.77575	4.296	.999876	.999887	1.01	1.62	
4)	Bromomethane	1.21685	1.06992	1.02617	1.02549	1.00034	1.06775	8.150	.999979	.999997	-1.59	-.705	
5)	Chloroethane	.46005	.43149	.42055	.36231	.34166	.40321	12.270	.999424	.999742	-6.49	-2.64	
6)	Dichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	-	
7)	Trichlorofluoromethane	1.75805	1.56868	1.60542	1.67908	1.36460	1.59517	9.274	.996901	.999793	-7.64	2.76	
8)	n-Pentane	-	-	-	-	-	-	-	-	-	-	-	
9)	Ethyl Ether	.43069	.40622	.40909	.41279	.40964	.41369	2.366	.999995	.999997	-.146	.144	
10)	Furfuran	-	-	-	-	-	-	-	-	-	-	-	
11)	Acrolein	.08611	.08673	.09178	.09180	.09078	.08944	3.125	.999981	.999995	-.00216	7.28	(Conc
12)	1,1-Dichloroethene	1.00027	.94273	.97294	1.00253	.96371	.97644	2.590	.999887	.999975	-.793	1.02	
13)	Freon 113	2.37671	2.10905	2.20475	2.32937	2.25836	2.25565	4.659	.999892	.999939	.0955	1.41	
14)	Acetone	.18143	.14010	.14429	.12892	.11797	.14254	16.860	.999326	.999896	-13.52	-3.39	(Conc
15)	t-Butylamine	-	-	-	-	-	-	-	-	-	-	-	
16)	Methyl Iodide	4.15622	4.04185	4.07482	4.20193	4.21367	4.13770	1.848	.999987	.999988	.786	.569	
17)	Carbon Disulfide	3.66386	2.80169	2.81028	2.94061	2.96485	3.03626	11.809	.999942	.999958	.904	.0877	
18)	2-Propanol	.02626	.02399	.02330	.02194	.02174	.02345	7.807	.999972	.999975	-15.25	-17.49	(Conc
19)	Acetonitrile	-	-	-	-	-	-	-	-	-	-	-	(Conc
20)	Allyl Chloride	.99977	.86557	.87281	.92163	.93053	.91806	5.878	.999945	.999958	1.38	.678	
21)	3-Chloro-1-Propene	-	-	-	-	-	-	-	-	-	-	-	
22)	Methylene Chloride	1.51138	1.11252	1.05839	1.07683	1.07323	1.16647	16.617	.999979	.999985	-.678	-1.21	
23)	t-Butyl Alcohol	.05040	.04772	.05902	.05775	.05543	.05406	8.955	.999687	.999961	-1.22	17.61	(Conc
24)	Acrylonitrile	.12684	.12668	.13500	.13822	.13505	.13236	3.983	.999943	.999983	.511	12.72	(Conc
25)	Methyl t-Butyl Ether	1.87350	1.62670	1.61761	1.58433	1.46006	1.63244	9.209	.999613	.999998	-4.19	-.205	
26)	trans-1,2-Dichloroethene	1.01605	.97249	1.04963	1.05156	1.03473	1.02489	3.178	.999963	.999988	-.0882	.886	
27)	Hexane	-	-	-	-	-	-	-	-	-	-	-	
28)	n-Hexane	.77456	.62243	.69930	.78946	.76240	.72963	9.467	.999696	.999763	1.66	3.15	
29)	1,1-Dichloroethane	1.78198	1.69833	1.75035	1.79142	1.80919	1.76625	2.466	.999986	.999992	1.05	.582	
30)	di-Isopropyl Ether	-	-	-	-	-	-	-	-	-	-	-	
31)	1-Propanol	-	-	-	-	-	-	-	-	-	-	-	(Conc
32)	2-Chloro-1,3-Butadiene	1.16085	1.16197	1.16685	1.23918	1.24165	1.19410	3.546	.999956	.999957	1.37	1.15	
33)	2,2-Dichloropropane	1.45735	1.32936	1.27493	1.32931	1.20038	1.31827	7.133	.999375	.999926	-3.79	.869	
34)	cis-1,2-Dichloroethene	1.15715	1.10131	1.12425	1.14505	1.10227	1.12601	2.224	.999906	.999987	-1.06	.706	
35)	Propionitrile	.04799	.04665	.04783	.04802	.04872	.04784	1.568	.999991	.999998	4.51	1.09	(Conc
36)	Ethyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
37)	Methyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Calibration File for 8240 Waters - Instr. HP02700
Calibrated: 970317 05:15

Comp No.	Compound	Files: >DMGI2 RF 4.00	>DMGI3 RF 20.00	>DMGI7 RF 50.00	>DMGI5 RF 100.00	>DMGI6 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
38)	Methacrylonitrile	.19532	.18487	.18127	.17944	.18260	.18470	3.388	.999963	.999998	-.0388	-3.84	(Conc
39)	Tetrahydrofuran	.15664	.12930	.14647	.14542	.14141	.14385	6.868	.999896	.999963	-.610	.975	
40)	Chloroform	2.45737	2.31155	2.32781	2.36185	2.38495	2.36871	2.417	.999989	.999997	.670	.127	
41)	Cyclohexane	1.04516	.94488	.97095	1.01719	.98650	.99294	3.949	.999911	.999956	-.174	1.11	
42)	1,1-Dichloropropene	1.35128	1.31154	1.36464	1.41953	1.34377	1.35815	2.907	.999780	.999959	-1.10	1.46	
43)	1,2-Dichloroethane-d4	1.22967	1.21000	1.18558	1.20749	1.21238	1.20903	1.302	.999992	.999995	.373	.0355	
44)	1,2-Dichloroethane	1.32193	1.26591	1.27754	1.30088	1.30901	1.29505	1.772	.999992	.999996	.646	.287	
45)	Vinyl Acetate	.03093	.03443	.03892	.03825	.03863	.03623	9.609	.999973	.999974	1.07	1.22	
46)	2-Butanone	.07302	.06897	.06908	.06698	.06639	.06889	3.773	.999985	.999990	-2.23	-1.28	(Conc
47)	1,1,1-Trichloroethane	.56184	.55024	.55177	.56664	.56201	.55850	1.276	.999987	.999989	.229	.521	
48)	Carbon Tetrachloride	.50797	.49918	.48986	.51949	.51271	.50584	2.292	.999947	.999951	.547	.925	
49)	Isobutyl Alcohol	.00453	.00353	.00387	.00357	.00316	.00373	13.746	.999097	.999885	-110.75	-14.84	(Conc
50)	Benzene	.70842	.64891	.66693	.65649	.66611	.66937	3.444	.999984	.999994	.340	-.294	
51)	Heptane	-	-	-	-	-	-	-	-	-	-	-	-
52)	n-Heptane	.14946	.12454	.14160	.16238	.16089	.14778	10.516	.999740	.999746	3.03	3.45	
53)	Isopropyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
54)	n-Butanol	.00320	.00269	.00314	.00305	.00302	.00302	6.592	.999914	.999932	-2.91	10.25	(Conc
55)	n-Butyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	(Conc
56)	Trichloroethene	.45090	.44519	.45609	.45771	.45246	.45247	1.083	.999989	.999998	-.221	.384	
57)	1,2-Dichloropropane	.36648	.34179	.34250	.34538	.34254	.34774	3.039	.999995	.999997	-.240	.0490	
58)	Methyl Methacrylate	.17234	.15631	.16153	.15495	.15205	.15944	5.010	.999951	.999980	-1.58	-.493	
59)	Dibromomethane	.54968	.51646	.51345	.50502	.49756	.51643	3.874	.999987	.999999	-1.12	-.440	
60)	1,4-Dioxane	.00234	.00235	.00227	.00227	.00213	.00227	3.800	.999811	.999994	-42.11	1.11	(Conc
)	Monochloroacetone	-	-	-	-	-	-	-	-	-	-	-	(Conc
62)	n-Propyl Acetate	.08602	.07701	.08426	.07787	.08153	.08134	4.810	.999815	.999878	.717	-.885	
63)	Bromodichloromethane	.85629	.83663	.84806	.83796	.86222	.84823	1.319	.999955	.999996	.971	-.297	
64)	2-Nitropropane	.07944	.06794	.06700	.06497	.05537	.06694	12.833	.998328	.999986	-16.09	.599	(Conc
65)	2-Chloroethyl Vinyl Ether	.17059	.16890	.18259	.17942	.17997	.17629	3.476	.999984	.999985	.662	1.05	(Conc
66)	Epichlorohydrin	-	-	-	-	-	-	-	-	-	-	-	
67)	cis-1,3-Dichloropropene	.51222	.49834	.51353	.50608	.52298	.51063	1.793	.999943	.999992	1.21	-.188	
68)	trans-1,3-Dichloropropene	.45531	.43434	.45055	.44089	.45876	.44797	2.268	.999914	.999986	1.36	-.329	
69)	1,1,2-Trichloroethane	.38145	.36001	.36283	.34874	.35046	.36070	3.623	.999979	.999979	-.685	-.814	
70)	Dibromochloromethane	.86563	.88681	.86935	.87892	.87715	.87557	.951	.999998	.999997	.0307	.0470	
71)	Bromoform	.70424	.68954	.73267	.73084	.69829	.71111	2.751	.999843	.999991	-1.47	.902	
72)	cis-1,4-Dichloro-2-Butene	-	-	-	-	-	-	-	-	-	-	-	(Conc
73)	trans-1,4-Dichloro-2-Butene	.09133	.09136	.09592	.09588	.09708	.09431	2.922	.999997	.999998	2.81	2.24	(Conc
74)	4-Methyl-2-Pentanone	.37853	.26264	.29028	.28330	.28536	.30002	15.045	.999953	.999956	-.0612	-.729	(Conc

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y Intercept (nth degree) in UG/L

Calibration Report

Title: Calibration File for 8240 Waters - Instr. HP02700
Calibrated: 970317 05:15

Comp No.	Compound	Files: >DMGI2 RF 4.00	>DMGI3 RF 20.00	>DMGI7 RF 50.00	>DMGI5 RF 100.00	>DMGI6 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
75)	Toluene-d8	.96387	1.04675	1.02649	1.00691	1.02619	1.01404	3.095	.999973	.999989	.317	-.485	
76)	Toluene	.90661	.94450	.97859	1.00404	1.03022	.97279	5.007	.999964	.999995	1.87	.803	
77)	Ethyl Methacrylate	.43185	.41577	.45353	.43927	.45347	.43878	3.624	.999937	.999966	1.21	.143	
78)	Tetrachloroethene	.55755	.55086	.58866	.60764	.58042	.57702	4.016	.999829	.999969	-.675	1.58	
79)	1,3-Dichloropropane	.59954	.60579	.63001	.61438	.62195	.61434	1.987	.999984	.999986	.276	-.0476	
80)	2-Hexanone	.15210	.15640	.16844	.16666	.16719	.16216	4.566	.999989	.999990	1.00	1.38	(Conc
81)	Butyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
82)	1,2-Dibromoethane	.85741	.88923	.92656	.92292	.93928	.90708	3.679	.999987	.999997	.984	.376	
83)	Chlorobenzene	.86508	.87919	.91624	.93171	.94734	.90791	3.835	.999985	.999996	1.35	.702	
84)	1,1,1,2-Tetrachloroethane	.57688	.61220	.63575	.62512	.61154	.61230	3.624	.999951	.999996	-.886	.421	
85)	Ethylbenzene	.32927	.31518	.33572	.33737	.32615	.32874	2.695	.999907	.999989	-.838	.917	
86)	m+p-Xylene	.40951	.40886	.42834	.43019	.42348	.42007	2.438	.999975	.999995	-.374	1.40	(Conc
87)	Isoamyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
88)	Butyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
89)	o-Xylene	.40706	.40990	.43143	.42378	.41591	.41762	2.403	.999958	.999993	-.742	.407	
90)	Styrene	.70054	.71834	.76056	.77161	.76550	.74331	4.278	.999985	.999993	.453	1.00	
91)	Cumene	-	-	-	-	-	-	-	-	-	-	-	
92)	Isopropylbenzene	1.11898	1.16246	1.19614	1.24429	1.27028	1.19843	5.089	.999964	.999986	1.90	1.000	
93)	Cyclohexanone	.01659	.01205	.02282	.03017	.02773	.02187	34.549	.998315	.999553	85.50	159.35	(Conc
94)	4-Bromofluorobenzene	.91642	.96102	.96663	.94564	.96128	.95020	2.152	.999980	.999990	.306	-.310	
95)	1,1,2,2-Tetrachloroethane	.77398	.76508	.79105	.74593	.71346	.75790	3.918	.999803	.999966	-2.92	-.352	
96)	Bromobenzene	.60046	.62717	.64838	.64270	.61288	.62632	3.198	.999838	.999998	-1.82	.659	
97)	1,2,3-Trichloropropane	.16057	.15173	.16296	.16028	.15231	.15757	3.285	.999796	.999988	-1.97	.735	
98)	n-Propylbenzene	1.56238	1.41000	1.47398	1.56495	1.56425	1.51511	4.652	.999947	.999947	1.42	1.34	
99)	2-Chlorotoluene	.34463	.34691	.36030	.36607	.37002	.35758	3.175	.999992	.999996	1.06	.662	
100)	1,3,5-Trimethylbenzene	.95887	.94539	.97872	.98015	.98051	.96873	1.641	.999998	.999998	.294	.383	
101)	4-Chlorotoluene	.35304	.35841	.37197	.37322	.36192	.36371	2.396	.999930	.999996	-.867	.723	
102)	tert-Butylbenzene	1.39877	1.41171	1.40361	1.40820	1.35536	1.39553	1.646	.999914	.999998	-1.53	.284	
103)	Pentachloroethane	.48744	.51024	.50162	.48547	.46579	.49011	3.472	.999878	.999992	-2.53	-.374	
104)	bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	
105)	1,2,4-Trimethylbenzene	.96276	.97004	1.00555	1.02317	.98044	.98839	2.560	.999871	.999988	-1.07	1.03	
106)	sec-Butylbenzene	1.30119	1.27917	1.34802	1.38931	1.41313	1.34616	4.212	.999975	.999988	1.67	.984	
107)	1,3-Dichlorobenzene	.73772	.79037	.84925	.85324	.86277	.81867	6.529	.999993	.999994	1.17	.969	
108)	p-Isopropyltoluene	.99393	.99983	1.04548	1.06433	1.03266	1.02724	2.920	.999927	.999989	-.485	1.04	
109)	Dicyclopentadiene	-	-	-	-	-	-	-	-	-	-	-	(Conc
110)	1,4-Dichlorobenzene	.88497	.91324	.96210	1.00789	.99671	.95298	5.556	.999960	.999969	.959	1.55	
111)	Benzyl Chloride	-	-	-	-	-	-	-	-	-	-	-	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Calibration File for 8240 Waters - Instr. HP02700
Calibrated: 970317 05:15

Comp No.	Compound	Files: >DMGI2 RF 4.00	>DMGI3 RF 20.00	>DMGI7 RF 50.00	>DMGI5 RF 100.00	>DMGI6 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
112)	1,3-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
113)	1,4-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
114)	n-Butylbenzene	.94638	.91463	1.01181	1.06049	1.04773	.99621	6.382	.999940	.999955	1.19	1.92
115)	1,2-Dichlorobenzene	.78378	.81565	.84879	.83034	.80369	.81645	3.043	.999907	.999994	-1.45	.386
116)	1,2-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
117)	1,2-Dibromo-3-Chloropropane	.14438	.15007	.16406	.14484	.15028	.15073	5.280	.999711	.999723	-.443	-1.15
118)	1,2,4-Trichlorobenzene	.33954	.37924	.43141	.35210	.36368	.37319	9.562	.999258	.999263	-1.99	-1.52
119)	Hexachlorobutadiene	.38403	.38473	.38178	.30916	.27088	.34612	15.307	.997749	.999525	-11.45	-2.28
120)	Naphthalene	.39541	.42769	.44753	.32728	.32233	.38405	14.898	.997954	.998323	-7.81	-3.57
121)	1,2,3-Trichlorobenzene	.26730	.28040	.30125	.19554	.19081	.24706	20.515	.995419	.996517	-11.44	-3.91

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DMJT4 BFB Injection Date: 03/19/97

Instrument ID: HP02700 BFB Injection Time: 10:02

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.0
75	30.0 - 60.0% of mass 95	48.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.2
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.2 (97.2)1
177	5.0 - 9.0% of mass 176	5.0 (7.1)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
01	VSTD004	004ppb IC	>DMJI1	03/19/97	10:57
02	VSTD020	020ppb IC	>DMJI2	03/19/97	11:33
03	VSTD050	050ppb IC	>DMJI3	03/19/97	12:07
04	VSTD100	100ppb IC	>DMJI4	03/19/97	13:43
05	VSTD300	300ppb IC	>DMJI5	03/19/97	14:20
06	VSTD050	050 PPB CC	>DMJS3	03/19/97	16:56
07	VBLKD41	VBLKD41	>DMJB3	03/19/97	18:54
08	K2-BR	2677287	>DMJ07	03/19/97	19:38
09	K2-BRMS	2677287	>DMJ08	03/19/97	20:11
10	K2-BRMSD	2677287	>DMJ09	03/19/97	20:46
11	K2-BRMS1	2677287	>DMJ10	03/19/97	21:20
12	K2-BRMSD1	2677287	>DMJ11	03/19/97	21:53
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SDG samples not affected by this cont. cal. b.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/19/97 Time: 1656

Lab File ID: >DMJS3 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Dichlorodifluoromethane		2.165	1.959	45.25	50.0	9.5	
Chloromethane	#	.743	.649	43.69	50.0	12.6#	
Vinyl Chloride	*	.776	.677	43.66	50.0	12.7*	
Bromomethane		1.068	.941	44.06	50.0	11.9	
Chloroethane		.403	.312	38.71	50.0	22.6	
Trichlorofluoromethane		1.595	1.050	32.90	50.0	34.2	not compd of interest
Ethyl Ether		.414	.409	49.43	50.0	1.1	
Acrolein		.089	.077	429.70	500.0	14.1	
1,1-Dichloroethene	*	.976	.970	49.66	50.0	.7*	
Freon 113		2.256	2.336	51.78	50.0	-3.6	
Acetone		.143	.101	71.96	100.0	28.0	
Methyl Iodide		4.138	4.157	50.24	50.0	-.5	
Carbon Disulfide		3.036	2.679	44.12	50.0	11.8	
2-Propanol		.023	.019	200.14	250.0	19.9	not compd of interest
Allyl Chloride		.918	.785	42.77	50.0	14.5	
Methylene Chloride		1.166	1.042	48.03	50.0	3.9	
t-Butyl Alcohol		.054	.053	247.22	250.0	1.1	
Acrylonitrile		.132	.117	443.75	500.0	11.3	
Methyl t-Butyl Ether		1.632	1.383	42.37	50.0	15.3	
trans-1,2-Dichloroethene		1.025	1.026	50.08	50.0	-.2	
n-Hexane		.730	.750	51.41	50.0	-2.8	
1,1-Dichloroethane	#	1.766	1.700	48.11	50.0	3.8#	
2-Chloro-1,3-Butadiene		1.194	1.142	47.84	50.0	4.3	
2,2-Dichloropropane		1.318	1.215	46.10	50.0	7.8	
cis-1,2-Dichloroethene		1.126	1.082	48.06	50.0	3.9	
Propionitrile		.048	.044	227.39	250.0	9.0	not compd of interest
Methacrylonitrile		.185	.166	112.18	125.0	10.3	
Tetrahydrofuran		.144	.122	42.29	50.0	15.4	
Chloroform	*	2.369	2.323	49.05	50.0	1.9*	
Cyclohexane		.993	.931	46.90	50.0	6.2	
1,1-Dichloropropene		1.358	1.360	50.06	50.0	-.1	
1,2-Dichloroethane		1.295	1.249	48.22	50.0	3.6	
Vinyl Acetate		.036	.034	47.44	50.0	5.1	RC, JC
2-Butanone		.069	.059	85.61	100.0	14.4	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

I b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP02700 Calibration Date: 03/19/97 Time: 1656

I b File ID: >DMJS3 Init. Calib. Date(s): 03/17/97 03/17/97

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

M n RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,1,1-Trichloroethane		.558	.575	51.50	50.0	-3.0
Carbon Tetrachloride		.506	.531	52.51	50.0	-5.0
Isobutyl Alcohol		.004	.002	405.38	625.0	35.1
Benzene		.669	.659	49.24	50.0	1.5
n-Heptane		.148	.164	55.44	50.0	-10.9
n-Butanol		.003	.003	530.70	625.0	15.1
Trichloroethene		.452	.490	54.12	50.0	-8.2
1,2-Dichloropropane	*	.348	.343	49.27	50.0	1.5*
Methyl Methacrylate		.159	.146	45.76	50.0	8.5
Dibromomethane		.516	.530	51.34	50.0	-2.7
1,4-Dioxane		.002	.002	515.07	625.0	17.6
n-Propyl Acetate		.081	.075	46.03	50.0	7.9
Bromodichloromethane		.848	.894	52.72	50.0	-5.4
2-Nitropropane		.067	.057	85.01	100.0	15.0
2-Chloroethyl Vinyl Ether		.176	.165	93.65	100.0	6.3
cis-1,3-Dichloropropene		.511	.517	50.60	50.0	-1.2
trans-1,3-Dichloropropene		.448	.450	50.24	50.0	-.5
1,1,2-Trichloroethane		.361	.367	50.94	50.0	-1.9
Dibromochloromethane		.876	.941	53.72	50.0	-7.4
Bromoform	#	.711	.733	51.51	50.0	-3.0#
trans-1,4-Dichloro-2-Butene		.094	.094	124.58	125.0	.3
4-Methyl-2-Pentanone		.300	.235	78.20	100.0	21.8
Toluene	*	.973	.975	50.11	50.0	-.2*
Ethyl Methacrylate		.439	.404	45.98	50.0	8.0
Tetrachloroethene		.577	.683	59.20	50.0	-18.4
1,3-Dichloropropane		.614	.618	50.31	50.0	-.6
2-Hexanone		.162	.129	79.84	100.0	20.2
1,2-Dibromoethane		.907	.943	51.96	50.0	-3.9
Chlorobenzene	#	.908	.946	52.12	50.0	-4.2#
1,1,1,2-Tetrachloroethane		.612	.667	54.50	50.0	-9.0
Ethylbenzene	*	.329	.336	51.04	50.0	-2.1*
m+p-Xylene		.420	.438	104.30	100.0	-4.3
o-Xylene		.418	.423	50.64	50.0	-1.3
Styrene		.743	.765	51.43	50.0	-2.9

not compd of interest

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/19/97 Time: 1656

Lab File ID: >DMJS3 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND	RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Isopropylbenzene	1.198	1.233	51.45	50.0	-2.9	
Cyclohexanone	.022	.020	514.01	625.0	17.8	-not compound of interest
1,1,2,2-Tetrachloroethane	# .758	.697	46.00	50.0	8.0#	
Bromobenzene	.626	.674	53.82	50.0	-7.6	
1,2,3-Trichloropropane	.158	.162	51.52	50.0	-3.0	
n-Propylbenzene	1.515	1.521	50.19	50.0	-.4	
2-Chlorotoluene	.358	.373	52.11	50.0	-4.2	
1,3,5-Trimethylbenzene	.969	1.013	52.30	50.0	-4.6	
4-Chlorotoluene	.364	.385	52.94	50.0	-5.9	
tert-Butylbenzene	1.396	1.411	50.55	50.0	-1.1	
Pentachloroethane	.490	.420	42.87	50.0	14.3	
1,2,4-Trimethylbenzene	.988	1.053	53.27	50.0	-6.5	
sec-Butylbenzene	1.346	1.465	54.43	50.0	-8.9	
1,3-Dichlorobenzene	.819	.903	55.13	50.0	-10.3	
p-Isopropyltoluene	1.027	1.148	55.88	50.0	-11.8	
1,4-Dichlorobenzene	.953	1.048	55.01	50.0	-10.0	
n-Butylbenzene	.996	1.145	57.47	50.0	-14.9	
1,2-Dichlorobenzene	.816	.859	52.60	50.0	-5.2	
1,2-Dibromo-3-Chloropropane	.151	.111	36.90	50.0	26.2	
1,2-Dichloroethane-d4	1.209	1.189	49.15	50.0	1.7	
Toluene-d8	1.014	1.009	49.73	50.0	.5	
4-Bromofluorobenzene	.950	.976	51.38	50.0	-2.8	

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

ab Name: LANCASTER LABS Contract: _____.

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

ab File ID (Standard): >DMJS3 Date Analyzed: 03/19/97

Instrument ID: HP02700 Time Analyzed: 16:56

atrix:(soil/water) SOIL Level:(low/med) MED Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	49995	8.46	155664	10.09	118333	14.34
	UPPER LIMIT	99990		311328		236666	
	LOWER LIMIT	24998		77832		59167	
	EPA SAMPLE NO.						
01	VBLKD41	47316	8.46	151193	10.09	118053	14.35
02	K2-BR	42333	8.48	118257	10.08	98855	14.34
03	K2-BRMS	47690	8.46	151038	10.09	114978	14.37
04	K2-BRMSD	47215	8.46	146723	10.09	114471	14.36
05	K2-BRMS1	46497	8.46	145266	10.08	113636	14.33
06	K2-BRMSD1	45964	8.46	140541	10.07	110446	14.31
07							
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22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DMKT1 BFB Injection Date: 03/20/97

Instrument ID: HP02700 BFB Injection Time: 00:21

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.2
75	30.0 - 60.0% of mass 95	55.3
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	0.0 (0.0)1
174	Greater than 50.0% of mass 95	82.2
175	5.0 - 9.0% of mass 174	6.6 (8.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.1 (98.7)1
177	5.0 - 9.0% of mass 176	5.6 (7.0)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
01	VSTD050	050 PPB CC	>DMKS1	03/20/97	00:41
02	VBLKD42	VBLKD42	>DMKB1	03/20/97	01:35
03	LCS-42	LCS-42	>DMK01	03/20/97	02:36
04	LCSD-42	LCSD-42	>DMK03	03/20/97	04:45
05					
06					
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7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/20/97 Time: 0041

Lab File ID: >DMKS1 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dichlorodifluoromethane		2.165	2.028	46.83	50.0	6.3
Chloromethane	#	.743	.679	45.68	50.0	8.6#
Vinyl Chloride	*	.776	.714	46.02	50.0	8.0*
Bromomethane		1.068	1.077	50.43	50.0	-.9
Chloroethane		.403	.407	50.41	50.0	-.8
Trichlorofluoromethane		1.595	1.661	52.05	50.0	-4.1
Ethyl Ether		.414	.386	46.62	50.0	6.8
Acrolein		.089	.086	478.71	500.0	4.3
1,1-Dichloroethene	*	.976	.822	42.11	50.0	15.8*
Freon 113		2.256	2.032	45.03	50.0	9.9
Acetone		.143	.122	88.36	100.0	11.6
Methyl Iodide		4.138	3.658	44.20	50.0	11.6
Carbon Disulfide		3.036	2.306	37.97	50.0	24.1
2-Propanol		.023	.021	221.21	250.0	11.5
Allyl Chloride		.918	.782	42.59	50.0	14.8
Methylene Chloride		1.166	.960	44.20	50.0	11.6
t-Butyl Alcohol		.054	.057	262.31	250.0	-4.9
Acrylonitrile		.132	.126	474.52	500.0	5.1
Methyl t-Butyl Ether		1.632	1.433	43.89	50.0	12.2
trans-1,2-Dichloroethene		1.025	.906	44.21	50.0	11.6
n-Hexane		.730	.629	43.14	50.0	13.7
1,1-Dichloroethane	#	1.766	1.563	44.26	50.0	11.5#
2-Chloro-1,3-Butadiene		1.194	1.009	42.24	50.0	15.5
cis-1,2-Dichloroethene		1.126	1.007	44.73	50.0	10.5
Propionitrile		.048	.043	225.24	250.0	9.9
Methacrylonitrile		.185	.166	112.56	125.0	9.9
Tetrahydrofuran		.144	.125	43.35	50.0	13.3
Chloroform	*	2.369	2.208	46.60	50.0	6.8*
Cyclohexane		.993	.826	41.60	50.0	16.8
1,2-Dichloroethane		1.295	1.234	47.63	50.0	4.7
Vinyl Acetate		.036	.036	49.91	50.0	.2
2-Butanone		.069	.067	96.81	100.0	3.2
1,1,1-Trichloroethane		.558	.524	46.91	50.0	6.2
Carbon Tetrachloride		.506	.477	47.10	50.0	5.8

RRF out of control, but not compd of interest

RC, JF

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/20/97 Time: 0041

Lab File ID: >DMKS1 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Isobutyl Alcohol		.004	.004	610.94	625.0	2.2
Benzene		.669	.611	45.63	50.0	8.7
n-Heptane		.148	.153	51.67	50.0	-3.3
n-Butanol		.003	.003	568.69	625.0	9.0
Trichloroethene		.452	.427	47.16	50.0	5.7
1,2-Dichloropropane	*	.348	.323	46.49	50.0	7.0*
Methyl Methacrylate		.159	.151	47.25	50.0	5.5
Dibromomethane		.516	.526	50.88	50.0	-1.8
1,4-Dioxane		.002	.002	631.97	625.0	-1.1
n-Propyl Acetate		.081	.079	48.86	50.0	2.3
Bromodichloromethane		.848	.852	50.24	50.0	-.5
2-Nitropropane		.067	.063	94.30	100.0	5.7
2-Chloroethyl Vinyl Ether		.176	.175	99.05	100.0	.9
cis-1,3-Dichloropropene		.511	.497	48.62	50.0	2.8
trans-1,3-Dichloropropene		.448	.442	49.36	50.0	1.3
1,1,2-Trichloroethane		.361	.356	49.40	50.0	1.2
Dibromochloromethane		.876	.912	52.06	50.0	-4.1
Bromoform	#	.711	.717	50.39	50.0	-.8#
trans-1,4-Dichloro-2-Butene		.094	.091	121.00	125.0	3.2
4-Methyl-2-Pentanone		.300	.273	91.03	100.0	9.0
Toluene	*	.973	.908	46.65	50.0	6.7*
Ethyl Methacrylate		.439	.416	47.39	50.0	5.2
Tetrachloroethene		.577	.565	48.93	50.0	2.1
2-Hexanone		.162	.155	95.84	100.0	4.2
1,2-Dibromoethane		.907	.941	51.87	50.0	-3.7
Chlorobenzene	#	.908	.882	48.57	50.0	2.9#
1,1,1,2-Tetrachloroethane		.612	.627	51.18	50.0	-2.4
Ethylbenzene	*	.329	.325	49.45	50.0	1.1*
m+p-Xylene		.420	.399	95.06	100.0	4.9
o-Xylene		.418	.407	48.77	50.0	2.5
Styrene		.743	.726	48.84	50.0	2.3
Isopropylbenzene		1.198	1.174	48.98	50.0	2.0
Cyclohexanone		.022	.029	722.17	625.0	-15.5
1,1,2,2-Tetrachloroethane	#	.758	.783	51.67	50.0	-3.3#

RRF out of control, but not compd of interest

7A

VOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/20/97 Time: 0041

Lab File ID: >DMKS1 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND	$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichloropropane	.158	.166	52.61	50.0	-5.2
Pentachloroethane	.490	.474	48.37	50.0	3.3
1,3-Dichlorobenzene	.819	.816	49.84	50.0	.3
1,4-Dichlorobenzene	.953	.946	49.65	50.0	.7
1,2-Dichlorobenzene	.816	.770	47.16	50.0	5.7
1,2-Dibromo-3-Chloropropane	.151	.106	35.11	50.0	29.8
1,2-Dichloroethane-d4	1.209	1.230	50.86	50.0	-1.7
Toluene-d8	1.014	1.037	51.15	50.0	-2.3
4-Bromofluorobenzene	.950	.986	51.88	50.0	-3.8

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

GC Column ID (Standard): >DMKS1 Date Analyzed: 03/20/97

Instrument ID: HP02700 Time Analyzed: 00:41

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	44472	8.53	138769	10.14	105607	14.40
	UPPER LIMIT	88944		277538		211214	
	LOWER LIMIT	22236		69385		52804	
	EPA SAMPLE NO.						
01	VBLKD42	42852	8.52	136111	10.13	107767	14.40
02	LCS-42	43382	8.52	137914	10.13	103197	14.37
03	LCSD-42	44360	8.51	141313	10.12	107066	14.37
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20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DMLT1 BFB Injection Date: 03/21/97

Instrument ID: HP02700 BFB Injection Time: 01:28

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.7
75	30.0 - 60.0% of mass 95	45.6
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	70.6
175	5.0 - 9.0% of mass 174	4.8 (6.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	69.0 (97.8)1
177	5.0 - 9.0% of mass 176	4.6 (6.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	050 PPB CC	>DMLS1	03/21/97	01:52
02	VBLKD45	VBLKD45	>DMLB1	03/21/97	02:40
03	MW-2-	2677694	>DML02	03/21/97	04:19
04	MW-1-	2677693	>DML03	03/21/97	05:09
05					
06					
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7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02700 Calibration Date: 03/21/97 Time: 0152

Lab File ID: >DMLS1 Init. Calib. Date(s): 03/17/97 03/17/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chloromethane	#	.743	.673	45.24	50.0	9.5#
Vinyl Chloride	*	.776	.706	45.50	50.0	9.0*
Bromomethane		1.068	.986	46.18	50.0	7.6
Chloroethane		.403	.322	39.95	50.0	20.1
1,1-Dichloroethene	*	.976	.919	47.08	50.0	5.8*
Acetone		.143	.099	70.75	100.0	29.2
Carbon Disulfide		3.036	2.503	41.22	50.0	17.6
Methylene Chloride		1.166	1.035	47.67	50.0	4.7
trans-1,2-Dichloroethene		1.025	.991	48.33	50.0	3.3
1,1-Dichloroethane	#	1.766	1.700	48.12	50.0	3.8#
cis-1,2-Dichloroethene		1.126	1.078	47.87	50.0	4.3
Chloroform	*	2.369	2.342	49.44	50.0	1.1*
1,2-Dichloroethane		1.295	1.302	50.25	50.0	-.5
Vinyl Acetate		.036	.033	45.24	50.0	9.5
2-Butanone		.069	.060	87.76	100.0	12.2
1,1,1-Trichloroethane		.558	.564	50.46	50.0	-.9
Carbon Tetrachloride		.506	.492	48.62	50.0	2.8
Benzene		.669	.638	47.69	50.0	4.6
Trichloroethene		.452	.437	48.25	50.0	3.5
1,2-Dichloropropane	*	.348	.332	47.80	50.0	4.4*
Bromodichloromethane		.848	.876	51.64	50.0	-3.3
cis-1,3-Dichloropropene		.511	.495	48.44	50.0	3.1
trans-1,3-Dichloropropene		.448	.435	48.59	50.0	2.8
1,1,2-Trichloroethane		.361	.357	49.50	50.0	1.0
Dibromochloromethane		.876	.894	51.05	50.0	-2.1
Bromoform	#	.711	.700	49.22	50.0	1.6#
4-Methyl-2-Pentanone		.300	.260	86.53	100.0	13.5
Toluene	*	.973	.956	49.12	50.0	1.8*
Tetrachloroethene		.577	.582	50.46	50.0	-.9
2-Hexanone		.162	.146	89.86	100.0	10.1
Chlorobenzene	#	.908	.928	51.12	50.0	-2.2#
Ethylbenzene	*	.329	.336	51.15	50.0	-2.3*
m+p-Xylene		.420	.430	102.32	100.0	-2.3
o-Xylene		.418	.422	50.54	50.0	-1.1

RO, JF

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

I b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP02700 Calibration Date: 03/21/97 Time: 0152

I b File ID: >DMLS1 Init. Calib. Date(s): 03/17/97 03/17/97

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

M n RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND	$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Styrene	.743	.755	50.75	50.0	-1.5
1,1,2,2-Tetrachloroethane #	.758	.801	52.84	50.0	-5.7#
1,2-Dichloroethane-d4	1.209	1.272	52.59	50.0	-5.2
Toluene-d8	1.014	1.025	50.53	50.0	-1.1
4-Bromofluorobenzene	.950	.982	51.68	50.0	-3.4

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DMLS1 Date Analyzed: 03/21/97

Instrument ID: HP02700 Time Analyzed: 01:52

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

		IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
	12 HOUR STD	42257		8.55	136728		10.17	100832		14.42
	UPPER LIMIT	84514			273456			201664		
	LOWER LIMIT	21129			68364			50416		
	EPA SAMPLE NO.									
01	VBLKD45	43683		8.53	138067		10.15	108424		14.43
02	MW-2-	42862		8.53	135242		10.16	109016		14.44
03	MW-1-	43203		8.53	134993		10.16	106131		14.40
04										
05										
06										
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18										
19										
20										
21										
22										

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMIT4 BFB Injection Date: 03/18/97

Instrument ID: HP03973 BFB Injection Time: 12:52

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.9
75	30.0 - 60.0% of mass 95	46.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	60.6
175	5.0 - 9.0% of mass 174	4.6 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	59.0 (97.2)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)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
01	VSTD004	004 PPB IC	>KMII1	03/18/97	13:17
02	VSTD020	020 PPB IC	>KMII2	03/18/97	13:54
03	VSTD050	050 PPB IC	>KMII3	03/18/97	14:31
04	VSTD100	100 PPB IC	>KMII4	03/18/97	15:07
05	VSTD300	300 PPB IC	>KMII5	03/18/97	15:44
06					
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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

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

RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >KMI11 RRF 20= >KMI12
RRF 50= >KMI13 RRF100= >KMI14 RRF300= >KMI15

	COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
	Chlorodifluoromethane	1.210	1.299	1.400	1.505	1.520	1.387	9.6	AVG	
	Chloromethane	# .958	1.072	1.094	1.125	1.084	1.067	6.0	AVG	#
	Vinyl Chloride	* .997	1.116	1.215	1.266	1.226	1.164	9.3	AVG	*
	Bromomethane	1.040	1.198	1.200	1.205	1.058	1.140	7.3	AVG	
	Chloroethane	.696	.762	.801	.836	.784	.776	6.7	AVG	
*	Trichlorofluoromethane	.932	1.017	1.134	1.218	1.268	1.114	12.5	AVG	
	Ethyl Ether	1.044	1.096	1.145	1.139	1.118	1.108	3.7	AVG	
	Propolein	.234	.250	.230	.207	.228	.230	6.7	AVG	
	Dichloroethene	* 1.253	1.146	1.393	1.408	1.402	1.321	8.8	AVG	*
	Freon 113	2.759	2.063	2.479	2.466	2.463	2.446	10.1	AVG	
	Acetone	.385	.324	.298	.269	.291	.313	14.3	AVG	
	Methyl Iodide	2.844	2.788	3.185	3.239	3.216	3.054	7.2	AVG	
	Carbon Disulfide	3.146	2.903	3.543	3.716	3.801	3.422	11.2	AVG	
	2-Propanol	.062	.062	.066	.063	.068	.064	4.0	AVG	
	Allyl Chloride	.853	.824	.847	.893	.893	.862	3.5	AVG	
	Methylene Chloride	1.570	1.412	1.528	1.548	1.528	1.517	4.0	AVG	
	t-Butyl Alcohol	.177	.159	.167	.154	.160	.163	5.5	AVG	
	Acrylonitrile	.326	.395	.369	.335	.362	.357	7.7	AVG	
	Methyl t-Butyl Ether	4.005	3.855	4.013	3.979	3.782	3.927	2.6	AVG	
	trans-1,2-Dichloroethene	1.388	1.289	1.497	1.528	1.494	1.439	6.9	AVG	
	n-Hexane	1.799	1.607	2.040	1.985	2.049	1.896	10.0	AVG	
	1,1-Dichloroethane	# 2.608	2.468	2.793	2.839	2.790	2.700	5.8	AVG	#
	Isopropanol	.007	.013	.017	.018	.020	.015	32.4	2NDDEG	— RRF out of control, but not compd of interest
	2-Chloro-1,3-Butadiene	1.819	1.770	2.164	2.235	2.210	2.039	11.1	AVG	
	2,2-Dichloropropane	1.487	1.430	1.645	1.641	1.544	1.549	6.1	AVG	
	cis-1,2-Dichloroethene	1.457	1.413	1.588	1.621	1.587	1.533	6.0	AVG	
	Propionitrile	.146	.120	.141	.143	.150	.140	8.3	AVG	
	Methacrylonitrile	.534	.453	.496	.503	.512	.500	5.9	AVG	
	Tetrahydrofuran	.349	.423	.430	.448	.453	.421	10.0	AVG	
	Chloroform	* 2.707	2.500	2.801	2.815	2.721	2.709	4.7	AVG	*
	Cyclohexane	2.230	2.023	2.437	2.398	2.359	2.290	7.3	AVG	
	1,1-Dichloropropene	1.927	1.772	2.130	2.114	2.027	1.994	7.4	AVG	
	1,2-Dichloroethane	1.711	1.700	1.816	1.772	1.630	1.726	4.1	AVG	
	Vinyl Acetate	.018	.035	.053	.055	.060	.044	40.1	2NDDEG	LQ, JQ

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

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

_____.

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >KMI11 RRF 20= >KMI12

RRF 50= >KMI13 RRF100= >KMI14 RRF300= >KMI15

COMPOUND		RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Butanone		.131	.138	.129	.121	.136	.131	5.1	AVG
1,1,1-Trichloroethane		.397	.362	.439	.439	.431	.414	8.2	AVG
Carbon Tetrachloride		.329	.301	.363	.368	.357	.344	8.2	AVG
Isobutyl Alcohol		.010	.005	.007	.007	.008	.008	20.7	2NDDEG
Benzene		.926	.848	.981	.981	.943	.936	5.9	AVG
n-Heptane		.234	.214	.267	.265	.271	.250	10.1	AVG
n-Butanol		.005	.003	.005	.006	.007	.005	23.8	2NDDEG
Trichloroethene		.322	.301	.363	.365	.365	.343	8.7	AVG
1,2-Dichloropropane	*	.433	.379	.418	.420	.416	.413	4.9	AVG *
Ethyl Methacrylate		.291	.258	.285	.283	.272	.278	4.7	AVG
Dibromomethane		.312	.302	.334	.332	.321	.320	4.3	AVG
1,4-Dioxane		.003	.003	.003	.003	.003	.003	10.2	AVG
Propyl Acetate		.163	.155	.162	.162	.165	.162	2.3	AVG
Bromodichloromethane		.549	.524	.586	.587	.565	.562	4.7	AVG
2-Nitropropane		.104	.113	.093	.085	.089	.097	12.1	AVG
2-Chloroethyl Vinyl Ether		.257	.297	.282	.254	.270	.272	6.6	AVG
cis-1,3-Dichloropropene		.515	.512	.574	.571	.565	.547	5.7	AVG
trans-1,3-Dichloropropene		.408	.448	.489	.491	.483	.464	7.8	AVG
1,1,2-Trichloroethane		.356	.346	.366	.361	.345	.355	2.6	AVG
Dibromochloromethane		.464	.474	.513	.511	.485	.489	4.5	AVG
Bromoform	#	.334	.331	.367	.366	.344	.348	4.9	AVG #
trans-1,4-Dichloro-2-Butene		.150	.134	.144	.138	.117	.137	9.2	AVG
4-Methyl-2-Pentanone		.762	.654	.622	.574	.597	.642	11.5	AVG
Toluene	*	1.184	1.207	1.392	1.405	1.362	1.310	8.1	AVG *
Ethyl Methacrylate		.591	.681	.756	.752	.744	.705	10.0	AVG
Tetrachloroethene		.300	.315	.379	.380	.377	.350	11.3	AVG
1,3-Dichloropropane		.672	.702	.752	.733	.676	.707	4.9	AVG
2-Hexanone		.260	.338	.378	.344	.374	.339	14.0	AVG
1,2-Dibromoethane		.546	.594	.652	.644	.619	.611	7.0	AVG
Chlorobenzene	#	.840	.873	.989	.997	.975	.935	7.8	AVG #
1,1,1,2-Tetrachloroethane		.370	.399	.448	.450	.431	.420	8.2	AVG
Ethylbenzene	*	.380	.375	.451	.448	.416	.414	8.7	AVG *
m+p-Xylene		.491	.511	.590	.592	.551	.547	8.4	AVG
o-Xylene		.490	.484	.564	.571	.536	.529	7.7	AVG

RRFs out of control, but not compds of interest

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

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

_____.

(1) RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >KMII1 RRF 20= >KMII2

RRF 50= >KMII3 RRF100= >KMII4 RRF300= >KMII5

COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Styrene	.760	.892	1.009	1.003	.933	.920	11.1	AVG
Isopropylbenzene	1.379	1.395	1.626	1.626	1.501	1.505	7.9	AVG
Cyclohexanone	.025	.032	.036	.023	.022	.028	22.8	2NDDEG
1,1,2,2-Tetrachloroethane #	.842	.811	.834	.810	.703	.800	7.0	AVG #
Bromobenzene	.375	.419	.470	.470	.428	.432	9.2	AVG
1,2,3-Trichloropropane	.174	.171	.177	.169	.146	.167	7.5	AVG
n-Propylbenzene	1.909	1.707	1.990	1.976	1.621	1.841	9.1	AVG
2-Chlorotoluene	.321	.313	.354	.356	.316	.332	6.3	AVG
1,3,5-Trimethylbenzene	1.142	1.122	1.299	1.292	1.005	1.172	10.6	AVG
4-Chlorotoluene	.354	.366	.398	.395	.338	.370	7.0	AVG
tert-Butylbenzene	1.308	1.353	1.532	1.520	1.119	1.367	12.4	AVG
1,2,4,5-Tetrachloroethane	.215	.265	.269	.279	.206	.247	13.7	AVG
1,2,4-Trimethylbenzene	1.061	1.132	1.289	1.266	.927	1.135	13.2	AVG
sec-Butylbenzene	1.400	1.424	1.816	1.794	1.329	1.553	15.0	AVG
1,3-Dichlorobenzene	.546	.597	.715	.703	.562	.624	12.7	AVG
4-Isopropyltoluene	1.179	1.194	1.400	1.371	.926	1.214	15.6	2NDDEG
1,4-Dichlorobenzene	.800	.809	.871	.884	.660	.805	11.1	AVG
n-Butylbenzene	1.198	1.217	1.480	1.446	1.000	1.268	15.6	2NDDEG
1,2-Dichlorobenzene	.688	.684	.743	.731	.532	.676	12.5	AVG
1,2-Dibromo-3-Chloropropane	.139	.131	.144	.143	.106	.133	12.1	AVG
1,2,4-Trichlorobenzene	.418	.445	.501	.481	.421	.453	8.1	AVG
Hexachlorobutadiene	.187	.180	.218	.200	.183	.194	8.2	AVG
Naphthalene	.980	.964	1.063	.997	.864	.974	7.4	AVG
1,2,3-Trichlorobenzene	.367	.382	.424	.384	.358	.383	6.6	AVG
1,2-Dichloroethane-d4	1.457	1.533	1.567	1.543	1.499	1.520	2.8	AVG
Toluene-d8	1.043	1.125	1.236	1.250	1.258	1.182	8.0	AVG
4-Bromofluorobenzene	.552	.623	.679	.685	.629	.634	8.5	AVG

— RRFs out of control, but not a compd of interest

Exporting data, QM, 4/4/97.

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KM111 RF 4.00	>KM112 RF 20.00	>KM113 RF 50.00	>KM114 RF 100.00	>KM115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
1)	Dichlorodifluoromethane	1.20983	1.29948	1.39979	1.50509	1.52011	1.38686	9.598	.999941	.999943	2.48	2.18	
2)	Freon 114/114a	-	-	-	-	-	-	-	-	-	-	-	(Conc
3)	Chloromethane	.95832	1.07170	1.09391	1.12487	1.08396	1.06655	5.966	.999895	.999986	-.593	1.24	
4)	Vinyl Chloride	.99650	1.11628	1.21518	1.26614	1.22555	1.16393	9.330	.999881	.999968	.338	2.08	
5)	Bromomethane	1.04020	1.19806	1.20017	1.20516	1.05750	1.14022	7.338	.998813	.999978	-5.15	1.49	
6)	Chloroethane	.69579	.76193	.80072	.83645	.78387	.77575	6.747	.999678	.999956	-1.18	1.97	
7)	Dichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	-	
8)	Trichlorofluoromethane	.93225	1.01725	1.13418	1.21845	1.26831	1.11409	12.496	.999888	.999951	3.82	2.37	
9)	n-Pentane	-	-	-	-	-	-	-	-	-	-	-	
10)	Ethyl Ether	1.04387	1.09577	1.14516	1.13901	1.11825	1.10841	3.695	.999966	.999997	-.455	.639	
11)	Furfuran	-	-	-	-	-	-	-	-	-	-	-	
12)	Acrolein	.23422	.24983	.22995	.20708	.22809	.22983	6.668	.999318	.999750	11.32	-33.29	(Conc
13)	1,1-Dichloroethene	1.25279	1.14637	1.39289	1.40846	1.40230	1.32056	8.845	.999925	.999941	1.34	2.09	
14)	Freon 113	2.75856	2.06322	2.47853	2.46648	2.46293	2.44594	10.139	.999921	.999926	.777	1.22	
15)	Freon 113/113a	-	-	-	-	-	-	-	-	-	-	-	(Conc
16)	Acetone	.38516	.32362	.29755	.26867	.29060	.31312	14.306	.999465	.999821	.0684	-8.23	(Conc
17)	Methyl Iodide	2.84375	2.78824	3.18542	3.23860	3.21611	3.05442	7.181	.999956	.999971	1.02	1.72	
18)	Carbon Disulfide	3.14593	2.90264	3.54268	3.71625	3.80137	3.42177	11.234	.999919	.999927	3.11	2.59	
19)	2-Propanol	.06154	.06232	.06577	.06306	.06766	.06407	4.001	.999769	.999948	13.87	-2.59	(Conc
20)	Acetonitrile	-	-	-	-	-	-	-	-	-	-	-	(Conc
21)	Allyl Chloride	.85331	.82391	.84750	.89290	.89276	.86207	3.498	.999964	.999964	1.25	1.19	
22)	3-Chloro-1-Propene	-	-	-	-	-	-	-	-	-	-	-	
23)	Methylene Chloride	1.56966	1.41163	1.52818	1.54775	1.52781	1.51700	4.045	.999967	.999982	.205	.938	
)	t-Butyl Alcohol	.17694	.15894	.16696	.15397	.15969	.16330	5.464	.999821	.999898	-2.33	-13.90	(Conc
25)	Acrylonitrile	.32583	.39473	.36887	.33540	.36235	.35743	7.700	.999535	.999781	8.32	-24.59	(Conc
26)	Methyl t-Butyl Ether	4.00474	3.85494	4.01263	3.97914	3.78196	3.92668	2.620	.999823	.999995	-2.01	.571	
27)	trans-1,2-Dichloroethene	1.38754	1.28947	1.49730	1.52806	1.49381	1.43924	6.891	.999899	.999956	.527	1.94	
28)	n-Hexane	1.79914	1.60722	2.04007	1.98475	2.04911	1.89606	10.036	.999888	.999897	2.23	1.65	
29)	Hexane	-	-	-	-	-	-	-	-	-	-	-	
30)	1,1-Dichloroethane	2.60839	2.46759	2.79295	2.83851	2.79023	2.69954	5.809	.999935	.999969	.502	1.61	
31)	di-Isopropyl Ether	-	-	-	-	-	-	-	-	-	-	-	
32)	1-Propanol	.00745	.01333	.01703	.01808	.01975	.01513	32.373	.999901	.999927	111.64	99.74	(Conc
33)	2-Chloro-1,3-Butadiene	1.81860	1.76954	2.16360	2.23485	2.21008	2.03934	11.083	.999902	.999934	1.61	2.65	
34)	2,2-Dichloropropane	1.48705	1.43033	1.64486	1.64101	1.54404	1.54946	6.089	.999658	.999964	-1.50	1.81	
35)	cis-1,2-Dichloroethene	1.45694	1.41272	1.58761	1.62103	1.58691	1.53304	6.004	.999925	.999971	.417	1.70	
36)	Propionitrile	.14579	.12023	.14145	.14275	.15021	.14008	8.281	.999869	.999942	16.42	6.32	(Conc
37)	Ethyl Acetate	-	-	-	-	-	-	-	-	-	-	-	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KM111 RF 4.00	>KM112 RF 20.00	>KM113 RF 50.00	>KM114 RF 100.00	>KM115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
38)	Methyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
39)	Methacrylonitrile	.53357	.45324	.49587	.50340	.51210	.49964	5.910	.999950	.999960	3.31	1.33	(Conc
40)	Tetrahydrofuran	.34881	.42316	.42963	.44840	.45346	.42069	10.010	.999982	.999986	1.68	1.30	
41)	Chloroform	2.70716	2.49993	2.80106	2.81547	2.72133	2.70899	4.658	.999875	.999973	-.507	1.38	
42)	Cyclohexane	2.23020	2.02327	2.43695	2.39796	2.35915	2.28951	7.333	.999888	.999941	.249	1.62	
43)	1,1-Dichloropropene	1.92729	1.77200	2.12962	2.11402	2.02692	1.99397	7.422	.999763	.999944	-.589	1.94	
44)	1,2-Dichloroethane-d4	1.45694	1.53349	1.56744	1.54253	1.49879	1.51984	2.824	.999934	.999998	-1.28	.287	
45)	1,2-Dichloroethane	1.71065	1.69958	1.81570	1.77220	1.62957	1.72554	4.140	.999475	.999989	-3.50	.934	
46)	Vinyl Acetate	.01767	.03453	.05266	.05492	.06047	.04405	40.111	.999678	.999879	7.19	4.82	
47)	2-Butanone	.13141	.13807	.12945	.12083	.13564	.13108	5.081	.999218	.999868	5.57	-5.13	(Conc
48)	1,1,1-Trichloroethane	.39658	.36201	.43915	.43888	.43149	.41362	8.167	.999889	.999941	.599	1.96	
49)	Carbon Tetrachloride	.32885	.30073	.36276	.36814	.35729	.34355	8.248	.999839	.999939	.370	2.23	
50)	Isobutyl Alcohol	.00973	.00545	.00706	.00736	.00809	.00754	20.703	.999115	.999491	59.46	.286	(Conc
51)	Benzene	.92645	.84759	.98147	.98065	.94317	.93587	5.858	.999821	.999960	-.603	1.64	
52)	n-Heptane	.23350	.21408	.26730	.26519	.27133	.25028	10.082	.999923	.999925	2.19	1.90	
53)	Heptane	-	-	-	-	-	-	-	-	-	-	-	
54)	Isopropyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
55)	n-Butyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	(Conc
56)	n-Butanol	.00484	.00350	.00514	.00602	.00680	.00526	23.759	.999519	.999817	128.39	85.59	(Conc
57)	Trichloroethene	.32160	.30149	.36316	.36517	.36482	.34325	8.685	.999938	.999948	1.33	1.94	
58)	Freon 112/112a	-	-	-	-	-	-	-	-	-	-	-	(Conc
59)	1,2-Dichloropropane	.43291	.37880	.41819	.41984	.41563	.41307	4.912	.999965	.999977	.242	.911	
)	Methyl Methacrylate	.29066	.25769	.28473	.28325	.27211	.27769	4.696	.999853	.999976	-1.14	1.00	
)	Dibromomethane	.31165	.30204	.33437	.33235	.32104	.32029	4.282	.999876	.999981	-.796	1.18	
62)	1,4-Dioxane	.00334	.00281	.00322	.00284	.00262	.00296	10.244	.999326	.999780	-85.36	-14.54	(Conc
63)	Monochloroacetone	-	-	-	-	-	-	-	-	-	-	-	(Conc
64)	n-Propyl Acetate	.16338	.15531	.16243	.16183	.16529	.16165	2.339	.999976	.999995	1.05	.187	
65)	Bromodichloromethane	.54854	.52398	.58593	.58661	.56474	.56196	4.718	.999853	.999976	-.721	1.40	
66)	2-Nitropropane	.10425	.11299	.09299	.08463	.08853	.09668	12.115	.999590	.999722	-3.62	-8.75	(Conc
67)	2-Chloroethyl Vinyl Ether	.25707	.29711	.28217	.25437	.26989	.27212	6.553	.999647	.999777	-.0758	-4.87	(Conc
68)	Epichlorohydrin	-	-	-	-	-	-	-	-	-	-	-	
69)	cis-1,3-Dichloropropene	.51545	.51197	.57382	.57076	.56523	.54745	5.658	.999959	.999979	.342	1.21	
70)	trans-1,3-Dichloropropene	.40799	.44780	.48931	.49146	.48347	.46401	7.750	.999955	.999990	.220	1.36	
71)	1,1,2-Trichloroethane	.35616	.34617	.36613	.36147	.34501	.35499	2.615	.999836	.999993	-1.79	.664	
72)	Dibromochloromethane	.46353	.47375	.51314	.51064	.48492	.48920	4.511	.999781	.999988	-1.56	1.21	
73)	Bromoform	.33432	.33111	.36671	.36646	.34379	.34848	4.928	.999667	.999978	-1.83	1.54	
74)	2,3-Dichloro-1,3-Butadiene	-	-	-	-	-	-	-	-	-	-	-	(Conc

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

$\overline{RF}$ - Average Response Factor

RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KM111 RF 4.00	>KM112 RF 20.00	>KM113 RF 50.00	>KM114 RF 100.00	>KM115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
75)	cis-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
76)	trans-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
77)	cis-1,4-Dichloro-2-Butene	-	-	-	-	-	-	-	-	-	-	-	
78)	trans-1,4-Dichloro-2-Butene	.15017	.13368	.14394	.13791	.11691	.13652	9.235	.998228	.999978	-22.71	4.34	(Conc
79)	4-Methyl-2-Pentanone	.76235	.65383	.62218	.57406	.59742	.64197	11.452	.999809	.999905	-1.56	-5.75	(Conc
80)	Toluene-d8	1.04298	1.12539	1.23550	1.25015	1.25825	1.18246	8.006	.999989	.999990	1.29	1.35	
81)	Toluene	1.18380	1.20687	1.39220	1.40511	1.36217	1.31003	8.104	.999866	.999968	.0379	1.93	
82)	Ethyl Methacrylate	.59120	.68066	.75578	.75213	.74418	.70479	10.002	.999959	.999987	.425	1.43	
83)	Tetrachloroethene	.30028	.31476	.37915	.38030	.37720	.35034	11.257	.999925	.999956	1.13	2.16	
84)	1,3-Dichloropropane	.67233	.70201	.75157	.73324	.67586	.70700	4.936	.999489	.999990	-3.31	1.04	
85)	2-Hexanone	.26007	.33771	.37789	.34350	.37401	.33864	14.000	.999588	.999781	5.08	-.375	(Conc
86)	Butyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
87)	1,2-Dibromoethane	.54648	.59432	.65245	.64434	.61880	.61128	7.004	.999836	.999987	-1.08	1.27	
88)	Chlorobenzene	.84028	.87276	.98934	.99696	.97485	.93484	7.792	.999916	.999977	.245	1.71	
89)	1,1,1,2-Tetrachloroethane	.36995	.39882	.44830	.45007	.43121	.41967	8.240	.999813	.999980	-.660	1.78	
90)	Ethylbenzene	.38010	.37500	.45149	.44769	.41590	.41404	8.720	.999464	.999946	-1.77	2.31	
91)	m+p-Xylene	.49073	.51079	.58986	.59231	.55073	.54688	8.370	.999527	.999963	-3.41	4.40	(Conc
92)	Isoamyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
93)	Butyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
94)	o-Xylene	.48976	.48423	.56402	.57116	.53649	.52913	7.679	.999630	.999954	-1.12	2.24	
95)	Styrene	.76020	.89216	1.00945	1.00332	.93271	.91957	11.065	.999524	.999980	-1.94	2.06	
96)	Cumene	-	-	-	-	-	-	-	-	-	-	-	
97)	Isopropylbenzene	1.37914	1.39497	1.62552	1.62622	1.50098	1.50537	7.942	.999433	.999958	-2.05	2.23	
)	Cyclohexanone	.02540	.03219	.03606	.02252	.02174	.02758	22.769	.994087	.995511	-168.44	-32.57	(Conc
99)	4-Bromofluorobenzene	.55164	.62312	.67904	.68485	.62950	.63363	8.475	.999447	.999980	-2.42	1.95	
100)	1,1,2,2-Tetrachloroethane	.84221	.81132	.83425	.80989	.70290	.80011	7.017	.998590	.999990	-6.53	.912	
101)	Bromobenzene	.37511	.41901	.46975	.47028	.42830	.43249	9.182	.999290	.999974	-2.75	2.16	
102)	1,2,3-Trichloropropane	.17408	.17079	.17680	.16925	.14556	.16730	7.470	.998341	.999992	-7.19	.899	
103)	n-Propylbenzene	1.90917	1.70666	1.98973	1.97647	1.62067	1.84054	9.080	.996838	.999885	-7.33	3.07	
104)	2-Chlorotoluene	.32111	.31348	.35427	.35575	.31645	.33221	6.320	.998937	.999951	-3.78	2.24	
105)	1,3,5-Trimethylbenzene	1.14214	1.12162	1.29897	1.29219	1.00499	1.17198	10.613	.994713	.999824	-9.43	3.91	
106)	4-Chlorotoluene	.35367	.36649	.39804	.39481	.33778	.37016	7.042	.998161	.999960	-5.96	2.16	
107)	tert-Butylbenzene	1.30817	1.35300	1.53196	1.51995	1.11948	1.36651	12.437	.991864	.999723	-11.94	4.63	
108)	Pentachloroethane	.21521	.26512	.26893	.27924	.20555	.24681	13.706	.992200	.999606	-11.55	4.65	
109)	bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	
110)	1,2,4-Trimethylbenzene	1.06075	1.13208	1.28948	1.26603	.92694	1.13506	13.204	.991401	.999740	-12.37	4.68	
111)	sec-Butylbenzene	1.39971	1.42358	1.81636	1.79374	1.32939	1.55256	15.022	.991733	.999696	-10.62	5.39	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y Intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Comp No.	Compound	Files: >KM111 RF 4.00	>KM112 RF 20.00	>KM113 RF 50.00	>KM114 RF 100.00	>KM115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
112)	1,3-Dichlorobenzene	.54551	.59715	.71493	.70273	.56167	.62440	12.720	.995680	.999884	-8.10	3.82
113)	p-Isopropyltoluene	1.17899	1.19407	1.40006	1.37145	.92574	1.21406	15.635	.985172	.999380	-15.59	6.46
114)	1,4-Dichlorobenzene	.79994	.80883	.87123	.88373	.65992	.80473	11.058	.992939	.999704	-11.32	4.26
115)	1,2,3-Trichlorobutene-3	-	-	-	-	-	-	-	-	-	-	-
116)	Dicyclopentadiene	-	-	-	-	-	-	-	-	-	-	-
117)	Benzyl Chloride	-	-	-	-	-	-	-	-	-	-	-
118)	1,3-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
119)	1,4-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
120)	n-Butylbenzene	1.19842	1.21683	1.47975	1.44606	1.00023	1.26826	15.557	.987031	.999505	-14.24	6.16
121)	1,2-Dichlorobenzene	.68843	.68414	.74341	.73053	.53234	.67577	12.463	.991387	.999733	-13.23	4.27
122)	1,2-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
123)	1,2-Dibromo-3-Chloropropane	.13924	.13145	.14437	.14310	.10552	.13274	12.075	.992146	.999729	-12.45	4.19
124)	1,2,4-Trichlorobenzene	.41826	.44515	.50130	.48135	.42100	.45341	8.125	.998519	.999972	-5.46	1.84
125)	Hexachlorobutadiene	.18694	.17990	.21842	.20035	.18254	.19363	8.230	.999004	.999876	-4.33	1.35
126)	Naphthalene	.98014	.96420	1.06305	.99690	.86412	.97368	7.381	.998328	.999968	-6.76	1.18
127)	1,2,3-Trichlorobenzene	.36724	.38180	.42409	.38374	.35842	.38306	6.583	.999392	.999878	-4.23	.148

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y Intercept (nth degree) in UG/L

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKT1 BFB Injection Date: 03/20/97

Instrument ID: HP03973 BFB Injection Time: 03:07

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	46.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	64.4
175	5.0 - 9.0% of mass 174	4.4 (6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	62.3 (96.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.8)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
01	VSTD050	050 PPB CC	>KMKS1	03/20/97	03:29
02	VBLKK43	VBLKK43	>KMKB1	03/20/97	04:15
03	KMW-4	2677539	>KMK01	03/20/97	05:07
04	RB--1	2677540	>KMK02	03/20/97	05:42
05	RB-4-	2679085	>KMK03	03/20/97	06:17
06	RB-5-	2679086	>KMK04	03/20/97	06:52
07	FB-1-	2679087	>KMK05	03/20/97	07:28
08	TB-2-	2677695	>KMK06	03/20/97	08:28
09					
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7A
VOLATILE CONTINUING CALIBRATION CHECK

ab Name: LANCASTER LABS Contract: _____.

b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

nstrument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

b File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

atrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

n RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Chloromethane	#	1.067	.976	45.74	50.0	8.5#	
Vinyl Chloride	*	1.164	1.109	47.63	50.0	4.7*	
Bromomethane		1.140	1.170	51.30	50.0	-2.6	
Chloroethane		.776	.775	49.95	50.0	.1	
Trichlorofluoromethane		1.114	1.215	54.52	50.0	-9.0	
Acrolein		.230	.243	528.42	500.0	-5.7	
1,1-Dichloroethene	*	1.321	1.422	53.84	50.0	-7.7*	
Acetone		.313	.306	97.84	100.0	2.2	
Carbon Disulfide		3.422	3.814	55.73	50.0	-11.5	
Methylene Chloride		1.517	1.517	49.99	50.0	.0	
Acrylonitrile		.357	.381	532.67	500.0	-6.5	
trans-1,2-Dichloroethene		1.439	1.547	53.73	50.0	-7.5	
1,1-Dichloroethane	#	2.700	2.778	51.46	50.0	-2.9#	
cis-1,2-Dichloroethene		1.533	1.620	52.83	50.0	-5.7	
Chloroform	*	2.709	2.857	52.73	50.0	-5.5*	
1,2-Dichloroethane		1.726	1.793	51.95	50.0	-3.9	
Vinyl Acetate		.044	.046	44.80	50.0	10.4	RG, JD
2-Butanone		.131	.139	105.74	100.0	-5.7	
1,1,1-Trichloroethane		.414	.454	54.82	50.0	-9.6	
Carbon Tetrachloride		.344	.393	57.25	50.0	-14.5	
Benzene		.936	.984	52.58	50.0	-5.2	
Trichloroethene		.343	.379	55.25	50.0	-10.5	
1,2-Dichloropropane	*	.413	.415	50.20	50.0	-.4*	
Bromodichloromethane		.562	.605	53.82	50.0	-7.6	
2-Chloroethyl Vinyl Ether		.272	.317	116.65	100.0	-16.7	
cis-1,3-Dichloropropene		.547	.577	52.67	50.0	-5.3	
trans-1,3-Dichloropropene		.464	.489	52.69	50.0	-5.4	
1,1,2-Trichloroethane		.355	.375	52.88	50.0	-5.8	
Dibromochloromethane		.489	.532	54.33	50.0	-8.7	
Bromoform	#	.348	.380	54.55	50.0	-9.1#	
4-Methyl-2-Pentanone		.642	.712	110.85	100.0	-10.8	
Toluene	*	1.310	1.461	55.76	50.0	-11.5*	
Tetrachloroethene		.350	.406	58.01	50.0	-16.0	
2-Hexanone		.339	.456	134.77	100.0	-34.8	- J, UJ

7A
VOLATILE CONTINUING CALIBRATION CHECK

o Name: LANCASTER LABS Contract: _____.

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

I strument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

Lab File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

M trix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chlorobenzene	#	.935	1.043	55.79	50.0	-11.6#
Ethylbenzene	*	.414	.471	56.82	50.0	-13.6*
m+p-Xylene		.547	.627	114.69	100.0	-14.7
o-Xylene		.529	.596	56.34	50.0	-12.7
Styrene		.920	1.058	57.53	50.0	-15.1
1,1,2,2-Tetrachloroethane	#	.800	.812	50.75	50.0	-1.5#
1,2-Dichloroethane-d4		1.520	1.639	53.90	50.0	-7.8
Toluene-d8		1.182	1.370	57.94	50.0	-15.9
4-Bromofluorobenzene		.634	.744	58.72	50.0	-17.4

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >KMKS1 Date Analyzed: 03/20/97

Instrument ID: HP03973 Time Analyzed: 03:29

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	35981	8.67	167504	10.29	132054	14.56
	UPPER LIMIT	71962		335008		264108	
	LOWER LIMIT	17991		83752		66027	
	EPA SAMPLE NO.						
01	VBLKK43	34883	8.67	166429	10.28	142756	14.56
02	KMW-4	35473	8.68	163250	10.28	141538	14.57
03	RB--1	35329	8.69	161143	10.29	142230	14.56
04	RB-4-	35599	8.70	161239	10.28	140313	14.56
05	RB-5-	35276	8.67	161121	10.28	141285	14.56
06	FB-1-	34421	8.68	163384	10.28	142092	14.55
07	TB-2-	34453	8.68	162037	10.28	139989	14.55
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22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601-5994

RAW DATA LOGBOOK
GC/MS VOA SOLIDS PREPARATION LOG
ANALYSIS #374

Surrogate Standard (SS) 8240 SS Lot 0
Matrix Spike Solution(s) (MSS)
MeOH (Vender and Lot #) B&J Lot B0084

Date	Time	Sample #	L M	Weight (g)	MeOH (ml)	SS (ml)	MSS (ml)	Total Vol (ml)	Init/ Emp #	Comments
3/14/97	1855	2677287	M	4.02	7.5ml	1ml	1.5ml	10ml MeOH	MM/219	MS1
3/19/97	1858	2677287	M	3.98	7.5ml	1ml	1.5ml	10ml MeOH	MM/219	MSD
3-21-97	02:51	Balance ✓	—	5.00g	—	—	—	—	CAO/452	
"	02:53	2677693	M	4.01	9	1	—	10ml MeOH	CAO/452	
"	02:59	2677694	M	3.98	9	1	—	"	CAO/452	
"	18:53	2679080	L	4.98	—	—	—	5ml H_2O	DCH/27	MU
"	19:32	2679081 (MS)	L	5.03	—	—	—	5ml H_2O	DCH/27	MU
"	20:06	2679082 (MSD)	L	4.97	—	—	—	5ml H_2O	DCH/27	MU
"	20:38	2679073	L	4.98	—	—	—	5ml H_2O	DCH/27	MU
"	21:13	2679074	L	5.03	—	—	—	5ml H_2O	DCH/27	MU
"	21:46	2679075	L	1.03	—	—	—	5ml H_2O	DCH/27	MU
"	22:23	2679074	M	4.03	9	1	—	10ml	DCH/27	
3-24-97	06:03	Balance ✓	—	5.00g	—	—	—	—	CAO/452	
"	06:07	2679561	L	1.02	—	—	—	5ml H_2O	CAO/452	
3/24/97	9:00	2678789	L	4.95	—	—	—	5ml H_2O	TLS/628	
"	0906	2679080	L	5.04	—	—	—	5ml H_2O	MM/559	
"	0932	2679061	L	4.99	—	—	—	5ml H_2O	MM/559	MS
"	0938	2679082	L	4.99	—	—	—	5ml H_2O	MM/559	MSD
"	0942	2679073	L	5.04	—	—	—	5ml H_2O	MM/559	
"	0950	2679076	L	4.98	—	—	—	5ml H_2O	MM/559	
"	1030	2678789	L	4.98	—	—	—	5ml H_2O	TLS/628	RE
"	1151	2679074	L	5.03	—	—	—	5ml H_2O	MM/559	

1161 Rev. 4/8/92

REVIEWED and APPROVED by
Tracee L Nell 4/1/97

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP02700 (HP1)

First Shift

8240B — Second Shift C

Third Shift CAD

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>DMGT1	BFB	50NG BFB	03/16/97	23:23		0.00	
>DMGI1	VSTD004	004ppb IC	03/16/97	23:56		1.00	NH
>DMGI2	VSTD004	004ppb IC	03/17/97	00:32		1.00	
>DMGI3	VSTD020	020ppb IC	03/17/97	01:06		1.00	
>DMGI4	VSTD050	050ppb IC	03/17/97	01:45		1.00	NH
>DMGI5	VSTD100	100ppb IC	03/17/97	02:22		1.00	
>DMGI6	VSTD300	300 PPB IC	03/17/97	02:59		1.00	
>DMGI7	VSTD050	050ppb IC	03/17/97	04:26		1.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP02700 (HP1)

First Shift TLS

Second Shift RRM

Third Shift —

8240 Md soils / small water/med: col

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>DMJT3	BFB	50NG BFB	03/19/97	09:43		0.00	NU
>DMJT4	BFB	50NG BFB	03/19/97	10:02		0.00	
>DMJI1	VSTD004	004ppb IC	03/19/97	10:57		1.00	
>DMJI2	VSTD020	020ppb IC	03/19/97	11:33		1.00	
>DMJI3	VSTD050	050ppb IC	03/19/97	12:07		1.00	
>DMJI4	VSTD100	100ppb IC	03/19/97	13:43		1.00	
>DMJI5	VSTD300	300ppb IC	03/19/97	14:20		1.00	
>DMJS2	VSTD050	050 PPB CC	03/19/97	15:32		1.00	NU
>DMJS2	VSTD050	050 PPB CC	03/19/97	15:32		1.00	REPROCESSED!
>DMJS3	VSTD050	050 PPB CC	03/19/97	16:56		1.00	
>DMJS3	VSTD050	050 PPB CC	03/19/97	16:56		1.00	REPROCESSED!
>DMJB2	VBLKD41	VBLKD41	03/19/97	18:04	D0781	1.00	NU
>DMJB3	VBLKD41	VBLKD41	03/19/97	18:54	D0781	1.00	
>DMJ07	K2-BR	2677287	03/19/97	19:38	D0781	1.00	
>DMJ07	K2-BR	2677287	03/19/97	19:38	D0781	1.00	REPROCESSED!
>DMJ08	K2-BRMS	2677287	03/19/97	20:11	D0781	1.00	
>DMJ09	K2-BRMSD	2677287	03/19/97	20:46	D0781	1.00	
>DMJ10	K2-BRMS1	2677287	03/19/97	21:20	D0781	1.00	
>DMJ11	K2-BRMS1D	2677287	03/19/97	21:53	D0781	1.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP02700 (HP1)

First Shift —

Second Shift —

Third Shift CAD

8240 m-d soils

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>DMK.T1	BFB	50NG BFB	03/20/97	00:21	_____	0.00	
>DMKS1	USTD050	050 PPB CC	03/20/97	00:41	_____	1.00	
>DMKB1	VBLKD42	VBLKD42	03/20/97	01:35	D0781	1.00	
>DMK01	LCS-42	LCS-42	03/20/97	02:36	D0781	1.00	
>DMK02	LCSD-42	LCSD-42	03/20/97	03:12	D0781	1.00	NV
>DMK03	LCSD-42	LCSD-42	03/20/97	04:45	D0781	1.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP02700 (HP1)

First Shift —

Second Shift —

Third Shift CAO

8240 Med Soils

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>DMLT1	BFB	50NG BFB	03/21/97	01:28		0.00	
>DMLS1	VSTD050	050 PPB CC	03/21/97	01:52		1.00	
>DMLB1	VBLKD45	VBLKD45	03/21/97	02:40	D0781	1.00	
>DML01	MW-1-	2677693	03/21/97	03:30	D0781	100.00	Not used
>DML02	MW-2-	2677694	03/21/97	04:19	D0781	50.00	
>DML03	MW-1-	2677693	03/21/97	05:09	D0781	50.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift TSS

8240B Waters Third Shift JRN

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMIT4	BFB	50nG BFB	03/18/97	12:52		0.00	
>KMII1	VSTD004	004 PPB IC	03/18/97	13:17		1.00	
>KMII2	VSTD020	020 PPB IC	03/18/97	13:54		1.00	
>KMII3	VSTD050	050 PPB IC	03/18/97	14:31		1.00	
>KMII4	VSTD100	100 PPB IC	03/18/97	15:07		1.00	
>KMII5	VSTD300	300 PPB IC	03/18/97	15:44		1.00	
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	
>KMI12	HYTZHMS	2675558	03/18/97	19:05	K0771	5.00	NJU
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	REPROCESSED!
>KMI14	HYTZHMSD	2675558	03/18/97	20:45	K0771	5.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	REPROCESSED!
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	REPROCESSED!
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	REPROCESSED!
>KMI15	EXBLKC	2678334	03/18/97	21:19	K0771	1.00	
>KMI16	A-28-	2676414	03/18/97	22:03	K0771	1.00	
>KMI17	A-28-MS	2676414	03/18/97	22:50	K0771	1.00	
>KMI18	77184	2677184	03/18/97	23:45	K0771	5.00	
>KMI19	CSBXZ	2678079	03/19/97	00:19	K0771	5.00	
>KMI20	ZH941	2675109	03/19/97	00:51	K0771	5.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift —

Third Shift JRN

82 YOB waters

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMKT1	BFB	50nG BFB	03/20/97	03:07		0.00	
>KMKS1	VSTD050	050 PPB CC	03/20/97	03:29		1.00	
>KMKB1	VBLKK43	VBLKK43	03/20/97	04:15	K0781	1.00	
>KMK01	KMW-4	2677539	03/20/97	05:07	K0781	1.00	
>KMK02	RB--1	2677540	03/20/97	05:42	K0781	1.00	
>KMK03	RB-4-	2679085	03/20/97	06:17	K0781	1.00	
>KMK04	RB-5-	2679086	03/20/97	06:52	K0781	1.00	
>KMK05	FB-1-	2679087	03/20/97	07:28	K0781	1.00	
>KMK06	TB-2-	2677695	03/20/97	08:28	K0781	1.00	
>KMKX1	CLEAN BLK		03/20/97	10:22	K0781	1.00	NA In house use
>KMKX2	0.125PPB	ACRYLON	03/20/97	10:58	K0781	1.00	↓ ↓

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: LANCASTER LABS Contract: _____.

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

Level: (low/med) MED

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKMA0772	38	35	39	33	35	39		0
02	077MALCS2	47	44	53	40	40	46		0
03	MW-1-	65	41	63	37	38	27		0
04	MW-1-DL	0 D	0 D	0 D	0 D	0 D	0 D		0
05	MW-1-MS	81	43	66	39	42	30		0
06	MW-1-MSD	69	43	66	42	49	30		0
07	MW-2-	75	40	56	39	42	29		0
08	MW-2-RE	72	40	58	38	44	29		0
09	MW-2-DL	0 D	0 D	0 D	0 D	0 D	0 D		0
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
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21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4 (PHL)	= Phenol-d6	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

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

FORM II SV-2 1/87 Rev.

Dilution due to matrix problems, unable to use these surrogates to evaluate extraction efficiency.

Soil QC Windows

Compound Name	Soil LCS	Soil MS/MSD
Phenol	16.8 - 136.8	23.7 - 131.1
bis(2-Chloroethyl)ether	16.7 - 143.3	24.7 - 138.1
2-Chlorophenol	21.3 - 129.3	16.6 - 135.4
1,3-Dichlorobenzene	14.1 - 135.3	23.2 - 126.4
1,4-Dichlorobenzene	14.8 - 136	23 - 118.4
1,2-Dichlorobenzene	14.4 - 142.8	27 - 127.8
2-Methylphenol	68.1 - 105.9	54.8 - 109.4
2,2'-oxybis(1-Chloropropane)	40.4 - 95.4	29.1 - 101.9
4-Methylphenol	61.2 - 105	53.2 - 100.6
N-Nitroso-di-n-propylamine	20.6 - 153.8	32.5 - 146.5
Hexachloroethane	13.4 - 138.2	18.2 - 131.6
Nitrobenzene	18.5 - 140.3	33.1 - 129.7
Isophorone	29.4 - 126.6	18.6 - 134.4
2-Nitrophenol	16.2 - 144.6	21.6 - 138
2,4-Dimethylphenol	0 - 125.5	0 - 123.6
bis(2-chloroethoxy)methane	18.2 - 138.2	28. - 130.6
2,4-Dichlorophenol	18.8 - 135.2	24.5 - 125.9
1,2,4-Trichlorobenzene	18.3 - 137.1	54.6 - 103.2
Naphthalene	21.3 - 128.7	20.9 - 127.7
4-Chloroaniline	0 - 81.1	0 - 92.1
Hexachlorobutadiene	17.3 - 143.9	26.1 - 134.1
4-Chloro-3-methylphenol	18.6 - 145.2	28.8 - 133.2
2-Methylnaphthalene	74.1 - 91.3	53.9 - 104.3
Hexachlorocyclopentadiene	0 - 106	0 - 115.4
2,4,6-Trichlorophenol	14 - 146.6	6.9 - 146.1
2,4,5-Trichlorophenol	78.9 - 104.1	53.7 - 113.7
2-Chloronaphthalene	20 - 143.6	32.8 - 131.8
2-Nitroaniline	74.8 - 115.6	62.2 - 118.6
Dimethylphthalate	21 - 145.8	34.1 - 134.3
2,6-Dinitrotoluene	25.9 - 148.9	35.6 - 139.4
Acenaphthylene	16.2 - 133.8	19 - 131.2
3-Nitroaniline	20.8 - 86.5	16.0 - 69.5
Acenaphthene	16.6 - 136.6	18.2 - 134.6
2,4-Dinitrophenol	5.4 - 136.2	0 - 127.9

Compound Name	Soil LCS	Soil MS/MSD
4-Nitrophenol	15 - 149.4	17 - 142.4
Dibenzofuran	76.8 - 97.8	57.8 - 106.4
2,4-Dinitrotoluene	20.4 - 157.8	31.8 - 142.2
Diethylphthalate	20.6 - 156.2	33.2 - 140.6
4-Chlorophenyl phenylether	18.3 - 149.1	30.7 - 134.5
Fluorene	38.3 - 121.1	16 - 139
4-Nitroaniline	46.7 - 111.5	32.5 - 106.9
4,6-Dinitro-2-methylphenol	7.9 - 142.3	11.8 - 128.8
N-Nitrosodiphenylamine	20.1 - 146.7	32.9 - 135.5
4-Bromophenyl phenylether	20.6 - 152.6	34.1 - 141.5
Hexachlorobenzene	16.6 - 160.6	27.8 - 151.4
Pentachlorophenol	9.6 - 141.6	9.3 - 137.7
Phenanthrene	18.2 - 141.2	0 - 179.4
Anthracene	16 - 133	14.2 - 133.6
Carbazole	70.8 - 109.8	57.8 - 115.2
Di-n-butylphthalate	18.5 - 157.7	26.7 - 146.7
Fluoranthene	17.1 - 144.3	0 - 197
Pyrene	15.1 - 148.3	0 - 240.7
Butylbenzylphthalate	23.2 - 154	32.2 - 149.8
3,3'-Dichlorobenzidine	5.1 - 141.3	0 - 142.9
Benzo(a)anthracene	43.9 - 121.9	0 - 178.6
bis(2-ethylhexyl)phthalate	10.6 - 170.2	20.6 - 156.8
Chrysene	42.7 - 123.7	0 - 197.8
Di-n-octylphthalate	10.4 - 164	26.8 - 154.6
Benzo(b)fluoranthene	42.1 - 122.5	0 - 169.9
Benzo(k)fluoranthene	43.4 - 125	26.7 - 139.5
Benzo(a)pyrene	42.7 - 121.3	0 - 176.6
Indeno(1,2,3-cd)pyrene	37.7 - 130.7	2.2 - 153.4
Dibenz(a,h)anthracene	41.2 - 128.2	0 - 163.5
Benzo(g,h,i)perylene	10.8 - 147	0 - 165.2

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

) Name: LANCASTER LABS Lab Code: LANCAS Instrument: HP01598

SW846 METHOD 8270 SPIKE LEVEL: 100 UG/ML AMT USED: 2.0

:AMPLE SPIKE LEVEL: 50000.UG/KG % MOISTURE 0. DILUTION: 10

JS SAMPLE: MW-1- 2677693 MS SAMPLE: MW-1-MS 2677693 MSD SAMPLE: MW-1-MSD 2677693

COMPOUND NAME	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
Phenol	0.00	38800.6	42351.1	78	85	-9.00		
bis(2-Chloroethyl)ether	0.00	63462.1	71329.7	127	143	-12.00		
:-Chlorophenol	0.00	38078.5	42187.0	76	84	-10.00		
,3-Dichlorobenzene	0.00	41030.7	46448.4	82	93	-12.00		
1,4-Dichlorobenzene	0.00	38955.6	43408.4	78	87	-11.00		
1,2-Dichlorobenzene	0.00	32916.1	37009.8	66	74	-12.00		
:-Methylphenol	0.00	43184.8	46639.4	86	93	-8.00		
:,2'-oxybis(1-Chloropropane)	0.00	18715.6	20092.8	37	40	-7.00		
-Methylphenol	0.00	48937.9	50393.1	98	101	-3.00		
N-Nitroso-di-n-propylamine	0.00	31725.2	31690.9	63	63	0.00		
"exachloroethane	0.00	0.00	0.00	0	0	NC		
.itrobenzene	0.00	173534.	127868.	347	256	30.00		
sophorone	0.00	93241.8	80215.7	186	160	15.00		
2-Nitrophenol	0.00	76025.5	68485.6	152	137	10.00		
2,4-Dimethylphenol	71089.5	177322.	166323.	212	190	6.00		
is(2-Chloroethoxy)methane	0.00	161734.	146874.	323	294	10.00		
,4-Dichlorophenol	0.00	89389.0	80064.4	179	160	11.00		
1,2,4-Trichlorobenzene	0.00	54069.7	86111.5	108	172	-46.00		
Naphthalene	10000000	7097113	7290695	0	0	-3.00		
-Chloroaniline	0.00	11641.9	8650.21	23	17	29.00		
exachlorobutadiene	0.00	101570.	91898.0	203	184	10.00		
hloro-3-methylphenol	0.00	89091.6	79625.7	178	159	11.00		
ethylnaphthalene	6817026	7217379	7423116	80	***	-3.00		
"exachlorocyclopentadiene	0.00	57775.8	52571.4	58	52	9.00		
,4,6-Trichlorophenol	0.00	36596.3	38528.0	73	77	-5.00		
,4,5-Trichlorophenol	0.00	46293.3	47859.8	92	96	-3.00		
2-Chloronaphthalene	0.00	42881.9	45524.1	86	91	-6.00		
2-Nitroaniline	0.00	29367.9	26592.3	59	53	10.00		
imethylphthalate	0.00	40105.6	41809.3	80	84	-4.00		
,6-Dinitrotoluene	0.00	19668.3	21568.6	39	43	-9.00		
Acenaphthylene	359110.	408095.	426042.	98	134	-4.00		
3-Nitroaniline	0.00	36580.2	37283.1	73	74	-2.00		
cenaphthene	3404834	3321504	3780119	0	150	-13.00		
,4-Dinitrophenol	0.00	0.00	0.00	0	0	~~32767.0~~ NC		⊘ mg 4-10-91
-Nitrophenol	0.00	73814.0	68238.9	148	136	8.00		
Dibenzofuran	2950355	2908512	3462272	0	***	-17.00		
,4-Dinitrotoluene	0.00	79006.4	69895.1	158	140	12.00		
iethylphthalate	0.00	34730.0	32285.5	69	64	7.00		
-Chlorophenyl-phenylether	0.00	19736.7	23251.9	39	46	-16.00		

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

Name: LANCASTER LABS Lab Code: LANCAS Instrument: HP01598

.046 METHOD 8270 SPIKE LEVEL: 100 UG/ML AMT USED: 2.0

SAMPLE SPIKE LEVEL: 50000.UG/KG % MOISTURE 0. DILUTION: 10

SAMPLE: MW-1- 2677693 MS SAMPLE: MW-1-MS 2677693 MSD SAMPLE: MW-1-MSD 2677693

COMPOUND NAME	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
.uorene	3221484	3227412	3788971	12	***	-16.00		
4-Nitroaniline	0.00	210218.	135445.	420	271	43.00		
4,6-Dinitro-2-methylphenol	0.00	0.00	0.00	0	0	NC		
Nitrosodiphenylamine	0.00	153151.	167865.	306	336	-9.00		
Bromophenyl-phenylether	0.00	42358.7	46229.4	85	92	-9.00		
Hexachlorobenzene	0.00	40089.8	31894.8	80	64	23.00		
Pentachlorophenol	0.00	68104.9	62016.8	136	124	9.00		
ienanthrene	6869741	6283728	8097459	0	***	-25.00		
ithracene	1790660	1974337	2138355	362	695	-8.00		
arbazole	1255980	1412849	1468359	314	429	-4.00		
Di-n-butylphthalate	0.00	49272.2	44603.1	98	89	10.00		
luoranthene	5020941	5058761	5716789	76	***	-12.00		
rene	5352854	4422052	6374448	0	***	-36.00		
tylbenzylphthalate	0.00	50983.6	55879.0	102	112	-9.00		
3,3'-Dichlorobenzidine	0.00	36380.4	33904.1	73	68	7.00		
Benzo(a)anthracene	2260831	2324204	2823154	127	***	-19.00		
s(2-Ethylhexyl)phthalate	0.00	57389.3	57872.1	115	116	-1.00		
rysene	1995399	2005411	2362331	20	734	-16.00		
Di-n-octylphthalate	0.00	48720.3	51436.9	97	103	-5.00		
Benzo(b)fluoranthene	1301362	1275313	1539890	0	477	-19.00		
nzo(k)fluoranthene	515124.	490253.	652030.	0	270	-28.00		
nzo(a)pyrene	964036.	971087.	1120303	19	312	-14.00		
o(1,2,3-cd)pyrene	349555.	426961.	455543.	155	212	-6.00		
z(a,h)anthracene	91899.4	182466.	148801.	183	116	20.00		
nzo(g,h,i)perylene	243862.	317717.	335584.	148	183	-5.00		

COMMENTS:

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP01598

SW846 METHOD 8270 SPIKE LEVEL: 100 UG/L

CS SAMPLE NO: 077MALCS2 077MALCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
henol	79.86	80		
is(2-Chloroethyl)ether	88.83	89		
2-Chlorophenol	87.59	88		
1,3-Dichlorobenzene	86.20	86		
,4-Dichlorobenzene	84.75	85		
,2-Dichlorobenzene	83.55	84		
2-Methylphenol	84.43	84		
2,2'-oxybis(1-Chloropropane)	68.25	68		
-Methylphenol	86.96	87		
-Nitroso-di-n-propylamine	89.17	89		
exachloroethane	93.12	93		
Nitrobenzene	90.21	90		
sophorone	95.45	95		
-Nitrophenol	92.40	92		
,4-Dimethylphenol	77.76	78		
bis(2-Chloroethoxy)methane	87.39	87		
2,4-Dichlorophenol	86.07	86		
,2,4-Trichlorobenzene	81.74	82		
aphthalene	79.75	80		
4-Chloroaniline	71.41	71		
Hexachlorobutadiene	91.77	92		
-Chloro-3-methylphenol	90.70	91		
-Methylnaphthalene	83.29	83		
achlorocyclopentadiene	161.64	81		
,6-Trichlorophenol	90.88	91		
,4,5-Trichlorophenol	86.20	86		
-Chloronaphthalene	85.76	86		
-Nitroaniline	87.18	87		
Dimethylphthalate	88.60	89		
2,6-Dinitrotoluene	99.70	100		
cenaphthylene	88.73	89		
-Nitroaniline	81.19	81		
Acenaphthene	84.42	84		
2,4-Dinitrophenol	107.98	108		
-Nitrophenol	91.81	92		
ibenzofuran	86.91	87		
,4-Dinitrotoluene	92.30	92		
Diethylphthalate	85.02	85		
-Chlorophenyl-phenylether	73.19	73		

SOIL SEMIVOLATILE QUALITY CONTROL REFERENCE SAMPLE RECOVERY

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP01598

SW846 METHOD 8270 SPIKE LEVEL: 100 UG/L

LCS SAMPLE NO: 077MALCS2 077MALCS

COMPOUND NAME	EXTRACT CONC UG/L	QCREF REC %	RANGE LOWER-UPPER	IN SPEC
Fluorene	75.69	76		
4-Nitroaniline	82.73	83		
4,6-Dinitro-2-methylphenol	101.98	102		
N-Nitrosodiphenylamine	91.24	91		
4-Bromophenyl-phenylether	94.49	94		
Hexachlorobenzene	92.99	93		
Pentachlorophenol	93.27	93		
Phenanthrene	84.29	84		
Anthracene	82.24	82		
Carbazole	85.64	86		
Di-n-butylphthalate	86.56	86		
Fluoranthene	76.62	77		
Pyrene	100.66	101		
Butylbenzylphthalate	98.62	99		
3,3'-Dichlorobenzidine	91.31	91		
Benzo(a)anthracene	85.57	86		
Bis(2-Ethylhexyl)phthalate	87.84	88		
Chrysene	90.45	90		
Di-n-octylphthalate	84.13	84		
Benzo(b)fluoranthene	83.13	83		
Benzo(k)fluoranthene	89.20	89		
Benzo(a)pyrene	85.28	85		
Indeno(1,2,3-cd)pyrene	89.20	89		
Dibenz(a,h)anthracene	91.26	91		
Benzo(g,h,i)perylene	83.31	83		

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >BC496 Lab Sample ID:SBLKMA077

Date Extracted: 03/18/97 Extraction:(SepF/Cont/Sonc/Sox) SONC

Date Analyzed: 03/20/97 Time Analyzed: 09:45

Matrix: (soil/water) SOIL Level:(low/med) MED

Instrument ID: HP01598

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	077MALCS2	077MALCS	>BC497	03/20/97
02	MW-1-	2677693	>BC518	03/20/97
03	MW-1-MS	2677693	>BC519	03/21/97
04	MW-1-MSD	2677693	>BC520	03/21/97
05	MW-2-	2677694	>BC521	03/21/97
06	MW-2-RE	2677694RE	>BC522	03/21/97
07	MW-1-DL	2677693DL	>BC536	03/21/97
08	MW-2-DL	2677694DL	>BC539	03/21/97

COMMENTS: _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKMA0772

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKMA077

Sample wt/vol: 2.0 (g/mL) G Lab File ID: >BC496

Level: (low/med) MED Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/18/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/20/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	2500	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	500	U
606-20-2	2,6-Dinitrotoluene	1000	U
208-96-8	Acenaphthylene	500	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKMA0772

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKMA077

Sample wt/vol: 2.0 (g/mL) G Lab File ID: >BC496

Level: (low/med) MED Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/18/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/20/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	1000	U
84-66-2	Diethylphthalate	1000	U
7005-72-3	4-Chlorophenyl-phenylether	1000	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	1500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	1000	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
86-74-8	Carbazole	500	U
84-74-2	Di-n-butylphthalate	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	1000	U
85-68-7	Butylbenzylphthalate	1000	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
56-55-3	Benzo(a)anthracene	500	U
117-81-7	bis(2-Ethylhexyl)phthalate	1000	U
218-01-9	Chrysene	500	U
117-84-0	Di-n-octylphthalate	1000	U
205-99-2	Benzo(b)fluoranthene	1000	U
207-08-9	Benzo(k)fluoranthene	2000	U
50-32-8	Benzo(a)pyrene	1000	U
193-39-5	Indeno(1,2,3-cd)pyrene	1000	U
53-70-3	Dibenz(a,h)anthracene	1000	U
191-24-2	Benzo(g,h,i)perylene	1000	U

(1) - Cannot be separated from Diphenylamine

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GPC Runlog

Date: 3-18-97

Inst. ID: 04485

Technician: W.O 712

Calibration Date: 3-12-97

Technician:

Tube #	LL Number	Comments
1	Blank	GPC Cleanup
2	MB	077SMB
3	LCS	077SMB
4 BG	247693	
5 MS	247693	
6 MSD	247693	
7	247694	
8	Blank	GPC Cleanup
9	↓	↓

Odd Tube Column ID: 14

Even Tube Column ID: 14

509

1002 Rev. 06/10/96

25

Organic Extraction Batchlog

Prep Analysis # 00381 BNA Soil Extraction

Prep Group # 702 TC8 - Soil/Solid Dept: 26

Verified:

Start Date: 3-28-97

Start Time: 1900

Tech 1: W0712

Tech 2: D Trimble 377

BATCH NO. 97077SMA026 712/796 KERR MED LEVE

QC	Sample Code	Amt (g)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKX3	20	SS97051A SS97064A	2.0			10.0		IS
LCS6	LCSS8	2.0	SS97051A SS97064A	2.0	MS97073C	2.0	↓		10
2677693MS	MW-1-MS	2.0	SS97051A SS97064A	2.0	MS97073C	2.0	↓		↓
2677693MSD	MW-1-MSD	2.0	SS97051A SS97064A	2.0	MS97073C	2.0	↓		↓
			DF 3/19/97 SD						

	Sample #	Sample Code	Amt (g)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	IS.	Analyses	Due Date	Pri
1	2677693 bkg	MW-1-	2.0	SS97051A SS97064A	2.0	10.0			10	4688 4689	3/28/97N	
2	2677694	MW-2-	2.0	SS97051A SS97064A	2.0	↓			↓	4688 4689	3/28/97N	
3				DF 3/19/97 SD								
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

W0712 3-18-97

Additional Comment:

DF = Dilution Factor FV = Final Volume page 1 of 1

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	87759		
Ja2504	96485		
Internal Standar		Balance #	
S-Evap/bath	52 °C	S-Evap/bath	°C
N-Evap	°C		

Spike Solutions:

SS97051A BNA SURROGATE STD.
SS97064A
MS97073C LCS SPIKE (100)
LAC3604 IS 3/25 3/26/97

CLIENT: Kerr - McGee Corporation
SDG: HMS03

LANCASTER LABORATORIES

MISCELLANEOUS WET CHEMISTRY

SAMPLE NUMBERS:

Sample #	Sample Code	Matrix Soil	Matrix Water	Comments
2677693	MW-1-	X		
2677694	MW-2-	X		

SAMPLE PREPARATION:
Samples were homogenized prior to analysis.

ANALYSIS:
No problems were encountered during analysis.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:
QC was within specifications.

DATA INTERPRETATION:
No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Denise M. Lentz Date: 4/9/97
Denise M. Lentz
Senior Administrator/Coordinator

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Duplicate Analysis
Miscellaneous Wet Chemistry

Matrix: SOIL

Sample Information		Duplicate Analysis										
Sample Number	Sample Code	Parameter	Method	Analysis Date	1st Dup Desig.	1st Dup Result	LOQ	2nd Dup Desig.	2nd Dup Result	Units	RPD (%)	Control Limit % </=
2677693	MW-1-	Moisture	OD	04/03/97	BKG	61.3	0.5	DUP	61.2	%	0	18.9
2677694	MW-2-											

Comments: If the background and/or the duplicate result are < the limit of quantitation, the RPD is not required.

Sample results are rounded to be consistent with the limit of quantitation.

ABBREVIATION KEY

CO	= Colorimetric	ND	= Not Detected
DI	= Distillation	J	= Estimated Value < LOQ
G	= Gravimetric	<	= Less Than
IR	= Infrared Spectrophotometry	LOQ	= Limit of Quantitation
M	= Meter	NA	= Not Applicable
OD	= Oven Dried	NE	= Method
TI	= Titration	*	= Out of Specification

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Laboratory Control Standard
Laboratory Control Standard Duplicate
Miscellaneous Wet Chemistry

Sample Information | Laboratory Control Standards | Matrix: SOIL

Sample Number	Sample Code	Parameter	Analysis Date	True LCS/D Value	LCS Result	LCSD Result	LOQ	Units	LCS/D Acceptance Range	% RPD Result	% RPD Acceptance < / =
2677693	MW-1-	Moisture	04/03/97	89.5	89.4	89.4	0.5	%	89.07 - 90.33	0	20
2677694	MW-2-										

Comments: LCS/LCSD results are rounded to be consistent with the limit of quantitation.

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5B

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

Name: LANCASTER LABS Contract: _____.

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

I b File ID: >BC380 DFTPP Injection Date: 03/17/97

Instrument ID: HP01598 DFTPP Injection Time: 19:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.3
68	Less than 2.0% of mass 69	.7 (1.0)1
69	Mass 69 relative abundance	63.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	18.2
365	Greater than 1.00% of mass 198	1.40
441	Present, but less than mass 443	5.9
442	Greater than 40.0% of mass 198	46.7
443	17.0 - 23.0% of mass 442	8.4 (17.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD80	STD0737	>BC381	03/17/97	19:25
02	SSTD160	STD0737	>BC382	03/17/97	20:26
03	SSTD120	STD0737	>BC383	03/17/97	21:22
04	SSTD05	STD0737	>BC384	03/17/97	22:18
05	SSTD50	STD0737	>BC385	03/17/97	23:14
06	SBLKWC0732	SBLKWC073	>BC386	03/18/97	00:10
07	073WCLCS2	073WCLCS	>BC387	03/18/97	01:06
08	10311	2676658	>BC388	03/18/97	02:02
09	30311	2676660	>BC389	03/18/97	02:58
10	20312	2677232	>BC392	03/18/97	05:46
11	10312	2677231	>BC393	03/18/97	06:42
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP01598 Calibration Date(s): 03/17/97 03/17/97

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

LAB FILE ID: RRF5 = >BC384 RRF50 = >BC385
F80 = >BC381 RRF120= >BC383 RRF160= >BC382

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
ridine	1.040	1.668	1.721	1.725	1.528	1.537	18.8	2NDDEG
.. Nitrosodimethylamine	.729	.965	1.038	1.037	.961	.946	13.4	AVG
2-Picoline	1.444	1.630	1.518	1.530	1.455	1.515	4.9	AVG
henol *	1.904	2.050	1.909	1.817	1.614	1.859	8.6	AVG *
iline	2.196	2.365	2.305	2.344	2.074	2.257	5.4	AVG
s(2-Chloroethyl)ether	1.525	1.546	1.494	1.473	1.278	1.463	7.3	AVG
2-Chlorophenol	1.520	1.579	1.437	1.416	1.224	1.435	9.4	AVG
1,3-Dichlorobenzene	1.633	1.636	1.536	1.517	1.319	1.528	8.5	AVG
4-Dichlorobenzene *	1.672	1.670	1.561	1.524	1.344	1.554	8.7	AVG *
nzyl alcohol	.761	.919	.907	.911	.791	.858	8.8	AVG
,2-Dichlorobenzene	1.604	1.569	1.500	1.474	1.229	1.475	10.0	AVG
2-Methylphenol	1.305	1.319	1.283	1.255	1.118	1.256	6.4	AVG
2'-oxybis(1-Chloropropane)	3.543	3.435	3.564	3.640	3.307	3.498	3.7	AVG
s(2-Chloroisopropyl)ether	3.543	3.435	3.564	3.640	3.307	3.498	3.7	AVG
Methylphenol	1.256	1.364	1.297	1.254	1.142	1.263	6.4	AVG
3- and 4-Methylphenol	1.256	1.364	1.297	1.254	1.142	1.263	6.4	AVG
etophenone	3.979	3.661	3.277	3.065	2.520	3.301	17.0	2NDDEG
Nitroso-di-n-propylamine #	1.177	1.251	1.186	1.192	1.011	1.163	7.7	AVG #
luidine	2.185	2.198	2.093	2.079	1.780	2.067	8.2	AVG
chloroethane	.630	.705	.698	.686	.613	.666	6.3	AVG
robenzene	.403	.505	.534	.519	.491	.490	10.5	AVG
ophorone	.782	.860	.862	.859	.819	.836	4.2	AVG
Nitrophenol *	.145	.227	.230	.228	.213	.208	17.4	2NDDEG *
,4-Dimethylphenol	.407	.439	.444	.431	.389	.422	5.4	AVG
Benzoic acid	.102	.225	.272	.333	.343	.255	38.4	1STDEG
s(2-Chloroethoxy)methane	.488	.523	.495	.499	.473	.495	3.7	AVG
4-Dichlorophenol *	.254	.333	.328	.326	.294	.307	10.9	AVG *
,2,4-Trichlorobenzene	.370	.372	.363	.354	.321	.356	5.8	AVG
Naphthalene	1.117	1.117	1.086	1.033	.940	1.059	7.0	AVG
4-Chloroaniline	.461	.516	.505	.489	.452	.485	5.7	AVG
xachlorobutadiene *	.221	.229	.228	.219	.203	.220	4.8	AVG *
Chloro-3-methylphenol *	.292	.374	.385	.378	.349	.355	10.7	AVG *
2-Methylnaphthalene	.636	.671	.619	.625	.558	.622	6.5	AVG
1-Methylnaphthalene	.636	.627	.624	.598	.541	.605	6.4	AVG
xachlorocyclopentadiene #	.214	.382	.460	.500	.467	.405	28.4	1STDEG #
4,6-Trichlorophenol *	.347	.451	.461	.476	.440	.435	11.7	AVG *
,4,5-Trichlorophenol	.339	.467	.536	.505	.470	.464	16.2	2NDDEG
2-Chloronaphthalene	1.259	1.298	1.326	1.226	1.139	1.250	5.8	AVG

J(+) No (+) No in print

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: ____.

Code: LANCAS Case No.: ____.SAS No.: ____. SDG No.: ____.

Instrument ID: HP01598 Calibration Date(s): 03/17/97 03/17/97

___.

: RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

.B FILE ID: RRF5 = >BC384 RRF50 = >BC385
F80 = >BC381 RRF120= >BC383 RRF160= >BC382

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD	
Nitroaniline	.361	.558	.615	.598	.566	.540	19.0	1STDEG	
Dimethylphthalate	1.392	1.532	1.510	1.421	1.291	1.429	6.8	AVG	
2.6-Dinitrotoluene	.172	.308	.346	.341	.313	.296	24.0	1STDEG	
enaphthylene	1.791	2.034	2.049	1.904	1.735	1.903	7.4	AVG	
Nitroaniline	.268	.414	.438	.417	.369	.381	17.9	2NDDEG	
Acenaphthene *	1.249	1.267	1.232	1.150	1.002	1.180	9.2	AVG	*
2,4-Dinitrophenol #	.089	.124	.163	.169	.153	.140	23.6	2NDDEG	#
Nitrophenol #	.138	.222	.255	.248	.215	.215	21.6	2NDDEG	#
benzofuran	1.832	1.800	1.771	1.589	1.514	1.701	8.3	AVG	
,4-Dinitrotoluene	.331	.451	.505	.484	.437	.442	15.2	2NDDEG	
1-Naphthylamine	1.016	1.076	1.085	1.013	.899	1.018	7.3	AVG	
-Naphthylamine	1.200	1.187	1.199	1.082	.961	1.126	9.3	AVG	
ethylphthalate	1.539	1.559	1.539	1.451	1.289	1.475	7.6	AVG	
Chlorophenyl-phenylether	.675	.691	.675	.636	.564	.649	7.9	AVG	
Fluorene	1.430	1.380	1.270	1.143	1.001	1.245	14.1	AVG	
4-Nitroaniline	.284	.395	.379	.335	.279	.334	15.9	2NDDEG	
6-Dinitro-2-methylphenol	.040	.122	.149	.158	.154	.125	39.8	1STDEG	
rosodiphenylamine (1) *	.535	.572	.533	.560	.521	.544	3.9	AVG	*
iphenylhydrazine	1.027	1.141	1.093	1.149	1.095	1.101	4.4	AVG	
omophenyl-phenylether	.229	.257	.248	.259	.240	.247	5.0	AVG	
achlorobenzene	.314	.323	.322	.322	.286	.313	5.0	AVG	
ntachlorophenol *	.103	.165	.188	.196	.189	.168	22.7	1STDEG	*
enanthrene	1.173	1.161	1.038	1.089	.953	1.083	8.4	AVG	
Anthracene	1.082	1.122	1.094	1.096	.965	1.072	5.7	AVG	
arbazole	.990	1.047	1.015	1.011	.889	.990	6.1	AVG	
-n-butylphthalate	1.237	1.531	1.449	1.483	1.306	1.401	8.9	AVG	
uoranthene *	1.062	1.222	1.155	1.141	1.007	1.117	7.5	AVG	*
Benzidine	.923	.790	.700	.705	.613	.746	15.7	AVG	
Pyrene	1.553	1.454	1.439	1.516	1.370	1.466	4.8	AVG	
tylbenzylphthalate	.639	.803	.804	.830	.790	.773	9.9	AVG	
3'-Dichlorobenzidine	.414	.542	.561	.574	.545	.527	12.3	AVG	
Benzo(a)anthracene	1.274	1.339	1.352	1.355	1.266	1.317	3.3	AVG	
bis(2-Ethylhexyl)phthalate	.856	1.119	1.087	1.094	1.033	1.038	10.2	AVG	
rysene	1.195	1.258	1.224	1.221	1.170	1.214	2.7	AVG	
-n-octylphthalate *	1.094	1.788	1.811	2.028	2.038	1.752	22.0	2NDDEG	*
,12-Dimethylbenz[a]anthrace	.456	.572	.582	.616	.590	.563	11.0	AVG	
Benzo(b)fluoranthene	1.281	1.407	1.308	1.407	1.330	1.346	4.3	AVG	
enzo(k)fluoranthene	1.167	1.319	1.303	1.353	1.298	1.288	5.5	AVG	

(Cannot be separated from Diphenylamine

RRF low, %RSD RO, JO

*

FORM VI SV-1 1/87 Rev.

* Avg RF used due to poor curve fit per 3/19/97

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

Instrument ID: HP01598 Calibration Date(s): 03/17/97 03/17/97

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

LAB FILE ID: RRF5 = >BC384 RRF50 = >BC385
RF80 = >BC381 RRF120= >BC383 RRF160= >BC382

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
enzo(a)pyrene	* 1.052	1.212	1.207	1.268	1.191	1.186	6.8	AVG *
Indeno(1,2,3-cd)pyrene	.795	1.018	1.009	1.078	.989	.978	11.0	AVG
Dibenz(a,h)anthracene	.807	1.032	1.032	1.083	.975	.986	10.9	AVG
enzo(g,h,i)perylene	.888	1.063	1.030	1.081	.983	1.009	7.7	AVG
-Fluorophenol	1.333	1.429	1.459	1.406	1.211	1.368	7.2	AVG
Phenol-d5	1.837	1.952	1.898	1.864	1.601	1.830	7.4	AVG
Phenol-d6	1.837	1.952	1.898	1.864	1.601	1.830	7.4	AVG
itrobenzene-d5	.377	.469	.485	.510	.475	.463	10.9	AVG
-Fluorobiphenyl	1.442	1.390	1.387	1.366	1.189	1.355	7.1	AVG
2,4,6-Tribromophenol	.160	.259	.286	.278	.256	.248	20.5	2NDDEG
Terphenyl-d14	.974	.962	.911	.967	.853	.933	5.5	AVG

FORM VI SV-1 1/87 Rev.

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >BC490 DFTPP Injection Date: 03/20/97

Instrument ID: HP01598 DFTPP Injection Time: 07:54

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	55.7
70	Less than 2.0% of mass 69	0.0 (0.0)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 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	18.6
365	Greater than 1.00% of mass 198	2.00
441	Present, but less than mass 443	6.9
442	Greater than 40.0% of mass 198	52.0
443	17.0 - 23.0% of mass 442	9.0 (17.2)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
01	SSTD80	STD0737	>BC491	03/20/97	08:25
02	SBLKMA0772	SBLKMA077	>BC496	03/20/97	09:45
03	077MALCS2	077MALCS	>BC497	03/20/97	10:37
04					
05					
06					
07					
08					
09					
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20					
21					
22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP01598 Calibration Date: 03/20/97 Time: 08:25

Lab File ID: >BC491 Init. Calib. Date(s): 03/17/97 03/17/97

RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

		COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
		Pyridine	1.537	1.838	85.35	80.0	-6.7
		N-Nitrosodimethylamine	.946	1.096	92.63	80.0	-15.8
		2-Picoline	1.515	1.719	90.74	80.0	-13.4
	*	Phenol	1.859	1.898	81.67	80.0	-2.1*
		Aniline	2.257	2.286	81.02	80.0	-1.3
		bis(2-Chloroethyl)ether	1.463	1.454	79.53	80.0	.6
		2-Chlorophenol	1.435	1.460	81.38	80.0	-1.7
		1,3-Dichlorobenzene	1.528	1.514	79.27	80.0	.9
	*	1,4-Dichlorobenzene	1.554	1.535	79.02	80.0	1.2*
		Benzyl alcohol	.858	.908	84.63	80.0	-5.8
		1,2-Dichlorobenzene	1.475	1.428	77.46	80.0	3.2
		2-Methylphenol	1.256	1.239	78.94	80.0	1.3
		2,2'-oxybis(1-Chloropropane)	3.498	3.105	71.02	80.0	11.2
		bis(2-Chloroisopropyl)ether	3.498	3.105	71.02	80.0	11.2
		4-Methylphenol	1.263	1.298	82.25	80.0	-2.8
		3- and 4-Methylphenol	1.263	1.298	82.25	80.0	-2.8
		Acetophenone	3.301	2.965	68.01	80.0	15.0
	#	N-Nitroso-di-n-propylamine	1.163	1.032	70.96	80.0	11.3#
		o-Toluidine	2.067	2.049	79.31	80.0	.9
		Hexachloroethane	.666	.703	84.42	80.0	-5.5
		Nitrobenzene	.490	.517	84.31	80.0	-5.4
		Isophorone	.836	.868	82.98	80.0	-3.7
	*	2-Nitrophenol	.208	.257	89.70	80.0	-12.1*
		2,4-Dimethylphenol	.422	.449	85.16	80.0	-6.4
		Benzoic acid	.255	.353	91.75	80.0	-14.7
		bis(2-Chloroethoxy)methane	.495	.504	81.31	80.0	-1.6
	*	2,4-Dichlorophenol	.307	.335	87.28	80.0	-9.1*
		1,2,4-Trichlorobenzene	.356	.365	81.99	80.0	-2.5
		Naphthalene	1.059	1.048	79.21	80.0	1.0
		4-Chloroaniline	.485	.500	82.56	80.0	-3.2
	*	Hexachlorobutadiene	.220	.218	79.15	80.0	1.1*
	*	4-Chloro-3-methylphenol	.355	.376	84.73	80.0	-5.9*
		2-Methylnaphthalene	.622	.636	81.82	80.0	-2.3
		1-Methylnaphthalene	.605	.617	81.55	80.0	-1.9
	#	Hexachlorocyclopentadiene	.405	.466	80.82	80.0	-1.0#
	*	2,4,6-Trichlorophenol	.435	.454	83.49	80.0	-4.4*
		2,4,5-Trichlorophenol	.464	.510	78.64	80.0	1.7
		2-Chloronaphthalene	1.250	1.280	81.92	80.0	-2.4

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP01598 Calibration Date: 03/20/97 Time: 08:25

Lab File ID: >BC491 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.540	.604	83.17	80.0	-4.0
Dimethylphthalate		1.429	1.418	79.35	80.0	.8
2,6-Dinitrotoluene		.296	.370	90.92	80.0	-13.7
Acenaphthylene		1.903	2.015	84.71	80.0	-5.9
3-Nitroaniline		.381	.453	84.55	80.0	-5.7
Acenaphthene	*	1.180	1.223	82.92	80.0	-3.7*
2,4-Dinitrophenol	#	.140	.212	100.98	80.0	-26.2# J, UJ
4-Nitrophenol	#	.215	.260	83.27	80.0	-4.1#
Dibenzofuran		1.701	1.776	83.53	80.0	-4.4
2,4-Dinitrotoluene		.442	.539	88.29	80.0	-10.4
1-Naphthylamine		1.018	1.082	85.08	80.0	-6.4
2-Naphthylamine		1.126	1.135	80.63	80.0	-.8
Diethylphthalate		1.475	1.525	82.70	80.0	-3.4
4-Chlorophenyl-phenylether		.649	.607	74.91	80.0	6.4
Fluorene		1.245	1.158	74.43	80.0	7.0
4-Nitroaniline		.334	.382	83.41	80.0	-4.3
4,6-Dinitro-2-methylphenol		.125	.179	95.27	80.0	-19.1
N-Nitrosodiphenylamine (1)	*	.544	.549	80.77	80.0	-1.0*
1,2-Diphenylhydrazine		1.101	1.143	83.03	80.0	-3.8
4-Bromophenyl-phenylether		.247	.242	78.56	80.0	1.8
Hexachlorobenzene		.313	.301	76.79	80.0	4.0
Pentachlorophenol	*	.168	.192	83.55	80.0	-4.4*
Phenanthrene		1.083	1.087	80.31	80.0	-.4
Anthracene		1.072	1.116	83.32	80.0	-4.2
Carbazole		.990	1.010	81.57	80.0	-2.0
Di-n-butylphthalate		1.401	1.395	79.66	80.0	.4
Fluoranthene	*	1.117	1.061	75.93	80.0	5.1*
Benzidine		.746	.740	317.45	320.0	.8
Pyrene		1.466	1.590	86.73	80.0	-8.4
Butylbenzylphthalate		.773	.831	86.00	80.0	-7.5
3,3'-Dichlorobenzidine		.527	.568	86.22	80.0	-7.8
Benzo(a)anthracene		1.317	1.335	81.07	80.0	-1.3
bis(2-Ethylhexyl)phthalate		1.038	1.070	82.52	80.0	-3.1
Chrysene		1.214	1.241	81.83	80.0	-2.3
Di-n-octylphthalate	*	1.752	1.765	75.73	80.0	5.3*
7,12-Dimethylbenz[a]anthrace		.563	.542	76.94	80.0	3.8
Benzo(b)fluoranthene		1.346	1.270	75.47	80.0	5.7
Benzo(k)fluoranthene		1.288	1.249	77.57	80.0	3.0

(1) Cannot be separated from Diphenylamine

KK 4.10.97

~~47477~~

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

nstrument ID: HP01598 Calibration Date: 03/20/97 Time: 08:25

File ID: >BC491 Init. Calib. Date(s): 03/17/97 03/17/97

in RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	* 1.186	1.165	78.59	80.0	1.8*
Indeno(1,2,3-cd)pyrene	.978	1.033	84.55	80.0	-5.7
Dibenz(a,h)anthracene	.986	1.027	83.35	80.0	-4.2
Benzo(g,h,i)perylene	1.009	1.021	81.00	80.0	-1.3
2-Fluorophenol	1.368	1.460	85.41	80.0	-6.8
Phenol-d5	1.830	1.832	80.08	80.0	-.1
Phenol-d6	1.830	1.832	80.08	80.0	-.1
Nitrobenzene-d5	.463	.504	86.97	80.0	-8.7
2-Fluorobiphenyl	1.355	1.344	79.33	80.0	.8
2,4,6-Tribromophenol	.248	.298	85.20	80.0	-6.5
Terphenyl-d14	.933	.965	82.76	80.0	-3.4

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >BC491 Date Analyzed: 03/20/97

Instrument ID: HP01598 Time Analyzed: 08:25

	IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	40025	11.06	129642	14.15	65863	18.57
UPPER LIMIT	80050		259284		131726	
LOWER LIMIT	20013		64821		32932	
EPA SAMPLE NO.						
01 SBLKMA0772	42973	11.06	155269	14.15	76712	18.56
02 077MALCS2	45417	11.06	165110	14.14	81442	18.55
03						
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >8C491 Date Analyzed: 03/20/97

Instrument ID: HP01598 Time Analyzed: 08:25

		IS4(PHN)			IS5(CRY)			IS6(PRY)		
		AREA	#	RT	AREA	#	RT	AREA	#	RT
	12 HOUR STD	111112		22.34	75178		29.05	80836		34.24
	UPPER LIMIT	222224			150356			161672		
	LOWER LIMIT	55556			37589			40418		
	EPA SAMPLE NO.									
01	SBLKMA0272	119961		22.34	83175		29.05	78928		34.24
02	077MALC02	126533		22.33	74211		29.05	72425		34.22
03										
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >BC51I DFTPP Injection Date: 03/20/97

Instrument ID: HP01598 DFTPP Injection Time: 20:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	44.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	1.76
441	Present, but less than mass 443	6.0
442	Greater than 40.0% of mass 198	43.5
443	17.0 - 23.0% of mass 442	8.5 (19.6)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
01	SSTD80	STD0737	>BC511	03/20/97	20:43
02	MW-1-	2677693	>BC518	03/20/97	23:31
03	MW-1-MS	2677693	>BC519	03/21/97	00:23
04	MW-1-MSD	2677693	>BC520	03/21/97	01:15
05	MW-2-	2677694	>BC521	03/21/97	02:07
06	MW-2-RE	2677694RE	>BC522	03/21/97	02:59
07					
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SEMIVOLATILE CONTINUING CALIBRATION CHECK

ab Name: LANCASTER LABS Contract: _____.

Code: LANCAS . Case No.: _____. SAS No.: _____. SDG No.: _____.

nstrument ID: HP01598 Calibration Date: 03/20/97 Time: 20:43

File ID: >BC511 Init. Calib. Date(s): 03/17/97 03/17/97

in RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine	1.537	1.584	72.35	80.0	9.6
N-Nitrosodimethylamine	.946	.936	79.13	80.0	1.1
2-Picoline	1.515	1.509	79.66	80.0	.4
* Phenol	1.859	1.880	80.91	80.0	-1.1*
Aniline	2.257	2.224	78.84	80.0	1.4
bis(2-Chloroethyl)ether	1.463	1.371	74.97	80.0	6.3
2-Chlorophenol	1.435	1.508	84.07	80.0	-5.1
1,3-Dichlorobenzene	1.528	1.557	81.53	80.0	-1.9
* 1,4-Dichlorobenzene	1.554	1.601	82.42	80.0	-3.0*
Benzyl alcohol	.858	.940	87.64	80.0	-9.6
1,2-Dichlorobenzene	1.475	1.500	81.33	80.0	-1.7
2-Methylphenol	1.256	1.280	81.53	80.0	-1.9
2,2'-oxybis(1-Chloropropane)	3.498	2.787	63.74	80.0	20.3
bis(2-Chloroisopropyl)ether	3.498	2.787	63.74	80.0	20.3
4-Methylphenol	1.263	1.277	80.90	80.0	-1.1
3- and 4-Methylphenol	1.263	1.277	80.90	80.0	-1.1
Acetophenone	3.301	3.179	75.20	80.0	6.0
# N-Nitroso-di-n-propylamine	1.163	.977	67.20	80.0	16.0#
o-Toluidine	2.067	2.024	78.33	80.0	2.1
Hexachloroethane	.666	.715	85.90	80.0	-7.4
Nitrobenzene	.490	.464	75.73	80.0	5.3
Isophorone	.836	.805	77.00	80.0	3.8
* 2-Nitrophenol	.208	.253	88.19	80.0	-10.2*
2,4-Dimethylphenol	.422	.421	79.80	80.0	.3
Benzoic acid	.255	.321	85.18	80.0	-6.5
bis(2-Chloroethoxy)methane	.495	.484	78.23	80.0	2.2
* 2,4-Dichlorophenol	.307	.330	86.04	80.0	-7.6*
1,2,4-Trichlorobenzene	.356	.369	82.77	80.0	-3.5
Naphthalene	1.059	1.045	78.99	80.0	1.3
4-Chloroaniline	.485	.475	78.35	80.0	2.1
* Hexachlorobutadiene	.220	.216	78.58	80.0	1.8*
* 4-Chloro-3-methylphenol	.355	.366	82.46	80.0	-3.1*
2-Methylnaphthalene	.622	.630	81.11	80.0	-1.4
1-Methylnaphthalene	.605	.606	80.16	80.0	-.2
# Hexachlorocyclopentadiene	.405	.446	77.69	80.0	2.9#
* 2,4,6-Trichlorophenol	.435	.462	84.89	80.0	-6.1*
2,4,5-Trichlorophenol	.464	.488	75.04	80.0	6.2
2-Chloronaphthalene	1.250	1.247	79.83	80.0	.2

JMG
3-20-97

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP01598 Calibration Date: 03/20/97 Time: 20:43

Lab File ID: >BC511 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.540	.541	74.48	80.0	6.9
Dimethylphthalate		1.429	1.558	87.23	80.0	-9.0
2,6-Dinitrotoluene		.296	.367	90.35	80.0	-12.9
Acenaphthylene		1.903	1.972	82.91	80.0	-3.6
3-Nitroaniline		.381	.440	81.76	80.0	-2.2
Acenaphthene	*	1.180	1.214	82.27	80.0	-2.8*
2,4-Dinitrophenol	#	.140	.230	110.82	80.0	-38.5# Flags
4-Nitrophenol	#	.215	.254	81.05	80.0	-1.3#
Dibenzofuran		1.701	1.800	84.63	80.0	-5.8
2,4-Dinitrotoluene		.442	.515	83.79	80.0	-4.7
1-Naphthylamine		1.018	1.043	82.00	80.0	-2.5
2-Naphthylamine		1.126	1.136	80.70	80.0	-.9
Diethylphthalate		1.475	1.558	84.50	80.0	-5.6
4-Chlorophenyl-phenylether		.649	.616	75.93	80.0	5.1
Fluorene		1.245	1.171	75.24	80.0	5.9
4-Nitroaniline		.334	.393	87.25	80.0	-9.1
4,6-Dinitro-2-methylphenol		.125	.170	91.27	80.0	-14.1
N-Nitrosodiphenylamine (1)	*	.544	.544	80.04	80.0	-.0*
1,2-Diphenylhydrazine		1.101	1.073	77.99	80.0	2.5
4-Bromophenyl-phenylether		.247	.249	80.70	80.0	-.9
Hexachlorobenzene		.313	.295	75.33	80.0	5.8
Pentachlorophenol	*	.168	.190	82.74	80.0	-3.4*
Phenanthrene		1.083	1.096	80.99	80.0	-1.2
Anthracene		1.072	1.106	82.57	80.0	-3.2
Carbazole		.990	1.025	82.81	80.0	-3.5
Di-n-butylphthalate		1.401	1.474	84.15	80.0	-5.2
Fluoranthene	*	1.117	1.069	76.55	80.0	4.3*
Benzidine		.746	.747	320.41	320.0	-.1
Pyrene		1.466	1.541	84.10	80.0	-5.1
Butylbenzylphthalate		.773	.838	86.69	80.0	-8.4
3,3'-Dichlorobenzidine		.527	.557	84.52	80.0	-5.6
Benzo(a)anthracene		1.317	1.243	75.47	80.0	5.7
bis(2-Ethylhexyl)phthalate		1.038	1.001	77.20	80.0	3.5
Chrysene		1.214	1.224	80.66	80.0	-.8
Di-n-octylphthalate	*	1.752	1.978	83.97	80.0	-5.0*
7,12-Dimethylbenz[a]anthrace		.563	.580	82.39	80.0	-3.0
Benzo(b)fluoranthene		1.346	1.320	78.42	80.0	2.0
Benzo(k)fluoranthene		1.288	1.284	79.78	80.0	.3

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

GC/MS Instrument ID: HP01598 Calibration Date: 03/20/97 Time: 20:43

Lab File ID: >BC511 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	*	1.186	1.245	84.01	80.0	-5.0*
Indeno(1,2,3-cd)pyrene		.978	1.071	87.66	80.0	-9.6
Dibenz(a,h)anthracene		.986	1.056	85.68	80.0	-7.1
Benzo(g,h,i)perylene		1.009	1.083	85.85	80.0	-7.3
2-Fluorophenol		1.368	1.442	84.34	80.0	-5.4
Phenol-d5		1.830	1.799	78.65	80.0	1.7
Phenol-d6		1.830	1.799	78.65	80.0	1.7
Nitrobenzene-d5		.463	.461	79.54	80.0	.6
2-Fluorobiphenyl		1.355	1.376	81.27	80.0	-1.6
2,4,6-Tribromophenol		.248	.261	74.02	80.0	7.5
Terphenyl-d14		.933	.940	80.56	80.0	-.7

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

File ID (Standard): >BC511 Date Analyzed: 03/20/97

Instrument ID: HP01598 Time Analyzed: 20:43

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	34387	10.96	117572	14.04	60001	18.44
	UPPER LIMIT	68774		235144		120002	
	LOWER LIMIT	17194		58786		30001	
	EPA SAMPLE NO.						
01	MW-1-	30950	10.95	44933*	14.06	37644	18.45
02	MW-1-MS	34245	10.95	43995*	14.06	40951	18.45
03	MW-1-MSD	26867	10.95	38265*	14.06	30808	18.45
04	MW-2-	30928	10.95	39500*	14.05	40216	18.45
05	MW-2-RE	28569	10.95	38508*	14.06	34720	18.44
06							
07							
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20							
21							
22							

JA
VJE

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

File ID (Standard): >BC511 Date Analyzed: 03/20/97

trument ID: HP01598 Time Analyzed: 20:43

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	102480	22.21	75248	28.91	69368	33.97
	UPPER LIMIT	204960		150496		138736	
	LOWER LIMIT	51240		37624		34684	
	EPA SAMPLE NO.	JD VJO		JD VJO		JD VJO	
01	MW-1-	43557*	22.24	25650*	28.92	21181*	33.96
02	MW-1-MS	52781	22.24	34878*	28.93	35946	33.97
03	MW-1-MSD	36245*	22.23	20246*	28.91	18303*	33.96
04	MW-2-	49835*	22.23	33783*	28.92	28572*	33.96
05	MW-2-RE	42472*	22.22	22610*	28.92	17466*	33.95
06							
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22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >BC530 DFTPP Injection Date: 03/21/97

Instrument ID: HP01598 DFTPP Injection Time: 08:04

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	58.0
70	Less than 2.0% of mass 69	.3 (.5)1
127	40.0 - 60.0% of mass 198	41.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.0
365	Greater than 1.00% of mass 198	1.97
441	Present, but less than mass 443	6.8
442	Greater than 40.0% of mass 198	44.9
443	17.0 - 23.0% of mass 442	9.2 (20.4)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
01	SSTD80	STD0737	>BC531	03/21/97	08:34
02	MW-1-DL	2677693DL	>BC536	03/21/97	09:39
03	MW-2-DL	2677694DL	>BC539	03/21/97	12:13
04					
05					
06					
07					
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22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP01598 Calibration Date: 03/21/97 Time: 08:34

Lab File ID: >BC531 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine	1.537	1.613	73.80	80.0	7.8
N-Nitrosodimethylamine	.946	.976	82.55	80.0	-3.2
2-Picoline	1.515	1.603	84.59	80.0	-5.7
Phenol *	1.859	1.730	74.44	80.0	6.9*
Aniline	2.257	2.144	76.00	80.0	5.0
bis(2-Chloroethyl)ether	1.463	1.382	75.57	80.0	5.5
2-Chlorophenol	1.435	1.406	78.39	80.0	2.0
1,3-Dichlorobenzene	1.528	1.497	78.39	80.0	2.0
1,4-Dichlorobenzene *	1.554	1.529	78.68	80.0	1.6*
Benzyl alcohol	.858	.872	81.33	80.0	-1.7
1,2-Dichlorobenzene	1.475	1.412	76.55	80.0	4.3
2-Methylphenol	1.256	1.226	78.09	80.0	2.4
2,2'-oxybis(1-Chloropropane)	3.498	3.026	69.21	80.0	13.5
bis(2-Chloroisopropyl)ether	3.498	3.026	69.21	80.0	13.5
4-Methylphenol	1.263	1.193	75.59	80.0	5.5
3- and 4-Methylphenol	1.263	1.193	75.59	80.0	5.5
Acetophenone	3.301	2.830	63.66	80.0	20.4
N-Nitroso-di-n-propylamine #	1.163	.957	65.82	80.0	17.7#
o-Toluidine	2.067	1.935	74.87	80.0	6.4
Hexachloroethane	.666	.680	81.65	80.0	-2.1
Nitrobenzene	.490	.456	74.35	80.0	7.1
Isophorone	.836	.810	77.47	80.0	3.2
2-Nitrophenol *	.208	.250	87.31	80.0	-9.1*
2,4-Dimethylphenol	.422	.397	75.34	80.0	5.8
Benzoic acid	.255	.342	89.52	80.0	-11.9
bis(2-Chloroethoxy)methane	.495	.464	74.86	80.0	6.4
2,4-Dichlorophenol *	.307	.328	85.58	80.0	-7.0*
1,2,4-Trichlorobenzene	.356	.352	79.12	80.0	1.1
Naphthalene	1.059	.999	75.47	80.0	5.7
4-Chloroaniline	.485	.474	78.26	80.0	2.2
Hexachlorobutadiene *	.220	.213	77.51	80.0	3.1*
4-Chloro-3-methylphenol *	.355	.364	81.91	80.0	-2.4*
2-Methylnaphthalene	.622	.639	82.23	80.0	-2.8
1-Methylnaphthalene	.605	.593	78.37	80.0	2.0
Hexachlorocyclopentadiene #	.405	.370	65.46	80.0	18.2#
2,4,6-Trichlorophenol *	.435	.455	83.64	80.0	-4.5*
2,4,5-Trichlorophenol	.464	.480	73.79	80.0	7.8
2-Chloronaphthalene	1.250	1.189	76.14	80.0	4.8

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP01598 Calibration Date: 03/21/97 Time: 08:34

File ID: >BC531 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline	.540	.528	72.70	80.0	9.1
Dimethylphthalate	1.429	1.491	83.46	80.0	-4.3
2,6-Dinitrotoluene	.296	.356	87.63	80.0	-9.5
Acenaphthylene	1.903	1.841	77.40	80.0	3.3
3-Nitroaniline	.381	.420	77.38	80.0	3.3
Acenaphthene *	1.180	1.151	78.01	80.0	2.5*
2,4-Dinitrophenol #	.140	.228	109.43	80.0	-36.8# J, UJ
4-Nitrophenol #	.215	.236	74.82	80.0	6.5#
Dibenzofuran	1.701	1.674	78.71	80.0	1.6
2,4-Dinitrotoluene	.442	.493	79.76	80.0	.3
1-Naphthylamine	1.018	.969	76.20	80.0	4.7
2-Naphthylamine	1.126	.985	69.98	80.0	12.5
Diethylphthalate	1.475	1.472	79.80	80.0	.3
4-Chlorophenyl-phenylether	.649	.544	67.12	80.0	16.1
Fluorene	1.245	1.008	64.79	80.0	19.0
4-Nitroaniline	.334	.367	78.61	80.0	1.7
4,6-Dinitro-2-methylphenol	.125	.183	97.60	80.0	-22.0
N-Nitrosodiphenylamine (1) *	.544	.566	83.16	80.0	-4.0*
1,2-Diphenylhydrazine	1.101	1.061	77.10	80.0	3.6
4-Bromophenyl-phenylether	.247	.250	81.09	80.0	-1.4
Hexachlorobenzene	.313	.315	80.50	80.0	-.6
Pentachlorophenol *	.168	.195	84.70	80.0	-5.9*
Phenanthrene	1.083	1.077	79.54	80.0	.6
Anthracene	1.072	1.053	78.57	80.0	1.8
Carbazole	.990	.958	77.41	80.0	3.2
Di-n-butylphthalate	1.401	1.420	81.04	80.0	-1.3
Fluoranthene *	1.117	.998	71.45	80.0	10.7*
Benzidine	.746	.753	322.81	320.0	-.9
Pyrene	1.466	1.803	98.36	80.0	-22.9
Butylbenzylphthalate	.773	.874	90.38	80.0	-13.0
3,3'-Dichlorobenzidine	.527	.551	83.63	80.0	-4.5
Benzo(a)anthracene	1.317	1.267	76.93	80.0	3.8
bis(2-Ethylhexyl)phthalate	1.038	1.060	81.75	80.0	-2.2
Chrysene	1.214	1.235	81.42	80.0	-1.8
Di-n-octylphthalate *	1.752	2.079	87.83	80.0	-9.8*
7,12-Dimethylbenz[a]anthrace	.563	.586	83.22	80.0	-4.0
Benzo(b)fluoranthene	1.346	1.337	79.45	80.0	.7
Benzo(k)fluoranthene	1.288	1.341	83.31	80.0	-4.1

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP01598 Calibration Date: 03/21/97 Time: 08:34

Lab File ID: >BC531 Init. Calib. Date(s): 03/17/97 03/17/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	*	1.186	1.233	83.19	80.0	-4.0*
Indeno(1,2,3-cd)pyrene		.978	1.073	87.78	80.0	-9.7
Dibenz(a,h)anthracene		.986	1.046	84.92	80.0	-6.2
Benzo(g,h,i)perylene		1.009	1.076	85.30	80.0	-6.6
2-Fluorophenol		1.368	1.358	79.46	80.0	.7
Phenol-d5		1.830	1.715	74.97	80.0	6.3
Phenol-d6		1.830	1.715	74.97	80.0	6.3
Nitrobenzene-d5		.463	.453	78.19	80.0	2.3
2-Fluorobiphenyl		1.355	1.246	73.54	80.0	8.1
2,4,6-Tribromophenol		.248	.272	77.17	80.0	3.5
Terphenyl-d14		.933	1.092	93.59	80.0	-17.0

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >BC531 Date Analyzed: 03/21/97

Instrument ID: HP01598 Time Analyzed: 08:34

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	43201	10.86	149934	13.94	83344	18.34
	UPPER LIMIT	86402		299868		166688	
	LOWER LIMIT	21601		74967		41672	
	EPA SAMPLE NO.						
01	MW-1-DL	40399	10.86	135518	13.94	69295	18.34
02	MW-2-DL	31495	10.85	110805	13.93	52013	18.33
03							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >BC531 Date Analyzed: 03/21/97

I strument ID: HP01598 Time Analyzed: 08:34

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	133265	22.11	77041	28.79	67108	33.72
	UPPER LIMIT	266530		154082		134216	
	LOWER LIMIT	66633		38521		33554	
	EPA SAMPLE NO.						
01	MW-1-DL	116757	22.10	90460	28.79	87647	33.72
02	MW-2-DL	78790	22.09	53275	28.78	49213	33.72
03							
04							
05							
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18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

SECTION 4

PROJECT CASE NARRATIVES AND

CHAIN-OF-CUSTODY RECORDS

CASE NARRATIVE

Client: Kerr-McGee Corporation
SDG #: HMS03

LANCASTER LABORATORIES
SEMIVOLATILES BY GC/MS

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2677693	MW-1-	X		10X Dilution
2677693DL	MW-1-DL	X		400X Dilution
2677693MS	MW-1-MS	X		Matrix Spike
2677693MSD	MW-1-MSD	X		Matrix Spike Dup
2677694	MW-2-	X		10X Dilution
2677694RE	MW-2-RE	X		Reinjection
2677694DL	MW-2-DL	X		800X Dilution
LABORATORY SUBMITTED QC:				
SBLKMA077	SBLKMA0772	X		Method Blank
077MALCS	077MALCS2	X		Lab Control Sample

SAMPLE PREPARATION:

All samples were prepared by SW-846 Method 3550A medium level protocol.

No problems were encountered during the extraction of these samples.

ANALYSIS:

The method used for analysis was EPA SW846 Method 8270B.

All samples were analyzed for the CLP OLM1.8 target compound list.

Case Narrative
SDG #: HMS03 continued

MW-1- and MW-2- were analyzed at initial 10X dilutions due to high concentrations of target compounds.

Due to a number of concentrations above calibration range, MW-1- and MW-2- were analyzed at further 400X and 800X dilutions, respectively.

No other problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Statistical windows are included in the QC summary section of this data package.

MW-2- had internal standard peak areas outside QC limits for both the initial injection and the reinjection confirming a matrix effect.

MW-1- had internal standard peak areas outside QC limits. MW-1-MS and MW-1-MSD were analyzed and internal standard peak areas were again outside QC limits, indicating a significant matrix effect.

A number of compounds were not recovered or their recoveries were outside QC limits in MW-1-MS and MW-1-MSD. Refer to the matrix spike/matrix spike duplicate form for the specific compounds outside QC limits.

All other QC was within specifications.

DATA INTERPRETATION:

Only non-conformances for client requested compounds are addressed in this case narrative.

Case Narrative
SDG #: HMS03 continued

Due to poor curve fit, a number of compounds were calculated using an average response factor. Refer to the calibration reports for more information

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Christine M. Ratcliff Date: 4/7/97

Christine M. Ratcliff,
Group Leader, GC/MS Semivolatiles

ANALYSIS

COMPUCHEM LABORATORIES

CHAIN-OF-CUSTODY RECORD

030701

Kerr McGee

PROJECT NAME: Gulf States Cr.
PROJECT NUMBER: 21-02
SAMPLERS (SIGNATURE)

PRINTED NAME

CLIENT ID (9 CHARACTERS)

1	2	3	4	5	6	7	8	9	No. of Bottles/Vials	GC/MS: 624-8240	GC/MS: 625-8270	GC/MS: TCL-VOA	GC/MS: TCL-SVOA	GC/MS: Other:	GC: 601-8010	GC: 602-8020	GC: 608-8080	GC: 8140	GC: TCL PEST/PCB's	GC: Herbicides	GC: Other:	INORGANICS: Metals	INORGANICS: Cyanide	INORGANICS: TAL Metals	INORGANICS: Other:	OTHER: TOC	OTHER: TOX	OTHER: Oil & Grease	OTHER: Pet Hydro.	OTHER: Phenols	MATRIX: Water/Soil	SAMPLING INFO: DATE	SAMPLING INFO: TIME
M	W	-	1		Project				3																							3/13/97	7:55
M	W	-	2		Project				3																							3/13/97	8:50
T	B	-	2						2																							3/13/97	N/A
							1																										
							1																										

REMARKS:

RELINQUISHED BY:	Date/Time	RELINQUISHED BY:	Date/Time	RELINQUISHED BY:	Date/Time
COMPANY NAME: Michael Pisani & Assoc.	3/13/97 11:15	COMPANY NAME:		COMPANY NAME:	
RECEIVED BY: FedEx: 433674 7927	Date/Time 3/13/97 1115	RECEIVED BY:	Date/Time	RECEIVED BY:	Date/Time 3/14/97 0941
COMPANY NAME:		COMPANY NAME:		COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RELINQUISHED BY:	Date/Time	RELINQUISHED BY:	Date/Time
COMPANY NAME:		COMPANY NAME:		COMPANY NAME:	

SHIPPING INFORMATION

Number of Shipping Containers

Method of Shipment: FED EX Priority

Special Handling Requirements: Call Dave with any questions

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601-5994

Sample Administration
Receipt Documentation Log

Client/Project: KESI MC 6212 COC Seal: Present / Not Present on cooler

Date of Receipt: 3/4/97 Broken / Intact

Time of Receipt: 0945 Package: Chilled / Not Chilled

Source Code: 3054 Unpacker Emp. No.: 67

Temperature of Samples	
#1	**#2**
Thermometer ID: 1010	Thermometer ID:
Corrected Temp.: 8.1	Corrected Temp.:
Temp. Bottle / ~~Surface Temp.~~	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y (N)	Ice Present? Y / N
#3	**#4**
Thermometer ID:	Thermometer ID:
Corrected Temp.:	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	3/4/97	1240	Unpacking
A. HUTCHINSON HST/PIT	3/4/97	1240	Place in Storage or Entry
[signature]	3/4/97	1580	Remove from Storage Entry
			Place in Storage or Entry
			Entry

FAX

Date 3/21/97

Number of pages including cover sheet 1

TO: Nancy Bomholm
Lancaster Laboratories

Phone (717) 656-2300
Fax Phone (717) 656-2681

FROM: David Upthegrove
Michael Pisani & Associates
1430 Energy Centre
1100 Poydras Street
New Orleans, LA 70163

Phone (504) 582-2468
Fax Phone (504) 582-2470

CC:

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please Comment

Nancy:

The purpose of this fax is to provide written confirmation of changes to chain-of-custody forms submitted with samples collected from the Gulf States Creosoting Site in Hattiesburg, Mississippi.

3-13-97 Shipment:

- Analyze MW-1 Product and MW-2 Product for TCL volatiles and semivolatiles by 8240 and 8270, respectively.
- Analyze TB-2 for TCL volatiles by 8240.

3-17-97 Shipment:

- Analyze RB-5 for TCL volatiles and semivolatiles by 8240 and 8270, respectively.

The address for Terra Consulting Group is:

9215 Interline Avenue
Baton Rouge, Louisiana 70809
(504) 930-9970 (phone)
(504) 930-9980 (fax)

Should you need any additional information, please call me. Thanks for all your help.

CLIENT: KERR-MCGEE
SDG: HMS03

LANCASTER LABORATORIES

VOLATILES by GC/MS

LL NUMBERS:	SAMPLE CODE:	MATRIX SOIL	MATRIX WATER	COMMENTS
2677693	MW-1-	X		6250X DILUTION
2677694	MW-2-	X		6250X DILUTION
2677695	TB-2-		X	CLIENT BLANK
LABORATORY SUBMITTED QC:				
VBLKD41	VBLKD41	X		METHOD BLANK 125X DILUTION
VBLKD42	VBLKD42	X		METHOD BLANK 125X DILUTION
VBLKD45	VBLKD45	X		METHOD BLANK 125X DILUTION
VBLKK43	VBLKK43		X	METHOD BLANK
2677287	K2-BR	X		UNSPIKED 125X DILUTION
2677287	K2-BRMS	X		MATRIX SPIKE 125X DILUTION
2677287	K2-BRMSD	X		MATRIX SPIKE DUP 125X DILUTION
LCS-42	LCS-42	X		LAB CONTROL SAMPLE 125X DILUTION

SAMPLE PREPARATION:

No problems were encountered during the sample preparation for the VOA fraction.

ANALYSIS:

The method used for analysis was EPA SW846 Method 8240B.

The medium level soil method was used for samples MW-1- and MW-2- due to the high level of target compounds. The quantitation limits for these samples were raised accordingly.

No other problems were encountered during the analysis of these samples.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Only client requested compounds are addressed in this narrative.

Samples MW-1- and MW-2- had surrogate recoveries outside QC limits due to the high dilution needed to perform the analysis.

QUALITY CONTROL and NONCONFORMANCE SUMMARY (cont.):

The percent recoveries for vinyl acetate and tetrachloroethene in K2-BRMSD were outside the statistical QC limits, indicating a matrix effect. A laboratory control sample was analyzed and all analytes except vinyl acetate met the statistical recovery criteria. The vinyl acetate recovery in the laboratory control sample was 151 percent, which exceeded the statistical QC limit of 55-142 percent. No vinyl acetate was detected in the sample analyses.

Statistical windows are included in the QC summary section of this data package.

All other QC was within specifications.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

John F. Morton Date 4/10/97

John F. Morton, M.S, GC/MS Volatiles

ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

May 21, 1997

Mr. David Upthegrove
Michael Pisani & Associates
1430 Energy Center
1100 Poydras Street
New Orleans, LA 70163

Dear Mr. Upthegrove:

Enclosed is the quality assurance review for the samples collected on March 13, 15, 17, 18, and 19, 1997, as part of the Gulf States Creosoting project. The samples were grouped by the laboratory into sample delivery group (SDG) HMS04 and were collectively analyzed for volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and PCBs.

Overall, the data quality is acceptable. However, a portion of the organic data has been qualified due to blank contamination, calibration issues, and results reported at concentrations below the quantitation limit.

If you have any questions/comments, or if I can be of further assistance, please feel free to call.

Sincerely,

for KB

Kathleen A. Blaine
Quality Assurance Specialist/Principal

KAB:cr/ko

Enc.

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ENVIRONMENTAL STANDARDS

Setting the Standards for Innovative Environmental Solutions

QUALITY ASSURANCE REVIEW OF SAMPLES COLLECTED FOR GULF STATES CREOSOTING

May 21, 1997

Prepared for:

MICHAEL PISANI & ASSOCIATES
1430 Energy Center
1100 Poydras Street
New Orleans, LA 70163

Prepared by:

ENVIRONMENTAL STANDARDS, INC.
1140 Valley Forge Road
P.O. Box 911
Valley Forge, PA 19482-0911

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Introduction

This quality assurance (QA) review is based upon a rigorous examination of the data generated from the samples collected between March 15 and 19, 1997, as part of the Gulf States Creosoting project. The samples that have undergone the QA review are presented on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Organic Data Review" (United States Environmental Protection Agency [US EPA], 2/94).

The reported analytical results are presented in Section 2. Data were examined to determine the usability of the analytical results and compliance relative to requirements specified in the analytical methods. Qualifier codes have been placed next to the results so the data user can quickly assess the qualitative and/or quantitative reliability of any result. This critical QA review identifies data quality issues for specific samples and specific evaluation criteria. The data qualifications allow the data end-user to best understand the usability of the analytical results. It should be understood that data that have not been qualified in this report should be considered valid based on the quality control (QC) criteria that have been reviewed. Details of this QA review are presented in the narrative section of this report. This report was prepared to provide a critical review of the laboratory analyses and reported analytical results. Rigorous QA reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
CPT/SB-01/8-10	2679073	HMS04	3/15/97	VOA, SVOA
CPT/SB-01/44-46	2679074	HMS04	3/15/97	VOA, SVOA
CPT/SB-01/44-46DL (Dilution of CPT/SB-01/44-46)	2679074DL	HMS04	3/15/97	VOA
CPT/SB-02/9-11	2679075	HMS04	3/15/97	VOA, SVOA
CPT/SB-02/9-11DL (Dilution of CPT/SB-02/9-11)	2679075DL	HMS04	3/15/97	SVOA
CPT/SB-03/20-22	2679076	HMS04	3/15/97	VOA, SVOA
CPT/SB-04/20-22	2679077	HMS04	3/15/97	VOA, SVOA
CPT/SB-04/20-22DL (Dilution of CPT/SB-04/20-22)	2679077DL	HMS04	3/15/97	SVOA
CPT/SB-04/20-22DL2 (Dilution of CPT/SB-04/20-22)	2679077DL2	HMS04	3/15/97	SVOA
CPT/SB-04/29-31	2679078	HMS04	3/15/97	VOA, SVOA
CPT/SB-04/29-31DL (Dilution of CPT/SB-04/29-31)	2679078DL	HMS04	3/15/97	SVOA
CPT/SB-05/10.5-12.5	2679079	HMS04	3/15/97	VOA, SVOA

TABLE 1 (Cont.)

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
CPT/SB-05/10.5-12.5DL (Dilution of CPT/SB-05/10.5-12.5)	2679079DL	HMS04	3/15/97	SVOA
CPT/SB-06/6-10	2679080	HMS04	3/17/97	VOA, SVOA
CPT/SB-06/6-10 (Matrix Spike)	2679081MS	HMS04	3/17/97	VOA, SVOA
CPT/SB-06/6-10 (Matrix Spike Duplicate)	2679082MSD	HMS04	3/17/97	VOA, SVOA
CPT/SB-07/14-16	2679083	HMS04	3/17/97	VOA, SVOA
CPT/SB-07/14-16DL (Dilution of CPT/SB-07/14-16)	2679083DL	HMS04	3/17/97	SVOA
CPT/SB-07/14-16DL2 (Dilution of CPT/SB-07/14-16)	2679083DL2	HMS04	3/17/97	SVOA
CPT/SB-06/36-38	2679084	HMS04	3/17/97	VOA, SVOA
CPT/SB-06/36-38DL (Dilution of CPT/SB-06/36-38)	2679084	HMS04	3/17/97	VOA
RB-4 (Rinsate Blank)	2679085	HMS04	3/15/97	VOA, SVOA
RB-5 (Rinsate Blank)	2679086	HMS04	3/17/97	VOA, SVOA
FB-1 (Field Blank)	2679087	HMS04	3/15/97	VOA
GEO/SB-01/10-12	2680801	HMS04	3/18/97	VOA, SVOA
GEO/SB-02/10-12	2680802	HMS04	3/18/97	VOA, SVOA

TABLE 1 (Cont.)

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
GEO/SB-03/8-9.3	2680803	HMS04	3/18/97	VOA, SVOA
GEO/SB-04/10-12	2680804	HMS04	3/18/97	VOA, SVOA
GEO/SB-05/4-9	2680805	HMS04	3/18/97	VOA, SVOA, P
GEO/SB-05/4-9DL (Dilution of GEO/SB-05/4-9)	2680805DL	HMS04	3/18/97	SVOA
GEO/SB-05A/17-19	2680806	HMS04	3/18/97	VOA, SVOA
RB-6 (Rinsate Blank)	2680807	HMS04	3/18/97	VOA, SVOA
GEO/SB-29/6-8	2680808	HMS04	3/18/97	VOA, SVOA
GEO/SB-29/6-8DL (Dilution of GEO/SB-29/6-8)	2680808DL	HMS04	3/18/97	SVOA
GEO/SB-29/6-8DL2 (Dilution of GEO/SB-29/6-8)	2680808DL2	HMS04	3/18/97	SVOA
GEO/SB-06/10-12	2680809	HMS04	3/19/97	VOA, SVOA
GEO/SB-06/10-12DL (Dilution of GEO/SB-06/10-12)	2680809	HMS04	3/19/97	SVOA
GEO/SB-06/10-12DL2 (Dilution of GEO/SB-06/10-12)	2680809	HMS04	3/19/97	SVOA
GEO/SB-07/5-7	2680810	HMS04	3/19/97	VOA, SVOA

TABLE 1 (Cont.)

Kerr-McGee Corporation Sample Number	Laboratory Sample Number	SDG Number	Date of Sample Collection	Parameter(s) Analyzed
GEO/SB-07/5-7DL (Dilution of GEO/SB-07/5-7)	2680810DL	HMS04	3/19/97	VOA, SVOA
FB-2 (Field Blank)	2680811	HMS04	3/19/97	VOA

NOTES:

SVOA - Semivolatile organic compounds by SW-846 Method 8270B.
VOA - Volatile organic compounds by SW-846 Method 8240B.
P - Organochlorine Pesticides by SW-846 Method 8081.

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 41 aqueous and solid samples (including dilutions, field blanks, rinsate blanks, matrix spike, and matrix spike duplicate samples) were performed by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. These 41 samples were collectively analyzed for volatile organic compounds by SW-846 Method 8240B, semivolatile organic compounds by SW-846 Method 8270B, and organochlorine pesticides and polychlorinated biphenyls (PCBs) by SW-846 Method 8081, as indicated on Table 1. The analytical results are presented in Section 2 of this report.

The findings in this report are based upon a rigorous review of sample holding times, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike and matrix spike duplicate recoveries, sample dilution results, surrogate recoveries, gas chromatography/mass spectroscopy (GC/MS) instrument mass tuning, calibrations, sample preparation, internal standard performance, analytical sequence, surrogate retention time shifts, 4,4'-DDT and endrin breakdown, GC column agreement, and the quantitation of positive results. A few deficiencies were identified during the validation of this data set.

In the Data Support Documentation (Section 3) of this report, the data reviewer has included copies of all relevant raw data, QC forms, and other documentation needed to support any changes made to the data package. It should be emphasized that the following items do not necessarily affect data usability. Usability issues are addressed in a subsequent section. This report has been prepared according to sections that provide information that apply to specific analyses performed on the project samples.

Noncorrectable Deficiency

- Sample RB-5 was not listed on the Chain-of-Custody records, but data was supplied for the volatiles and semivolatiles analytical fractions.

Comments

1. As noted in the Laboratory Case Narrative, the quantitation limits for the volatile fraction of samples CPT/SB-04/20-22, CPT/SB-04/29-31, CPT/SB-05/10.5-12.5, GEO/SB-05/4-9, GEO/SB-29/6-8, GEO/SB-06/10-12, and GEO/SB-07/5-7 were raised due to high concentrations of non-target compounds in the samples.

2. Diethylphthalate, a common field and laboratory contaminant, was detected in the rinsate blank, RB-5, at a concentration of 2 µg/l. Bis(2-ethylhexyl)phthalate and phenanthrene were detected in the rinsate blank, RB-6, at concentrations of 4 µg/l and 1 µg/l, respectively. All samples in this SDG are considered to be associated with these two rinsate blanks (see subsequent data qualifiers).

3. Due to interferences in the matrix resulting in secondary dilutions of the semivolatile fraction of samples CPT/SB-02/9-11, CPT/SB-04/20-22, CPT/SB04/29-31, CPT/SB-05/10.5-12.5, CPT/SB-07/14-16, GEO/SB-05/4-9, GEO/SB-29/6-8, GEO/SB-06/10-12, and GEO/SB-07/5-7, the semivolatile surrogate compounds were diluted out. Surrogate recoveries measure laboratory performance on a sample-specific basis. Based on these surrogate recoveries, the data reviewer was not able to evaluate the extraction efficiency for the aforementioned analyses. Therefore, the data was not qualified based on the reported recoveries for the surrogate compounds.

4. A zero percent recovery was obtained on the confirmation column for tetrachloro-*m*-xylene in the pesticide/PCB analysis of sample GEO/SB-05/4-9. The recovery for this surrogate on the primary column, as well as the recovery for the secondary surrogate on both columns, was acceptable. No qualification of the data is required based on this information.

5. The data usability results for the LCS and matrix spike/matrix spike duplicate analyses were evaluated utilizing the laboratory-generated precision and accuracy limits.

6. The laboratory reported "not-detected" results down to the method detection limits (MDLs). In addition, positive results less than the quantitation limit, but greater than the MDL, were qualified by the laboratory as estimated ("J").

7. All results were reported on the data tables on a wet-weight basis, according to instructions from Michael Pisani & Associates personnel.

8. The laboratory analyzed the volatile and/or semivolatile fraction two or more times for several samples. The laboratory reported one set of results from all analyses, although the laboratory provided the raw data for all analyses. The laboratory reported the results for target compounds whose concentrations exceeded the calibration range in the initial analyses from the secondary dilution analyses. All target compounds that were within the calibration range in the initial analyses were reported from those analyses. The data reviewer has only qualified the results reported by the laboratory.

With regard to data usability, the principal areas of concern are blank contamination, calibration issues, and results reported at concentrations below the quantitation limit. Based upon a review of the data package provided, the following data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- The analyses for vinyl acetate in the samples ! RB-4, RB-5, RB-6, FB-1, and FB-2 are unusable, and the "not-detected" results have been flagged "R" on the data tables. A very low (<0.050) relative response factor (RRF) was observed for this compound in the associated initial multipoint calibration standards and continuing calibration standard.

- Due to the trace-level presence of diethylphthalate and bis(2-ethylhexyl)phthalate in the associated rinse blanks, the compounds in the samples listed below should be considered "not-detected", and the reported positive results have been flagged "U*" on the data tables. Furthermore, results that were reported below the sample-specific quantitation limit were replaced with the quantitation limit and the appropriate "U*" qualifier. It should be noted that dilution factors and sample volume were taken into consideration when evaluating blank contamination.

Compound	Sample(s) With Results Qualified as "Not-Detected" ("U*")
diethylphthalate	CPT/SB-01/8-10
bis(2-ethylhexyl)phthalate	CPT/SB-01/8-10 and CPT/SB-03/20-22

- Although there is no direct reason to question the reported positive results for acetone in samples CPT/SB-01/8-10, CPT/SB-02/9-11, CPT/SB-06/6-10, GEO/SB-05/4-9, GEO/SB-29/6-8, and GEO/SB-06/10-12, this compound is a very common laboratory and field contaminant. In addition, the reported result for this compound in this sample represents a low-level, on-column detection. Accordingly, extreme caution should be exercised if the results are to be used in a decision-making process, such as risk assessment.

- The actual reporting limits for the following compounds in the associated samples may be higher than reported, and the "not-detected" results for these compounds have been flagged "UJ" on the data tables. In addition, high percent differences (25.0% < %D ≤90.0%) were

obtained between the average RRFs of the associated initial calibrations and the RRFs in the associated continuing calibrations.

Compound	Sample(s) With Biased Reporting Limits ("UJ")	Samples With Estimated Positive Results ("J")
acetone	CPT/SB-03/20-22	CPT/SB-06/6-10, CPT/SB-01/8-10, CPT/SB-01/44-46, CPT/SB-07/14-16, CPT/SB-06/36-38, CPT/SB-04/20-22, CPT/SB-02/9-11, CPT/SB-04/29-31, and CPT/SB-05/10.5-12.5
2-hexanone	RB-4, RB-5, and FB-1	
2,4-dinitrophenol	RB-6	
4-nitroaniline	RB-6	

- According to reporting conventions, all positive results reported below the sample-specific quantitation limits should be considered estimated and have been flagged "J" on the data tables.

A complete support documentation of this organic data QA review is presented in Section 3 of this report.

B. Conclusions

This QA review has identified several aspects of the analytical data that required qualification. The majority of the data are acceptable. However, a portion of the organic data has been qualified due blank contamination, calibration issues, and results reported at concentrations below the quantitation limit. To confidently use any of the analytical data within these sample sets, the data user should understand the qualifications and limitations of the results.

Report prepared by:

for KB

Kathleen A. Blaine
Quality Assurance Specialist/Principal

Report reviewed by:

Ruth L Forman

Ruth L. Forman
Senior Quality Assurance Chemist II

Report reviewed and approved by:

Rock J. Vitale, CPC
Technical Director of Chemistry/Principal

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Valley Forge, PA 19482-0911

(610) 935-5577

Date: 5-21-97

Organic Qualifiers

U Compound was not detected.

U* This compound should be considered "not-detected" since it was detected in a field, trip, and/or laboratory blank at a similar level.

J Quantitation is estimated due to limitations identified during the quality assurance review (data validation).

R Unusable result; analyte may or may not be present in the sample.

UJ This compound was not detected, but the Quantitation limit may or may not be higher due to a bias identified during the quality assurance review.

Kerr McGee Corp, Final

			HMS04								
			CPT/SB-01/44-46 Grab Soil Sampl			CPT/SB-01/8-10 Grab Soil Sample			CPT/SB-02/9-11 Grab Soil Sample		
			2679074			2679073			2679075		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	3	U	3	3	U	3	3	U	3
1	Chloromethane	74-87-3	2	U	2	2	U	2	2	U	2
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	2	U	2	2	U	2	2	U	2
6	Acetone	67-64-1	730	J	35	59	J	7	9	J	7
7	Carbon Disulfide	75-15-0	3	U	3	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	1	U	1	1	U	1	1	U	1
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	7	U	7	7	U	7	7	U	7
14	Chloroform	67-66-3	1	U	1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	1	U	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	3	U	3	3	U	3	3	U	3
21	Bromodichloromethane	75-27-4	2	U	2	2	U	2	2	U	2
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

Kerr McGee Corp, Final

			HMS04								
			CPT/SB-01/44-46 Grab Soil Sampl			CPT/SB-01/8-10 Grab Soil Sample			CPT/SB-02/9-11 Grab Soil Sample		
			2679074			2679073			2679075		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	3	U	3	3	U	3	3	U	3
24	Toluene	108-88-3	1	U	1	1	U	1	13		1
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	3	U	3	3	U	3	3	U	3
29	Dibromochloromethane	124-48-1	1	U	1	1	U	1	1	U	1
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	1	U	1	1	U	1	46		1
33	Xylene (total)	1330-20-7	1	U	1	1	U	1	280		1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	1	U	1	1	U	1

			CPT/SB-03/20-22 Grab Soil Sampl			CPT/SB-04/20-22 Grab Soil Sampl			CPT/SB-04/29-31 Grab Soil Sampl		
			2679076			2679077			2679078		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	3	U	3	15	U	15	15	U	15
1	Chloromethane	74-87-3	2	U	2	10	U	10	10	U	10
2	Vinyl Chloride	75-01-4	2	U	2	10	U	10	10	U	10
3	Bromomethane	74-83-9	3	U	3	15	U	15	15	U	15
4	Chloroethane	75-00-3	3	U	3	15	U	15	15	U	15
5	1,1-Dichloroethene	75-35-4	2	U	2	10	U	10	10	U	10
6	Acetone	67-64-1	7	UJ	7	99	J	35	68	J	35
7	Carbon Disulfide	75-15-0	3	U	3	15	U	15	15	U	15
8	Methylene Chloride	75-09-2	2	U	2	10	U	10	10	U	10
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	10	U	10	10	U	10
10	1,1-Dichloroethane	75-34-3	1	U	1	5	U	5	5	U	5
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	10	U	10	10	U	10
12	2-Butanone	78-93-3	7	U	7	35	U	35	35	U	35
14	Chloroform	67-66-3	1	U	1	5	U	5	5	U	5
15	1,1,1-Trichloroethane	71-55-6	1	U	1	5	U	5	5	U	5
16	Carbon Tetrachloride	56-23-5	1	U	1	5	U	5	5	U	5
17	Benzene	71-43-2	1	U	1	21	J	5	6	J	5
18	1,2-Dichloroethane	107-06-2	2	U	2	10	U	10	10	U	10
19	Trichloroethene	79-01-6	1	U	1	5	U	5	5	U	5
20	1,2-Dichloropropane	78-87-5	3	U	3	15	U	15	15	U	15
21	Bromodichloromethane	75-27-4	2	U	2	10	U	10	10	U	10
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	5	U	5	5	U	5

			CPT/SB-03/20-22 Grab Soil Sampl			CPT/SB-04/20-22 Grab Soil Sampl			CPT/SB-04/29-31 Grab Soil Sampl		
			2679076			2679077			2679078		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	3	U	3	15	U	15	15	U	15
24	Toluene	108-88-3	1	U	1	340		5	63		5
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	5	U	5	5	U	5
26	1,1,2-Trichloroethane	79-00-5	2	U	2	10	U	10	10	U	10
27	Tetrachloroethene	127-18-4	1	U	1	5	U	5	5	U	5
28	2-Hexanone	591-78-6	3	U	3	15	U	15	15	U	15
29	Dibromochloromethane	124-48-1	1	U	1	5	U	5	5	U	5
31	Chlorobenzene	108-90-7	1	U	1	5	U	5	5	U	5
32	Ethylbenzene	100-41-4	1	U	1	250		5	60		5
33	Xylene (total)	1330-20-7	1	U	1	1,300		5	350		5
35	Styrene	100-42-5	1	U	1	240		5	71		5
36	Bromoform	75-25-2	1	U	1	5	U	5	5	U	5
37	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	5	U	5	5	U	5

			CPT/SB-05/10.5-12.5 Grab Soil Sa			CPT/SB-06/36-38 Grab Soil Sampl			CPT/SB-06/6-10 Unspiked Grab S		
			2679079			2679084			2679080		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	15	U	15	3	U	3	3	U	3
1	Chloromethane	74-87-3	10	U	10	2	U	2	2	U	2
2	Vinyl Chloride	75-01-4	10	U	10	2	U	2	2	U	2
3	Bromomethane	74-83-9	15	U	15	3	U	3	3	U	3
4	Chloroethane	75-00-3	15	U	15	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	10	U	10	2	U	2	2	U	2
6	Acetone	67-64-1	100	J	35	1,500	J	35	10	J	7
7	Carbon Disulfide	75-15-0	15	U	15	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	10	U	10	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	10	U	10	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	5	U	5	1	U	1	1	U	1
11	cis-1,2-Dichloroethene	156-59-2	10	U	10	2	U	2	2	U	2
12	2-Butanone	78-93-3	35	U	35	7	U	7	7	U	7
14	Chloroform	67-66-3	5	U	5	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	5	U	5	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	5	U	5	1	U	1	1	U	1
17	Benzene	71-43-2	7	J	5	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	10	U	10	2	U	2	2	U	2
19	Trichloroethene	79-01-6	5	U	5	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	15	U	15	3	U	3	3	U	3
21	Bromodichloromethane	75-27-4	10	U	10	2	U	2	2	U	2
22	cis-1,3-Dichloropropene	10061-01-5	5	U	5	1	U	1	1	U	1

			CPT/SB-05/10.5-12.5 Grab Soil Sa			CPT/SB-06/36-38 Grab Soil Sampl			CPT/SB-06/6-10 Unspiked Grab S		
			2679079			2679084			2679080		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	15	U	15	3	U	3	3	U	3
24	Toluene	108-88-3	140		5	1	U	1	1	U	1
25	trans-1,3-Dichloropropene	10061-02-6	5	U	5	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	10	U	10	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	5	U	5	1	U	1	1	U	1
28	2-Hexanone	591-78-6	15	U	15	3	U	3	3	U	3
29	Dibromochloromethane	124-48-1	5	U	5	1	U	1	1	U	1
31	Chlorobenzene	108-90-7	5	U	5	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	120		5	1	U	1	1	U	1
33	Xylene (total)	1330-20-7	780		5	1	U	1	1	U	1
35	Styrene	100-42-5	100		5	1	U	1	1	U	1
36	Bromoform	75-25-2	5	U	5	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	5	U	5	1	U	1	1	U	1

			CPT/SB-07/14-16 Grab Soil Sampl			FB-1 Grab Water Sample			FB-2 Grab Water Sample		
			2679083			2679087			2680811		
			3/17/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/19/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			WATER			WATER		
			VOA			VOA			VOA		
			UG/KG			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	3	U	3	2	R	2	2	R	2
1	Chloromethane	74-87-3	2	U	2	3	U	3	3	U	3
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	2	U	2	1	U	1	1	U	1
6	Acetone	67-64-1	42	J	7	6	U	6	6	U	6
7	Carbon Disulfide	75-15-0	3	U	3	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	1	U	1	2	U	2	2	U	2
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	7	U	7	3	U	3	3	U	3
14	Chloroform	67-66-3	1	U	1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	5	J	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	3	U	3	1	U	1	1	U	1
21	Bromodichloromethane	75-27-4	2	U	2	1	U	1	1	U	1
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

			CPT/SB-07/14-16 Grab Soil Sampl			FB-1 Grab Water Sample			FB-2 Grab Water Sample		
			2679083			2679087			2680811		
			3/17/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/19/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			WATER			WATER		
			VOA			VOA			VOA		
			UG/KG			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	3	U	3	5	U	5	5	U	5
24	Toluene	108-88-3	15		1	2	U	2	2	U	2
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	3	U	3	7	UJ	7	7	U	7
29	Dibromochloromethane	124-48-1	1	U	1	2	U	2	2	U	2
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	24		1	2	U	2	2	U	2
33	Xylene (total)	1330-20-7	75		1	1	U	1	1	U	1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	2	U	2	2	U	2

			GEO/SB-01/10-12 Grab Soil Sampl			GEO/SB-02/10-12 Grab Soil Sampl			GEO/SB-03/8-9.3 Grab Soil Sampl		
			2680801			2680802			2680803		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	3	U	3	3	U	3	3	U	3
1	Chloromethane	74-87-3	2	U	2	2	U	2	2	U	2
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	2	U	2	2	U	2	2	U	2
6	Acetone	67-64-1	7	U	7	7	U	7	7	U	7
7	Carbon Disulfide	75-15-0	3	U	3	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	1	U	1	1	U	1	1	U	1
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	7	U	7	7	U	7	7	U	7
14	Chloroform	67-66-3	1	U	1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	1	U	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	3	U	3	3	U	3	3	U	3
21	Bromodichloromethane	75-27-4	2	U	2	2	U	2	2	U	2
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

			GEO/SB-01/10-12 Grab Soil Sampl			GEO/SB-02/10-12 Grab Soil Sampl			GEO/SB-03/8-9.3 Grab Soil Sampl		
			2680801			2680802			2680803		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	3	U	3	3	U	3	3	U	3
24	Toluene	108-88-3	1	U	1	1	U	1	1	U	1
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	3	U	3	3	U	3	3	U	3
29	Dibromochloromethane	124-48-1	1	U	1	1	U	1	1	U	1
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	1	U	1	1	U	1	1	U	1
33	Xylene (total)	1330-20-7	1	U	1	1	U	1	1	U	1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	1	U	1	1	U	1

			GEO/SB-04/10-12 Grab Soil Sampl			GEO/SB-05/4-9 Grab Soil Sample			GEO/SB-05A/17-19 Grab Soil Sam		
			2680804			2680805			2680806		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	3	U	3	15	U	15	3	U	3
1	Chloromethane	74-87-3	2	U	2	10	U	10	2	U	2
2	Vinyl Chloride	75-01-4	2	U	2	10	U	10	2	U	2
3	Bromomethane	74-83-9	3	U	3	15	U	15	3	U	3
4	Chloroethane	75-00-3	3	U	3	15	U	15	3	U	3
5	1,1-Dichloroethene	75-35-4	2	U	2	10	U	10	2	U	2
6	Acetone	67-64-1	7	U	7	73	J	35	7	U	7
7	Carbon Disulfide	75-15-0	3	U	3	15	U	15	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	10	U	10	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	10	U	10	2	U	2
10	1,1-Dichloroethane	75-34-3	1	U	1	5	U	5	1	U	1
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	10	U	10	2	U	2
12	2-Butanone	78-93-3	7	U	7	35	U	35	7	U	7
14	Chloroform	67-66-3	1	U	1	5	U	5	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	5	U	5	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	5	U	5	1	U	1
17	Benzene	71-43-2	1	U	1	5	U	5	2	J	1
18	1,2-Dichloroethane	107-06-2	2	U	2	10	U	10	2	U	2
19	Trichloroethene	79-01-6	1	U	1	5	U	5	1	U	1
20	1,2-Dichloropropane	78-87-5	3	U	3	15	U	15	3	U	3
21	Bromodichloromethane	75-27-4	2	U	2	10	U	10	2	U	2
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	5	U	5	1	U	1

			GEO/SB-04/10-12 Grab Soil Sampl			GEO/SB-05/4-9 Grab Soil Sample			GEO/SB-05A/17-19 Grab Soil Sam		
			2680804			2680805			2680806		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	3	U	3	15	U	15	3	U	3
24	Toluene	108-88-3	1	U	1	50		5	1	U	1
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	5	U	5	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	10	U	10	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	5	U	5	1	U	1
28	2-Hexanone	591-78-6	3	U	3	15	U	15	3	U	3
29	Dibromochloromethane	124-48-1	1	U	1	5	U	5	1	U	1
31	Chlorobenzene	108-90-7	1	U	1	5	U	5	1	U	1
32	Ethylbenzene	100-41-4	1	U	1	230		5	1	U	1
33	Xylene (total)	1330-20-7	1	U	1	1,200		5	1	J	1
35	Styrene	100-42-5	1	U	1	5	U	5	1	U	1
36	Bromoform	75-25-2	1	U	1	5	U	5	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	1	U	1	5	U	5	1	U	1

			GEO/SB-06/10-12 Grab Soil Sampl			GEO/SB-07/5-7 Grab Soil Sample			GEO/SB-29/6-8 Grab Soil Sample		
			2680809			2680810			2680808		
			3/19/1997 12:00:00 AM			3/19/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	15	U	15	15	U	15	15	U	15
1	Chloromethane	74-87-3	10	U	10	10	U	10	10	U	10
2	Vinyl Chloride	75-01-4	10	U	10	10	U	10	10	U	10
3	Bromomethane	74-83-9	15	U	15	15	U	15	15	U	15
4	Chloroethane	75-00-3	15	U	15	15	U	15	15	U	15
5	1,1-Dichloroethene	75-35-4	10	U	10	10	U	10	10	U	10
6	Acetone	67-64-1	44	J	35	35	U	35	53	J	35
7	Carbon Disulfide	75-15-0	15	U	15	15	U	15	15	U	15
8	Methylene Chloride	75-09-2	10	U	10	10	U	10	10	U	10
9	trans-1,2-Dichloroethene	156-60-5	10	U	10	10	U	10	10	U	10
10	1,1-Dichloroethane	75-34-3	5	U	5	5	U	5	5	U	5
11	cis-1,2-Dichloroethene	156-59-2	10	U	10	10	U	10	10	U	10
12	2-Butanone	78-93-3	35	U	35	35	U	35	35	U	35
14	Chloroform	67-66-3	5	U	5	5	U	5	5	U	5
15	1,1,1-Trichloroethane	71-55-6	5	U	5	5	U	5	5	U	5
16	Carbon Tetrachloride	56-23-5	5	U	5	5	U	5	5	U	5
17	Benzene	71-43-2	8	J	5	5	U	5	5	U	5
18	1,2-Dichloroethane	107-06-2	10	U	10	10	U	10	10	U	10
19	Trichloroethene	79-01-6	5	U	5	5	U	5	5	U	5
20	1,2-Dichloropropane	78-87-5	15	U	15	15	U	15	15	U	15
21	Bromodichloromethane	75-27-4	10	U	10	10	U	10	10	U	10
22	cis-1,3-Dichloropropene	10061-01-5	5	U	5	5	U	5	5	U	5

			GEO/SB-06/10-12 Grab Soil Sampl			GEO/SB-07/5-7 Grab Soil Sample			GEO/SB-29/6-8 Grab Soil Sample		
			2680809			2680810			2680808		
			3/19/1997 12:00:00 AM			3/19/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			SEDIM			SEDIM			SEDIM		
			VOA			VOA			VOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	15	U	15	15	U	15	15	U	15
24	Toluene	108-88-3	95		5	14	J	5	45		5
25	trans-1,3-Dichloropropene	10061-02-6	5	U	5	5	U	5	5	U	5
26	1,1,2-Trichloroethane	79-00-5	10	U	10	10	U	10	10	U	10
27	Tetrachloroethene	127-18-4	5	U	5	5	U	5	5	U	5
28	2-Hexanone	591-78-6	15	U	15	15	U	15	15	U	15
29	Dibromochloromethane	124-48-1	5	U	5	5	U	5	5	U	5
31	Chlorobenzene	108-90-7	5	U	5	5	U	5	5	U	5
32	Ethylbenzene	100-41-4	480		5	68		5	210		5
33	Xylene (total)	1330-20-7	1,700		5	490		5	1,200		5
35	Styrene	100-42-5	5	U	5	5	U	5	5	U	5
36	Bromoform	75-25-2	5	U	5	5	U	5	5	U	5
37	1,1,2,2-Tetrachloroethane	79-34-5	5	U	5	5	U	5	5	U	5

			RB-4 Grab Water Sample			RB-5 Grab Water Sample			RB-6 Grab Water Sample		
			2679085			2679086			2680807		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
255	Vinyl Acetate	108-05-4	2	R	2	2	R	2	2	R	2
1	Chloromethane	74-87-3	3	U	3	3	U	3	3	U	3
2	Vinyl Chloride	75-01-4	2	U	2	2	U	2	2	U	2
3	Bromomethane	74-83-9	3	U	3	3	U	3	3	U	3
4	Chloroethane	75-00-3	3	U	3	3	U	3	3	U	3
5	1,1-Dichloroethene	75-35-4	1	U	1	1	U	1	1	U	1
6	Acetone	67-64-1	6	U	6	6	U	6	6	U	6
7	Carbon Disulfide	75-15-0	3	U	3	3	U	3	3	U	3
8	Methylene Chloride	75-09-2	2	U	2	2	U	2	2	U	2
9	trans-1,2-Dichloroethene	156-60-5	2	U	2	2	U	2	2	U	2
10	1,1-Dichloroethane	75-34-3	2	U	2	2	U	2	2	U	2
11	cis-1,2-Dichloroethene	156-59-2	2	U	2	2	U	2	2	U	2
12	2-Butanone	78-93-3	3	U	3	3	U	3	3	U	3
14	Chloroform	67-66-3	1	U	1	1	U	1	1	U	1
15	1,1,1-Trichloroethane	71-55-6	1	U	1	1	U	1	1	U	1
16	Carbon Tetrachloride	56-23-5	1	U	1	1	U	1	1	U	1
17	Benzene	71-43-2	1	U	1	1	U	1	1	U	1
18	1,2-Dichloroethane	107-06-2	2	U	2	2	U	2	2	U	2
19	Trichloroethene	79-01-6	1	U	1	1	U	1	1	U	1
20	1,2-Dichloropropane	78-87-5	1	U	1	1	U	1	1	U	1
21	Bromodichloromethane	75-27-4	1	U	1	1	U	1	1	U	1
22	cis-1,3-Dichloropropene	10061-01-5	1	U	1	1	U	1	1	U	1

			RB-4 Grab Water Sample			RB-5 Grab Water Sample			RB-6 Grab Water Sample		
			2679085			2679086			2680807		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8240B			SW-846 8240B			SW-846 8240B		
			WATER			WATER			WATER		
			VOA			VOA			VOA		
			UG/L			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	4-Methyl-2-pentanone	108-10-1	5	U	5	5	U	5	5	U	5
24	Toluene	108-88-3	2	U	2	2	U	2	2	U	2
25	trans-1,3-Dichloropropene	10061-02-6	1	U	1	1	U	1	1	U	1
26	1,1,2-Trichloroethane	79-00-5	2	U	2	2	U	2	2	U	2
27	Tetrachloroethene	127-18-4	1	U	1	1	U	1	1	U	1
28	2-Hexanone	591-78-6	7	UJ	7	7	UJ	7	7	U	7
29	Dibromochloromethane	124-48-1	2	U	2	2	U	2	2	U	2
31	Chlorobenzene	108-90-7	1	U	1	1	U	1	1	U	1
32	Ethylbenzene	100-41-4	2	U	2	2	U	2	2	U	2
33	Xylene (total)	1330-20-7	1	U	1	1	U	1	1	U	1
35	Styrene	100-42-5	1	U	1	1	U	1	1	U	1
36	Bromoform	75-25-2	1	U	1	1	U	1	1	U	1
37	1,1,2,2-Tetrachloroethane	79-34-5	2	U	2	2	U	2	2	U	2

			HMS04								
			CPT/SB-01/44-46 Grab Soil Sampl			CPT/SB-01/8-10 Grab Soil Sample			CPT/SB-02/9-11 Grab Soil Sample		
			2679074			2679073			2679075		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	170	U	170
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	330	U	330
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	170	U	170
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	170	U	170
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	170	U	170
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	170	U	170
7	2-methylphenol	95-48-7	67	U	67	67	U	67	330	U	330
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	500	U	500
9	4-methylphenol	106-44-5	100	U	100	100	U	100	500	U	500
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	330	U	330
11	hexachloroethane	67-72-1	67	U	67	67	U	67	330	U	330
12	nitrobenzene	98-95-3	33	U	33	33	U	33	170	U	170
13	isophorone	78-59-1	67	U	67	67	U	67	330	U	330
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	330	U	330
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	330	U	330
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	170	U	170
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	170	U	170
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	170	U	170
19	naphthalene	91-20-3	33	U	33	33	U	33	180,000		1,700
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	500	U	500
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	330	U	330
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	330	U	330

			HMS04								
			CPT/SB-01/44-46 Grab Soil Sample			CPT/SB-01/8-10 Grab Soil Sample			CPT/SB-02/9-11 Grab Soil Sample		
			2679074			2679073			2679075		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	79,000		1,700
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	830	U	830
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	330	U	330
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	330	U	330
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	170	U	170
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	330	U	330
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	170	U	170
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	330	U	330
31	acenaphthylene	208-96-8	33	U	33	33	U	33	840	J	170
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	330	U	330
33	acenaphthene	83-32-9	33	U	33	33	U	33	26,000		170
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	830	U	830
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	830	U	830
36	dibenzofuran	132-64-9	33	U	33	33	U	33	26,000		170
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	330	U	330
38	diethyl phthalate	84-66-2	67	U	67	120	U*	67	330	U	330
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	330	U	330
40	fluorene	86-73-7	33	U	33	33	U	33	47,000		1,700
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	500	U	500
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	830	U	830
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	330	U	330
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	500	U	500

			HMS04								
			CPT/SB-01/44-46 Grab Soil Sample			CPT/SB-01/8-10 Grab Soil Sample			CPT/SB-02/9-11 Grab Soil Sample		
			2679074			2679073			2679075		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	500	U	500
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	830	U	830
47	phenanthrene	85-01-8	33	U	33	33	U	33	110,000		1,700
48	anthracene	120-12-7	33	U	33	33	U	33	18,000		170
49	carbazole	86-74-8	33	U	33	33	U	33	11,000		170
50	di-n-butyl phthalate	84-74-2	33	U	33	33	U	33	170	U	170
51	fluoranthene	206-44-0	33	U	33	33	U	33	56,000		1,700
52	pyrene	129-00-0	67	U	67	67	U	67	24,000		330
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	330	U	330
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	670	U	670
55	benzo (a) anthracene	56-55-3	33	U	33	33	U	33	9,500		170
56	chrysene	218-01-9	33	U	33	33	U	33	8,500		170
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	98	U*	67	330	U	330
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	330	U	330
59	benzo (b) fluoranthene	205-99-2	67	U	67	67	U	67	5,100		330
60	benzo (k) fluoranthene	207-08-9	130	U	130	130	U	130	1,900		670
61	benzo (a) pyrene	50-32-8	67	U	67	67	U	67	3,500		330
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	67	U	67	1,200	J	330
63	dibenz (a,h) anthracene	53-70-3	67	U	67	67	U	67	330	U	330
64	benzo (ghi) perylene	191-24-2	67	U	67	67	U	67	990	J	330

			CPT/SB-03/20-22 Grab Soil Sample			CPT/SB-04/20-22 Grab Soil Sample			CPT/SB-04/29-31 Grab Soil Sample		
			2679076			2679077			2679078		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	53,000		1,700	46,000		1,700
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	330	U	330	330	U	330
3	2-chlorophenol	95-57-8	33	U	33	170	U	170	170	U	170
4	1,3-dichlorobenzene	541-73-1	33	U	33	170	U	170	170	U	170
5	1,4-dichlorobenzene	106-46-7	33	U	33	170	U	170	170	U	170
6	1,2-dichlorobenzene	95-50-1	33	U	33	170	U	170	170	U	170
7	2-methylphenol	95-48-7	67	U	67	20,000		330	17,000		330
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	500	U	500	500	U	500
9	4-methylphenol	106-44-5	100	U	100	76,000		5,000	71,000		5,000
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	330	U	330	330	U	330
11	hexachloroethane	67-72-1	67	U	67	330	U	330	330	U	330
12	nitrobenzene	98-95-3	33	U	33	170	U	170	170	U	170
13	isophorone	78-59-1	67	U	67	330	U	330	330	U	330
14	2-nitrophenol	88-75-5	67	U	67	330	U	330	330	U	330
15	2,4-dimethylphenol	105-67-9	67	U	67	20,000		330	17,000		330
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	170	U	170	170	U	170
17	2,4-dichlorophenol	120-83-2	33	U	33	170	U	170	170	U	170
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	170	U	170	170	U	170
19	naphthalene	91-20-3	33	U	33	340,000		3,300	200,000		1,700
20	4-chloroaniline	106-47-8	100	U	100	500	U	500	500	U	500
21	hexachlorobutadiene	87-68-3	67	U	67	330	U	330	330	U	330
22	4-chloro-3-methylphenol	59-50-7	67	U	67	330	U	330	330	U	330

			CPT/SB-03/20-22 Grab Soil Sample			CPT/SB-04/20-22 Grab Soil Sample			CPT/SB-04/29-31 Grab Soil Sample		
			2679076			2679077			2679078		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	110,000		3,300	77,000		1,700
24	hexachlorocyclopentadiene	77-47-4	170	U	170	830	U	830	830	U	830
25	2,4,6-trichlorophenol	88-06-2	67	U	67	330	U	330	330	U	330
26	2,4,5-trichlorophenol	95-95-4	67	U	67	330	U	330	330	U	330
27	2-chloronaphthalene	91-58-7	33	U	33	170	U	170	170	U	170
28	2-nitroaniline	88-74-4	67	U	67	330	U	330	330	U	330
29	dimethyl phthalate	131-11-3	33	U	33	170	U	170	170	U	170
30	2,6-dinitrotoluene	606-20-2	67	U	67	330	U	330	330	U	330
31	acenaphthylene	208-96-8	33	U	33	3,700		170	2,700		170
32	3-nitroaniline	99-09-2	67	U	67	330	U	330	330	U	330
33	acenaphthene	83-32-9	33	U	33	73,000		1,700	51,000		1,700
34	2,4-dinitrophenol	51-28-5	170	U	170	830	U	830	830	U	830
35	4-nitrophenol	100-02-7	170	U	170	830	U	830	830	U	830
36	dibenzofuran	132-64-9	33	U	33	68,000		1,700	48,000		1,700
37	2,4-dinitrotoluene	121-14-2	67	U	67	330	U	330	330	U	330
38	diethyl phthalate	84-66-2	67	U	67	330	U	330	330	U	330
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	330	U	330	330	U	330
40	fluorene	86-73-7	33	U	33	90,000		1,700	64,000		1,700
41	4-nitroaniline	100-01-6	100	U	100	500	U	500	500	U	500
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	830	U	830	830	U	830
43	N-nitrosodiphenylamine	86-30-6	67	U	67	330	U	330	330	U	330
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	500	U	500	500	U	500

			CPT/SB-03/20-22 Grab Soil Sample			CPT/SB-04/20-22 Grab Soil Sample			CPT/SB-04/29-31 Grab Soil Sample		
			2679076			2679077			2679078		
			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/15/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	500	U	500	500	U	500
46	pentachlorophenol	87-86-5	170	U	170	830	U	830	830	U	830
47	phenanthrene	85-01-8	33	U	33	190,000		1,700	130,000		1,700
48	anthracene	120-12-7	33	U	33	26,000		170	20,000		170
49	carbazole	86-74-8	33	U	33	15,000		170	11,000		170
50	di-n-butyl phthalate	84-74-2	33	U	33	170	U	170	170	U	170
51	fluoranthene	206-44-0	33	U	33	98,000		1,700	71,000		1,700
52	pyrene	129-00-0	67	U	67	62,000		3,300	26,000		330
53	butyl benzyl phthalate	85-68-7	67	U	67	330	U	330	330	U	330
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	670	U	670	670	U	670
55	benzo (a) anthracene	56-55-3	33	U	33	15,000		170	12,000		170
56	chrysene	218-01-9	33	U	33	14,000		170	10,000		170
57	bis (2-ethylhexyl) phthalate	117-81-7	120	U*	67	330	U	330	330	U	330
58	di-n-octyl phthalate	117-84-0	67	U	67	330	U	330	330	U	330
59	benzo (b) fluoranthene	205-99-2	67	U	67	8,900		330	6,600		330
60	benzo (k) fluoranthene	207-08-9	130	U	130	3,600		670	2,600		670
61	benzo (a) pyrene	50-32-8	67	U	67	6,600		330	4,900		330
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	2,700		330	2,000		330
63	dibenz (a,h) anthracene	53-70-3	67	U	67	790	J	330	580	J	330
64	benzo (ghi) perylene	191-24-2	67	U	67	2,100		330	1,500	J	330

			CPT/SB-05/10.5-12.5 Grab Soil Sam			CPT/SB-06/36-38 Grab Soil Sample			CPT/SB-06/6-10 Unspiked Grab So		
			2679079			2679084			2679080		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	670	U	670	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	1,300	U	1,300	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	670	U	670	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	670	U	670	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	670	U	670	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	670	U	670	33	U	33	33	U	33
7	2-methylphenol	95-48-7	1,300	U	1,300	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	2,000	U	2,000	100	U	100	100	U	100
9	4-methylphenol	106-44-5	2,000	U	2,000	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	1,300	U	1,300	67	U	67	67	U	67
11	hexachloroethane	67-72-1	1,300	U	1,300	67	U	67	67	U	67
12	nitrobenzene	98-95-3	670	U	670	33	U	33	33	U	33
13	isophorone	78-59-1	1,300	U	1,300	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	1,300	U	1,300	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	1,300	U	1,300	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	670	U	670	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	670	U	670	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	670	U	670	33	U	33	33	U	33
19	naphthalene	91-20-3	910,000		6,700	50	J	33	33	U	33
20	4-chloroaniline	106-47-8	2,000	U	2,000	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	1,300	U	1,300	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	1,300	U	1,300	67	U	67	67	U	67

			CPT/SB-05/10.5-12.5 Grab Soil Sam			CPT/SB-06/36-38 Grab Soil Sample			CPT/SB-06/6-10 Unspiked Grab So		
			2679079			2679084			2679080		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	440,000		6,700	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	3,300	U	3,300	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	1,300	U	1,300	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	1,300	U	1,300	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	670	U	670	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	1,300	U	1,300	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	670	U	670	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	1,300	U	1,300	67	U	67	67	U	67
31	acenaphthylene	208-96-8	10,000		670	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	1,300	U	1,300	67	U	67	67	U	67
33	acenaphthene	83-32-9	290,000		6,700	42	J	33	33	U	33
34	2,4-dinitrophenol	51-28-5	3,300	U	3,300	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	3,300	U	3,300	170	U	170	170	U	170
36	dibenzofuran	132-64-9	270,000		6,700	37	J	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	1,300	U	1,300	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	1,300	U	1,300	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	1,300	U	1,300	67	U	67	67	U	67
40	fluorene	86-73-7	330,000		6,700	49	J	33	33	U	33
41	4-nitroaniline	100-01-6	2,000	U	2,000	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	3,300	U	3,300	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	1,300	U	1,300	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	2,000	U	2,000	100	U	100	100	U	100

			CPT/SB-05/10.5-12.5 Grab Soil Sam			CPT/SB-06/36-38 Grab Soil Sample			CPT/SB-06/6-10 Unspiked Grab So		
			2679079			2679084			2679080		
			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	2,000	U	2,000	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	3,300	U	3,300	170	U	170	170	U	170
47	phenanthrene	85-01-8	710,000		6,700	160	J	33	33	U	33
48	anthracene	120-12-7	98,000		670	33	U	33	33	U	33
49	carbazole	86-74-8	69,000		670	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	670	U	670	33	U	33	33	U	33
51	fluoranthene	206-44-0	430,000		6,700	94	J	33	33	U	33
52	pyrene	129-00-0	250,000		13,000	67	U	67	67	U	67
53	butyl benzyl phthalate	85-68-7	1,300	U	1,300	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	2,700	U	2,700	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	69,000		670	33	U	33	33	U	33
56	chrysene	218-01-9	62,000		670	33	U	33	33	U	33
57	bis (2-ethylhexyl) phthalate	117-81-7	1,300	U	1,300	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	1,300	U	1,300	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	38,000		1,300	67	U	67	67	U	67
60	benzo (k) fluoranthene	207-08-9	13,000		2,700	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	26,000		1,300	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	8,500		1,300	67	U	67	67	U	67
63	dibenz (a,h) anthracene	53-70-3	2,500	J	1,300	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	6,500	J	1,300	67	U	67	67	U	67

			CPT/SB-07/14-16 Grab Soil Sample			GEO/SB-01/10-12 Grab Soil Sample			GEO/SB-02/10-12 Grab Soil Sampl		
			2679083			2680801			2680802		
			3/17/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	33	U	33
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	67	U	67
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	33	U	33
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	33	U	33
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	33	U	33
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	33	U	33
7	2-methylphenol	95-48-7	67	U	67	67	U	67	67	U	67
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	100	U	100
9	4-methylphenol	106-44-5	100	U	100	100	U	100	100	U	100
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	67	U	67
11	hexachloroethane	67-72-1	67	U	67	67	U	67	67	U	67
12	nitrobenzene	98-95-3	33	U	33	33	U	33	33	U	33
13	isophorone	78-59-1	67	U	67	67	U	67	67	U	67
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	67	U	67
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	67	U	67
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	33	U	33
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	33	U	33
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	33	U	33
19	naphthalene	91-20-3	36,000		330	98	J	33	33	U	33
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	100	U	100
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	67	U	67
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	67	U	67

			CPT/SB-07/14-16 Grab Soil Sample			GEO/SB-01/10-12 Grab Soil Sample			GEO/SB-02/10-12 Grab Soil Sampl		
			2679083			2680801			2680802		
			3/17/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	15,000		170	33	U	33	33	U	33
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	170	U	170
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	67	U	67
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	67	U	67
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	33	U	33
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	67	U	67
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	33	U	33
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	67	U	67
31	acenaphthylene	208-96-8	310	J	33	33	U	33	33	U	33
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	67	U	67
33	acenaphthene	83-32-9	9,600		170	33	U	33	33	U	33
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	170	U	170
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	170	U	170
36	dibenzofuran	132-64-9	9,700		170	33	U	33	33	U	33
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	67	U	67
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	67	U	67
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	67	U	67
40	fluorene	86-73-7	8,500		170	33	U	33	33	U	33
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	100	U	100
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	170	U	170
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	67	U	67
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	100	U	100

			CPT/SB-07/14-16 Grab Soil Sample			GEO/SB-01/10-12 Grab Soil Sample			GEO/SB-02/10-12 Grab Soil Sampl		
			2679083			2680801			2680802		
			3/17/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	100	U	100
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	170	U	170
47	phenanthrene	85-01-8	20,000		170	33	U	33	33	U	33
48	anthracene	120-12-7	4,800		33	33	U	33	33	U	33
49	carbazole	86-74-8	970		33	33	U	33	33	U	33
50	di-n-butyl phthalate	84-74-2	33	U	33	33	U	33	33	U	33
51	fluoranthene	206-44-0	8,200		170	33	U	33	33	U	33
52	pyrene	129-00-0	3,900		67	67	U	67	67	U	67
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	67	U	67
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	130	U	130
55	benzo (a) anthracene	56-55-3	1,300		33	33	U	33	33	U	33
56	chrysene	218-01-9	1,300		33	33	U	33	33	U	33
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	67	U	67
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	67	U	67
59	benzo (b) fluoranthene	205-99-2	890		67	67	U	67	67	U	67
60	benzo (k) fluoranthene	207-08-9	330	J	130	130	U	130	130	U	130
61	benzo (a) pyrene	50-32-8	690		67	67	U	67	67	U	67
62	indeno (1,2,3-cd) pyrene	193-39-5	380		67	67	U	67	67	U	67
63	dibenz (a,h) anthracene	53-70-3	90	J	67	67	U	67	67	U	67
64	benzo (ghi) perylene	191-24-2	280	J	67	67	U	67	67	U	67

			GEO/SB-03/8-9.3 Grab Soil Sample			GEO/SB-04/10-12 Grab Soil Sample			GEO/SB-05/4-9 Grab Soil Sample		
			2680803			2680804			2680805		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	33	U	33	330	U	330
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	67	U	67	670	U	670
3	2-chlorophenol	95-57-8	33	U	33	33	U	33	330	U	330
4	1,3-dichlorobenzene	541-73-1	33	U	33	33	U	33	330	U	330
5	1,4-dichlorobenzene	106-46-7	33	U	33	33	U	33	330	U	330
6	1,2-dichlorobenzene	95-50-1	33	U	33	33	U	33	330	U	330
7	2-methylphenol	95-48-7	67	U	67	67	U	67	670	U	670
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	100	U	100	1,000	U	1,000
9	4-methylphenol	106-44-5	100	U	100	100	U	100	1,000	U	1,000
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	67	U	67	670	U	670
11	hexachloroethane	67-72-1	67	U	67	67	U	67	670	U	670
12	nitrobenzene	98-95-3	33	U	33	33	U	33	330	U	330
13	isophorone	78-59-1	67	U	67	67	U	67	670	U	670
14	2-nitrophenol	88-75-5	67	U	67	67	U	67	670	U	670
15	2,4-dimethylphenol	105-67-9	67	U	67	67	U	67	1,200	J	670
16	bis (2-chloroethoxy) methane	111-91-1	33	U	33	33	U	33	330	U	330
17	2,4-dichlorophenol	120-83-2	33	U	33	33	U	33	330	U	330
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	33	U	33	330	U	330
19	naphthalene	91-20-3	200	J	33	33	U	33	400,000		3,300
20	4-chloroaniline	106-47-8	100	U	100	100	U	100	1,000	U	1,000
21	hexachlorobutadiene	87-68-3	67	U	67	67	U	67	670	U	670
22	4-chloro-3-methylphenol	59-50-7	67	U	67	67	U	67	670	U	670

			GEO/SB-03/8-9.3 Grab Soil Sample			GEO/SB-04/10-12 Grab Soil Sample			GEO/SB-05/4-9 Grab Soil Sample		
			2680803			2680804			2680805		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	33	U	33	220,000		3,300
24	hexachlorocyclopentadiene	77-47-4	170	U	170	170	U	170	1,700	U	1,700
25	2,4,6-trichlorophenol	88-06-2	67	U	67	67	U	67	670	U	670
26	2,4,5-trichlorophenol	95-95-4	67	U	67	67	U	67	670	U	670
27	2-chloronaphthalene	91-58-7	33	U	33	33	U	33	330	U	330
28	2-nitroaniline	88-74-4	67	U	67	67	U	67	670	U	670
29	dimethyl phthalate	131-11-3	33	U	33	33	U	33	330	U	330
30	2,6-dinitrotoluene	606-20-2	67	U	67	67	U	67	670	U	670
31	acenaphthylene	208-96-8	33	U	33	33	U	33	8,300		330
32	3-nitroaniline	99-09-2	67	U	67	67	U	67	670	U	670
33	acenaphthene	83-32-9	33	U	33	33	U	33	63,000		3,300
34	2,4-dinitrophenol	51-28-5	170	U	170	170	U	170	1,700	U	1,700
35	4-nitrophenol	100-02-7	170	U	170	170	U	170	1,700	U	1,700
36	dibenzofuran	132-64-9	33	U	33	33	U	33	130,000		3,300
37	2,4-dinitrotoluene	121-14-2	67	U	67	67	U	67	670	U	670
38	diethyl phthalate	84-66-2	67	U	67	67	U	67	670	U	670
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	67	U	67	670	U	670
40	fluorene	86-73-7	33	U	33	33	U	33	130,000		3,300
41	4-nitroaniline	100-01-6	100	U	100	100	U	100	1,000	U	1,000
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	170	U	170	1,700	U	1,700
43	N-nitrosodiphenylamine	86-30-6	67	U	67	67	U	67	670	U	670
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	100	U	100	1,000	U	1,000

			GEO/SB-03/8-9.3 Grab Soil Sample			GEO/SB-04/10-12 Grab Soil Sample			GEO/SB-05/4-9 Grab Soil Sample		
			2680803			2680804			2680805		
			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM			3/18/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	100	U	100	1,000	U	1,000
46	pentachlorophenol	87-86-5	170	U	170	170	U	170	1,700	U	1,700
47	phenanthrene	85-01-8	33	U	33	33	U	33	360,000		3,300
48	anthracene	120-12-7	33	U	33	33	U	33	98,000		3,300
49	carbazole	86-74-8	33	U	33	33	U	33	52,000		3,300
50	di-n-butyl phthalate	84-74-2	33	U	33	33	U	33	330	U	330
51	fluoranthene	206-44-0	33	U	33	33	U	33	220,000		3,300
52	pyrene	129-00-0	67	U	67	67	U	67	180,000		6,700
53	butyl benzyl phthalate	85-68-7	67	U	67	67	U	67	670	U	670
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	130	U	130	1,300	U	1,300
55	benzo (a) anthracene	56-55-3	33	U	33	33	U	33	52,000		330
56	chrysene	218-01-9	33	U	33	33	U	33	48,000		330
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	67	U	67	670	U	670
58	di-n-octyl phthalate	117-84-0	67	U	67	67	U	67	670	U	670
59	benzo (b) fluoranthene	205-99-2	67	U	67	67	U	67	36,000		670
60	benzo (k) fluoranthene	207-08-9	130	U	130	130	U	130	14,000		1,300
61	benzo (a) pyrene	50-32-8	67	U	67	67	U	67	24,000		670
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	67	U	67	9,600		670
63	dibenz (a,h) anthracene	53-70-3	67	U	67	67	U	67	2,700	J	670
64	benzo (ghi) perylene	191-24-2	67	U	67	67	U	67	6,400		670

			GEO/SB-05A/17-19 Grab Soil Samp			GEO/SB-06/10-12 Grab Soil Sample			GEO/SB-07/5-7 Grab Soil Sample		
			2680806			2680809			2680810		
			3/18/1997 12:00:00 AM			3/19/1997 12:00:00 AM			3/19/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	33	U	33	170	U	170	170	U	170
2	bis (2-chloroethyl) ether	111-44-4	67	U	67	330	U	330	330	U	330
3	2-chlorophenol	95-57-8	33	U	33	170	U	170	170	U	170
4	1,3-dichlorobenzene	541-73-1	33	U	33	170	U	170	170	U	170
5	1,4-dichlorobenzene	106-46-7	33	U	33	170	U	170	170	U	170
6	1,2-dichlorobenzene	95-50-1	33	U	33	170	U	170	170	U	170
7	2-methylphenol	95-48-7	67	U	67	330	U	330	330	U	330
8	2,2-oxybis (1-chloropropane)	108-60-1	100	U	100	500	U	500	500	U	500
9	4-methylphenol	106-44-5	100	U	100	500	U	500	500	U	500
10	N-nitrosodi-n-propylamine	621-64-7	67	U	67	330	U	330	330	U	330
11	hexachloroethane	67-72-1	67	U	67	330	U	330	330	U	330
12	nitrobenzene	98-95-3	33	U	33	170	U	170	170	U	170
13	isophorone	78-59-1	67	U	67	330	U	330	330	U	330
14	2-nitrophenol	88-75-5	67	U	67	330	U	330	330	U	330
15	2,4-dimethylphenol	105-67-9	67	U	67	1,300	J	330	330	U	330
16	*bis (2-chloroethoxy) methane*	111-91-1	33	U	33	170	U	170	170	U	170
17	2,4-dichlorophenol	120-83-2	33	U	33	170	U	170	170	U	170
18	1,2,4-trichlorobenzene	120-82-1	33	U	33	170	U	170	170	U	170
19	naphthalene	91-20-3	33	U	33	420,000		3,300	210,000		4,200
20	4-chloroaniline	106-47-8	100	U	100	500	U	500	500	U	500
21	hexachlorobutadiene	87-68-3	67	U	67	330	U	330	330	U	330
22	4-chloro-3-methylphenol	59-50-7	67	U	67	330	U	330	330	U	330

			GEO/SB-05A/17-19 Grab Soil Samp			GEO/SB-06/10-12 Grab Soil Sample			GEO/SB-07/5-7 Grab Soil Sample		
			2680806			2680809			2680810		
			3/18/1997 12:00:00 AM			3/19/1997 12:00:00 AM			3/19/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	33	U	33	190,000		1,700	230,000		4,200
24	hexachlorocyclopentadiene	77-47-4	170	U	170	830	U	830	830	U	830
25	2,4,6-trichlorophenol	88-06-2	67	U	67	330	U	330	330	U	330
26	2,4,5-trichlorophenol	95-95-4	67	U	67	330	U	330	330	U	330
27	2-chloronaphthalene	91-58-7	33	U	33	170	U	170	170	U	170
28	2-nitroaniline	88-74-4	67	U	67	330	U	330	330	U	330
29	dimethyl phthalate	131-11-3	33	U	33	170	U	170	170	U	170
30	2,6-dinitrotoluene	606-20-2	67	U	67	330	U	330	330	U	330
31	acenaphthylene	208-96-8	33	U	33	5,200		170	7,700		170
32	3-nitroaniline	99-09-2	67	U	67	330	U	330	330	U	330
33	acenaphthene	83-32-9	33	U	33	150,000		1,700	200,000		4,200
34	2,4-dinitrophenol	51-28-5	170	U	170	830	U	830	830	U	830
35	4-nitrophenol	100-02-7	170	U	170	830	U	830	830	U	830
36	dibenzofuran	132-64-9	33	U	33	130,000		1,700	180,000		4,200
37	2,4-dinitrotoluene	121-14-2	67	U	67	330	U	330	330	U	330
38	diethyl phthalate	84-66-2	67	U	67	330	U	330	330	U	330
39	4-chlorophenyl phenyl ether	7005-72-3	67	U	67	330	U	330	330	U	330
40	fluorene	86-73-7	33	U	33	160,000		1,700	250,000		4,200
41	4-nitroaniline	100-01-6	100	U	100	500	U	500	500	U	500
42	4,6-dinitro-2-methylphenol	534-52-1	170	U	170	830	U	830	830	U	830
43	N-nitrosodiphenylamine	86-30-6	67	U	67	330	U	330	330	U	330
44	4-bromophenyl phenyl ether	101-55-3	100	U	100	500	U	500	500	U	500

			GEO/SB-05A/17-19 Grab Soil Samp			GEO/SB-06/10-12 Grab Soil Sample			GEO/SB-07/5-7 Grab Soil Sample		
			2680806			2680809			2680810		
			3/18/1997 12:00:00 AM			3/19/1997 12:00:00 AM			3/19/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			SEDIM			SEDIM		
			SVOA			SVOA			SVOA		
			UG/KG			UG/KG			UG/KG		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	100	U	100	500	U	500	500	U	500
46	pentachlorophenol	87-86-5	170	U	170	830	U	830	830	U	830
47	phenanthrene	85-01-8	210	J	33	370,000		3,300	510,000		4,200
48	anthracene	120-12-7	130	J	33	55,000		1,700	120,000		4,200
49	carbazole	86-74-8	56	J	33	38,000		1,700	27,000	J	4,200
50	di-n-butyl phthalate	84-74-2	33	U	33	170	U	170	170	U	170
51	fluoranthene	206-44-0	160	J	33	170,000		1,700	250,000		4,200
52	pyrene	129-00-0	120	J	67	120,000		3,300	230,000		8,300
53	butyl benzyl phthalate	85-68-7	67	U	67	330	U	330	330	U	330
54	3,3'-dichlorobenzidine	91-94-1	130	U	130	670	U	670	670	U	670
55	benzo (a) anthracene	56-55-3	43	J	33	40,000		1,700	61,000		4,200
56	chrysene	218-01-9	33	U	33	33,000		1,700	52,000		4,200
57	bis (2-ethylhexyl) phthalate	117-81-7	67	U	67	330	U	330	330	U	330
58	di-n-octyl phthalate	117-84-0	67	U	67	330	U	330	330	U	330
59	benzo (b) fluoranthene	205-99-2	67	U	67	18,000		330	33,000	J	8,300
60	benzo (k) fluoranthene	207-08-9	130	U	130	6,700		670	11,000		670
61	benzo (a) pyrene	50-32-8	67	U	67	13,000		330	22,000		330
62	indeno (1,2,3-cd) pyrene	193-39-5	67	U	67	4,100		330	8,700		330
63	dibenz (a,h) anthracene	53-70-3	67	U	67	1,400	J	330	3,400		330
64	benzo (ghi) perylene	191-24-2	67	U	67	2,400		330	6,400		330

			GEO/SB-29/6-8 Grab Soil Sample			RB-4 Grab Water Sample			RB-5 Grab Water Sample		
			2680808			2679085			2679086		
			3/18/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/KG			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
1	phenol	108-95-2	170	U	170	1	U	1	1	U	1
2	bis (2-chloroethyl) ether	111-44-4	330	U	330	1	U	1	1	U	1
3	2-chlorophenol	95-57-8	170	U	170	1	U	1	1	U	1
4	1,3-dichlorobenzene	541-73-1	170	U	170	1	U	1	1	U	1
5	1,4-dichlorobenzene	106-46-7	170	U	170	1	U	1	1	U	1
6	1,2-dichlorobenzene	95-50-1	170	U	170	1	U	1	1	U	1
7	2-methylphenol	95-48-7	330	U	330	2	U	2	2	U	2
8	2,2-oxybis (1-chloropropane)	108-60-1	500	U	500	2	U	2	2	U	2
9	4-methylphenol	106-44-5	500	U	500	2	U	2	2	U	2
10	N-nitrosodi-n-propylamine	621-64-7	330	U	330	2	U	2	2	U	2
11	hexachloroethane	67-72-1	330	U	330	2	U	2	2	U	2
12	nitrobenzene	98-95-3	170	U	170	1	U	1	1	U	1
13	isophorone	78-59-1	330	U	330	1	U	1	1	U	1
14	2-nitrophenol	88-75-5	330	U	330	2	U	2	2	U	2
15	2,4-dimethylphenol	105-67-9	1,000	J	330	1	U	1	1	U	1
16	bis (2-chloroethoxy) methane	111-91-1	170	U	170	1	U	1	1	U	1
17	2,4-dichlorophenol	120-83-2	170	U	170	2	U	2	2	U	2
18	1,2,4-trichlorobenzene	120-82-1	170	U	170	1	U	1	1	U	1
19	naphthalene	91-20-3	380,000		3,300	1	U	1	1	U	1
20	4-chloroaniline	106-47-8	500	U	500	2	U	2	2	U	2
21	hexachlorobutadiene	87-68-3	330	U	330	1	U	1	1	U	1
22	4-chloro-3-methylphenol	59-50-7	330	U	330	2	U	2	2	U	2

			GEO/SB-29/6-8 Grab Soil Sample			RB-4 Grab Water Sample			RB-5 Grab Water Sample		
			2680808			2679085			2679086		
			3/18/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/KG			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	180,000		1,700	1	U	1	1	U	1
24	hexachlorocyclopentadiene	77-47-4	830	U	830	3	U	3	3	U	3
25	2,4,6-trichlorophenol	88-06-2	330	U	330	1	U	1	1	U	1
26	2,4,5-trichlorophenol	95-95-4	330	U	330	1	U	1	1	U	1
27	2-chloronaphthalene	91-58-7	170	U	170	1	U	1	1	U	1
28	2-nitroaniline	88-74-4	330	U	330	1	U	1	1	U	1
29	dimethyl phthalate	131-11-3	170	U	170	3	U	3	3	U	3
30	2,6-dinitrotoluene	606-20-2	330	U	330	1	U	1	1	U	1
31	acenaphthylene	208-96-8	5,500		170	1	U	1	1	U	1
32	3-nitroaniline	99-09-2	330	U	330	1	U	1	1	U	1
33	acenaphthene	83-32-9	130,000		1,700	1	U	1	1	U	1
34	2,4-dinitrophenol	51-28-5	830	U	830	5	U	5	5	U	5
35	4-nitrophenol	100-02-7	830	U	830	5	U	5	5	U	5
36	dibenzofuran	132-64-9	120,000		1,700	1	U	1	1	U	1
37	2,4-dinitrotoluene	121-14-2	330	U	330	2	U	2	2	U	2
38	diethyl phthalate	84-66-2	330	U	330	2	U	2	2	J	2
39	4-chlorophenyl phenyl ether	7005-72-3	330	U	330	2	U	2	2	U	2
40	fluorene	86-73-7	140,000		1,700	1	U	1	1	U	1
41	4-nitroaniline	100-01-6	500	U	500	2	U	2	2	U	2
42	4,6-dinitro-2-methylphenol	534-52-1	830	U	830	5	U	5	5	U	5
43	N-nitrosodiphenylamine	86-30-6	330	U	330	2	U	2	2	U	2
44	4-bromophenyl phenyl ether	101-55-3	500	U	500	2	U	2	2	U	2

			GEO/SB-29/6-8 Grab Soil Sample			RB-4 Grab Water Sample			RB-5 Grab Water Sample		
			2680808			2679085			2679086		
			3/18/1997 12:00:00 AM			3/15/1997 12:00:00 AM			3/17/1997 12:00:00 AM		
			A			A			A		
			SW-846 8270B			SW-846 8270B			SW-846 8270B		
			SEDIM			WATER			WATER		
			SVOA			SVOA			SVOA		
			UG/KG			UG/L			UG/L		
			Result	Qual	Limit	Result	Qual	Limit	Result	Qual	Limit
45	hexachlorobenzene	118-74-1	500	U	500	1	U	1	1	U	1
46	pentachlorophenol	87-86-5	830	U	830	1	U	1	1	U	1
47	phenanthrene	85-01-8	350,000		3,300	1	U	1	1	U	1
48	anthracene	120-12-7	78,000		1,700	1	U	1	1	U	1
49	carbazole	86-74-8	48,000		1,700	1	U	1	1	U	1
50	di-n-butyl phthalate	84-74-2	170	U	170	1	U	1	1	U	1
51	fluoranthene	206-44-0	180,000		1,700	1	U	1	1	U	1
52	pyrene	129-00-0	140,000		3,300	1	U	1	1	U	1
53	butyl benzyl phthalate	85-68-7	330	U	330	2	U	2	2	U	2
54	3,3'-dichlorobenzidine	91-94-1	670	U	670	2	U	2	2	U	2
55	benzo (a) anthracene	56-55-3	44,000		1,700	1	U	1	1	U	1
56	chrysene	218-01-9	41,000		1,700	1	U	1	1	U	1
57	bis (2-ethylhexyl) phthalate	117-81-7	330	U	330	2	U	2	2	U	2
58	di-n-octyl phthalate	117-84-0	330	U	330	2	U	2	2	U	2
59	benzo (b) fluoranthene	205-99-2	25,000		330	2	U	2	2	U	2
60	benzo (k) fluoranthene	207-08-9	8,700		670	2	U	2	2	U	2
61	benzo (a) pyrene	50-32-8	17,000		330	2	U	2	2	U	2
62	indeno (1,2,3-cd) pyrene	193-39-5	6,300		330	2	U	2	2	U	2
63	dibenz (a,h) anthracene	53-70-3	1,800		330	2	U	2	2	U	2
64	benzo (ghi) perylene	191-24-2	4,800		330	2	U	2	2	U	2

			RB-6 Grab Water Sample		
			2680807		
			3/18/1997 12:00:00 AM		
			A		
			SW-846 8270B		
			WATER		
			SVOA		
			UG/L		
			Result	Qual	Limit
1	phenol	108-95-2	1	U	1
2	bis (2-chloroethyl) ether	111-44-4	1	U	1
3	2-chlorophenol	95-57-8	1	U	1
4	1,3-dichlorobenzene	541-73-1	1	U	1
5	1,4-dichlorobenzene	106-46-7	1	U	1
6	1,2-dichlorobenzene	95-50-1	1	U	1
7	2-methylphenol	95-48-7	2	U	2
8	2,2-oxybis (1-chloropropane)	108-60-1	2	U	2
9	4-methylphenol	106-44-5	2	U	2
10	N-nitrosodi-n-propylamine	621-64-7	2	U	2
11	hexachloroethane	67-72-1	2	U	2
12	nitrobenzene	98-95-3	1	U	1
13	isophorone	78-59-1	1	U	1
14	2-nitrophenol	88-75-5	2	U	2
15	2,4-dimethylphenol	105-67-9	1	U	1
16	bis (2-chloroethoxy) methane	111-91-1	1	U	1
17	2,4-dichlorophenol	120-83-2	2	U	2
18	1,2,4-trichlorobenzene	120-82-1	1	U	1
19	naphthalene	91-20-3	1	U	1
20	4-chloroaniline	106-47-8	2	U	2
21	hexachlorobutadiene	87-68-3	1	U	1
22	4-chloro-3-methylphenol	59-50-7	2	U	2

			RB-6 Grab Water Sample		
			2680807		
			3/18/1997 12:00:00 AM		
			A		
			SW-846 8270B		
			WATER		
			SVOA		
			UG/L		
			Result	Qual	Limit
23	2-methylnaphthalene	91-57-6	1	U	1
24	hexachlorocyclopentadiene	77-47-4	3	U	3
25	2,4,6-trichlorophenol	88-06-2	1	U	1
26	2,4,5-trichlorophenol	95-95-4	1	U	1
27	2-chloronaphthalene	91-58-7	1	U	1
28	2-nitroaniline	88-74-4	1	U	1
29	dimethyl phthalate	131-11-3	3	U	3
30	2,6-dinitrotoluene	606-20-2	1	U	1
31	acenaphthylene	208-96-8	1	U	1
32	3-nitroaniline	99-09-2	1	U	1
33	acenaphthene	83-32-9	1	U	1
34	2,4-dinitrophenol	51-28-5	5	UJ	5
35	4-nitrophenol	100-02-7	5	U	5
36	dibenzofuran	132-64-9	1	U	1
37	2,4-dinitrotoluene	121-14-2	2	U	2
38	diethyl phthalate	84-66-2	2	U	2
39	4-chlorophenyl phenyl ether	7005-72-3	2	U	2
40	fluorene	86-73-7	1	U	1
41	4-nitroaniline	100-01-6	2	UJ	2
42	4,6-dinitro-2-methylphenol	534-52-1	5	U	5
43	N-nitrosodiphenylamine	86-30-6	2	U	2
44	4-bromophenyl phenyl ether	101-55-3	2	U	2

			RB-6 Grab Water Sample		
			2680807		
			3/18/1997 12:00:00 AM		
			A		
			SW-846 8270B		
			WATER		
			SVOA		
			UG/L		
			Result	Qual	Limit
45	hexachlorobenzene	118-74-1	1	U	1
46	pentachlorophenol	87-86-5	1	U	1
47	phenanthrene	85-01-8	1	J	1
48	anthracene	120-12-7	1	U	1
49	carbazole	86-74-8	1	U	1
50	di-n-butyl phthalate	84-74-2	1	U	1
51	fluoranthene	206-44-0	1	U	1
52	pyrene	129-00-0	1	U	1
53	butyl benzyl phthalate	85-68-7	2	U	2
54	3,3'-dichlorobenzidine	91-94-1	2	U	2
55	benzo (a) anthracene	56-55-3	1	U	1
56	chrysene	218-01-9	1	U	1
57	bis (2-ethylhexyl) phthalate	117-81-7	4	J	2
58	di-n-octyl phthalate	117-84-0	2	U	2
59	benzo (b) fluoranthene	205-99-2	2	U	2
60	benzo (k) fluoranthene	207-08-9	2	U	2
61	benzo (a) pyrene	50-32-8	2	U	2
62	indeno (1,2,3-cd) pyrene	193-39-5	2	U	2
63	dibenz (a,h) anthracene	53-70-3	2	U	2
64	benzo (ghi) perylene	191-24-2	2	U	2

			HMS04		
			GEO/SB-05/4-9 Grab Soil Sample		
			2680805		
			3/18/1997 12:00:00 AM		
			A		
			SW-846 8081		
			SEDIM		
			PEST		
			UG/KG		
			Result	Qual	Limit
1	Alpha BHC	319-84-6	0.4	U	0.4
2	Beta BHC	319-85-7	1	U	1
3	Delta BHC	319-86-8	0.6	U	0.6
4	Gamma BHC - Lindane	58-89-9	0.6	U	0.6
5	Heptachlor	76-44-8	10		1
6	Aldrin	309-00-2	1	U	1
7	Heptachlor Epoxide	1024-57-3	0.6	U	0.6
8	Endosulfan I	959-98-8	4	J	1
9	Dieldrin	60-57-1	2	U	2
10	DDE	72-55-9	3	U	3
11	Endrin	72-20-8	2	U	2
12	Endosulfan II	33213-65-9	4	U	4
13	DDD	72-54-8	1	U	1
14	Endosulfan Sulfate	1031-07-8	3	U	3
15	DDT	50-29-3	3	U	3
16	Methoxychlor	72-43-5	8	U	8
17	Endrin Ketone	53494-70-5	5	U	5
18	Endrin Aldehyde	7421-93-4	6	U	6
19	Alpha Chlordane	5103-71-9	1	U	1
20	Gamma Chlordane	5103-74-2	0.2	U	0.2
21	Toxaphene	8001-35-2	100	U	100
22	PCB-1016	12674-11-2	30	U	30

			HMS04		
			GEO/SB-05/4-9 Grab Soil Sample		
			2680805		
			3/18/1997 12:00:00 AM		
			A		
			SW-846 8081		
			SEDIM		
			PEST		
			UG/KG		
			Result	Qual	Limit
23	PCB-1221	11104-28-2	50	U	50
24	PCB-1232	11141-16-5	30	U	30
25	PCB-1242	53469-21-9	10	U	10
26	PCB-1248	12672-29-6	40	U	40
27	PCB-1254	11097-69-1	100	U	100
28	PCB-1260	11096-82-5	200	U	200

SECTION 3

ORGANIC DATA SUPPORT DOCUMENTATION

Organic Analyses Support Documentation

Environmental Standards Project Name: Gulf States
Sample Collection Dates: 3/15, 17, & 18/97
Job Number: 9704525
Project Manager: K. Allman
Laboratory: Lancaster

Reviewed By: K. Allman
Approved By: [signature]
Completion Date: 5/97

Applicable Sample No's.: ☒ Refer to Table 1 in the Quality Assurance Review

Deliverables: CLP ☒
Tier I ☐
Tier II ☐
Limited ☐
Other ☐

Sample No.	Lab. Control No.
SSC Hmsoy	

The following table indicates criteria which were examined, the identified problems, and support documentation attachments.

	Criteria Examined in Detail (Check (✓) If Yes or Footnote Letter for Comments Below)					Problems Identified (Check (✓) If Yes or Footnote Number for Comments Below)					Support Documentation Attachments (Check (✓) If Yes -- or Identify Attachment No.)				
	VOA Method 8240 &	BNA Method 8270 &	PEST / PCB Method 8081	Other Method(s)		VOA Method 8240 &	BNA Method 8270 &	PEST / PCB Method 8081	Other Method(s)		VOA Method 8240 &	BNA Method 8270 &	PEST / PCB Method 8081	Other Method(s)	
Holding Times	✓	✓	✓								✓	✓	✓		
Blank Analysis Results: Target Compounds	✓	✓	✓			✓					✓	✓	✓		
Blank Analysis Results: TICs															
System Mntr. Cmpds. &/or Surrogate Spike Rslts.	✓	✓	✓			✓	✓				✓	✓	✓		
Matrix Spike / Matrix Spike Duplicate Results	✓		✓								✓		✓		
Blank Spike Results															
Duplicate Analysis Results ☐ Field ☐ Lab															
Qualitative Identification: Target Compounds	✓	✓	✓												
Qualitative Identification: TICs															
DFTPP & BFB Mass Tuning	✓	✓									✓	✓			
GC Instrument Performance			✓												
Initial Calibrations	✓	✓	✓		✓						✓	✓	✓		
Continuing Calibrations	✓	✓	✓		✓	✓					✓	✓	✓		
Quantitation of Results	✓	✓	✓												
DDT / Endrin Breakdown			✓										✓		
Surrogate Retention Time Shifts			✓												
Internal Standards Performance	✓	✓									✓	✓			
Resolution Check Standards															
Analytical Sequence	✓	✓	✓								✓	✓	✓		
Florisil Cartridge Check & GPC Calibration		✓	✓												
GC Column Agreement			✓												
Others:															

Comments: _____

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Quantification Limit	
						5x	10x
V	S	MB	VBIK615	none			
V	S	MB	VBIK616	none			
V	Aq	MB	VBIKK49	none			
V	Aq	MB	VBIK245	none			
V	Aq	EB	RB-1	none			
V	Aq	EB	RB-5	none			
V	Aq	FB	FB-01	none			
V	Aq	EB	RB-6	none			
V	Aq	FB	FB-2	none			

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

* = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

\+ = Contaminant observed on one column only.

Notes: _____

SOIL VOLATILE SURROGATE RECOVERY

2B

LAB NAME: LANCASTER LABS SDG No: HMS04

LEVEL: LOW

	EPA SAMPLE NO.	S1 (DCA) #	S2 (TOL) #	S3 (BFB) #	OTHER	TOT OUT
01	01--8	100	100	102		
02	01-44	93	95	93		
03	01-44DL	95	96	96		
04	02--9	99	98	100		
05	03-20	94	96	100		
06	04-20	91	95	96		
07	04-29	101	102	112		
08	05-10	98	102	99		
09	06--6	97	98	99		
10	06--6MS	95	102	103		
11	06--6MSD	93	96	97		
12	07-14	95	95	96		
13	06-36	91	97	98		
14	06-36DL	96	94	98		
15	SB-01	97	98	106		
16	SB-02	105	100	108		
17	SB-03	95	95	101		
18	SB-04	96	92	99		
19	SB-05	97	97	88		
20	SB05A	92	92	99		
21	SB-29	101	97	95		
22	SB-06	98	90	92		
23	SB-07	97	102	80		
24						
25	LAB QC					
26	VBLKG15	94	93	97		
27	VBLKG16	90	88	96		
28						

				QC LIMITS
S1	(DCA)	=	1,2-Dichloroethane-d4	70 - 121
S2	(TOL)	=	Toluene-d8	81 - 117
S3	(BFB)	=	4-Bromofluorobenzene	74 - 121

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-2 1/87 Rev. Modified

Lancaster Laboratories • 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681
A subsidiary of Thermo TerraTech Inc., a Thermo Electron company

WATER VOLATILE SURROGATE RECOVERY

2A

Lab Name: LANCASTER LABS SDG No: HMS04

	EPA SAMPLE NO.	S1 (DCA) #	S2 (TOL) #	S3 (BFB) #	OTHER	TOT OUT
01	RB-4-	101	104	109		
02	RB-5-	103	105	109		
03	FB-1-	105	104	109		
04	RB--6	102	106	112		
05	FB--2	105	104	110		
06						
07	LAB QC					
08	VBLKK43	103	106	109		
09	VBLKK45	102	105	110		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

				QC LIMITS
S1	(DCA)	=	1,2-Dichloroethane-d4	76 - 114
S2	(TOL)	=	Toluene-d8	88 - 110
S3	(BFB)	=	4-Bromofluorobenzene	86 - 115

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-2 1/87 rev. Modified

QC Limits for Scan #4593 Generated May, 1996

#	Name	MS/MSD	LCS/LCSD
3434	Chloromethane	32-146	35-158
3435	Bromomethane	20-160	54-130
3436	Vinyl Chloride	40-153	46-158
3437	Chloroethane	I-179	19-139
3440	Methylene Chloride	58-142	69-143
4074	Acetone	16-169	44-132
4076	Carbon Disulfide	1-184	1-208
1180	1,1-Dichloroethene	53-163	66-158
3442	1,1-Dichloroethane	62-144	67-147
3444	Chloroform	1-227	78-136
3445	1,2-Dichloroethane	67-131	72-132
4085	2-Butanone	16-169	50-133
3446	1,1,1-Trichloroethane	72-138	82-130
3447	Carbon Tetrachloride	64-144	79-135
4091	Vinyl Acetate	1-165	55-142
3448	Bromodichloromethane	73-123	80-122
3450	1,2-Dichloropropane	72-130	72-134
3454	cis-1,3-Dichloropropene	70-124	75-127
1181	Trichloroethene	53-161	78-132
3452	Dibromochloromethane	67-125	77-121
3453	1,1,2-Trichloroethane	67-128	73-124
1182	Benzene	61-139	74-134
3451	trans-1,3-Dichloroethene	68-123	77-122
3456	Bromoform	53-129	62-125
4108	4-Methyl-2-pentanone	48-148	52-132
4107	2-Hexanone	40-152	46-136
3457	Tetrachloroethene	34-188	72-144
3449	1,1,2,2-Tetrachloroethane	1-205	65-127
1183	Toluene	58-150	68-140
1184	Chlorobenzene	40-155	77-127
3458	Ethylbenzene	8-214	80-136
4117	Styrene	67-133	80-130
3355	Xylene (total)	1-256	81-133
6187	trans-1,2-Dichloroethene	55-151	66-150
6277	cis-1,2-Dichloroethene	69-139	71-143

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: ^GM001
06--6 2679080
Method: 4593
Instrument: HP03460

Matrix spike: ^GM002
06--6MS 2679081
Matrix/Level: SL
Dilution Factor: 1.0

Spike Duplicate: ^GM003
06--6MSD 2679082
Batch: G970801AA
Moisture: 16

COMPOUND NAME	SPIKE LEVEL	US CONC UG/KG	MS CONC UG/KG	MSD CONC UG/KG	MS REC %	MSD REC %	RPD %	RANGE LOWER-UPPER	IN SPEC
Chloromethane	23.81	0.00	20.36	25.25	86	106	-21	1-273	YES
Vinyl Chloride	23.81	0.00	22.29	27.53	94	116	-21	1-251	YES
xomethane	23.81	0.00	19.63	24.25	82	102	-22	1-242	YES
loroethane	23.81	0.00	17.16	22.71	72	95	-28	14-230	YES
1,1-Dichloroethene	23.81	0.00	25.43	26.85	107	113	-5	1-234	YES
Acetone	178.57	11.55	150.54	155.50	78	81	-4	19-150	YES
rbon Disulfide	178.57	0.00	230.13	239.43	129	134	-4	29-183	YES
thylene Chloride	23.81	0.00	23.81	25.40	100	107	-7	1-221	YES
trans-1,2-Dichloroethene	23.81	0.00	23.48	24.66	99	104	-5	54-156	YES
1,1-Dichloroethane	23.81	0.00	25.00	25.88	105	109	-4	59-155	YES
s-1,2-Dichloroethene	23.81	0.00	23.29	25.29	98	106	-8	54-156	YES
loroform	23.81	0.00	23.31	25.29	98	106	-8	51-138	YES
1,2-Dichloroethane	23.81	0.00	21.85	23.12	92	97	-5	49-155	YES
Vinyl Acetate	119.05	0.00	132.64	140.68	111	118	-6	19-190	YES
Butanone	178.57	0.00	162.63	175.01	91	98	-7	22-167	YES
,1,1-Trichloroethane	23.81	0.00	25.95	27.53	109	116	-6	52-162	YES
Carbon Tetrachloride	23.81	0.00	24.91	26.51	105	111	-6	70-140	YES
enzene	23.81	0.00	23.91	25.86	100	109	-9	37-151	YES
ichloroethene	23.81	0.00	24.47	25.88	103	109	-6	71-157	YES
ichloropropane	23.81	0.00	24.43	25.88	102	109	-7	1-210	YES
odichloromethane	23.81	0.00	23.12	24.97	97	105	-8	35-155	YES
1,3-Dichloropropene	23.81	0.00	23.60	24.98	99	105	-6	1-227	YES
ns-1,3-Dichloropropene	23.81	0.00	22.42	23.75	94	100	-6	17-183	YES
,1,2-Trichloroethane	23.81	0.00	22.53	23.69	95	99	-4	52-150	YES
Dibromochloromethane	23.81	0.00	22.75	23.79	96	100	-4	53-149	YES
omoform	23.81	0.00	18.80	20.14	79	85	-7	45-169	YES
Methyl-2-Pentanone	119.05	0.00	104.17	103.15	88	87	1	50-124	YES
oluene	23.81	0.00	24.15	24.90	101	104	-3	47-150	YES
Tetrachloroethene	23.81	0.00	26.69	26.76	112	112	0	64-148	YES
Hexanone	119.05	0.00	103.61	102.64	87	86	1	52-140	YES
lorobenzene	23.81	0.00	23.43	24.15	98	101	-3	37-160	YES
thylbenzene	23.81	0.00	24.07	25.67	101	108	-7	37-162	YES
Xylene (total)	71.43	0.00	73.34	74.52	103	104	-1	61-165	YES
yrene	23.81	0.00	23.41	24.08	98	101	-3	74-136	YES
1,2,2-Tetrachloroethane	23.81	0.00	22.54	22.62	95	95	0	46-157	YES

N/C = Could not calculate

b Chronicle: _____ Ent. by _____.

_____ Ver. by _____.

_____.

* The %RPD for this compound exceeds requirements.

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GMOB1 Lab Sample ID: VBLKG15

Date Analyzed: 03/24/97 Time Analyzed: 08:36

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: HP03460

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	06--6	2679080	>GMO01	09:21
02	06--6MS	2679081	>GMO02	09:54
03	06--6MSD	2679082	>GMO03	10:27
04	01--8	2679073	>GMO04	11:00
05	03-20	2679076	>GMO05	11:33
06	01-44	2679074	>GMO07	12:07
07	01-44DL	2679074	>GMO08	12:46
08	07-14	2679083	>GMO09	13:19
09	06-36	2679084	>GMO10	14:11
10	04-20	2679077	>GMO12	15:18
11	02--9	2679075	>GMO13	16:07
12	06-36DL	2679084	>GMO14	16:42
13	LCSLG15	LCSLG15	>GMO15	17:16
14	04-29	2679078	>GMO16	18:17
15	05-10	2679079	>GMO17	19:07
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____.

_____.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG15

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKG15

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >GMOB1

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

Moisture: not dec. _____ Date Analyzed: 03/24/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
74-87-3	Chloromethane		2	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-35-4	1,1-Dichloroethene		2	U
67-64-1	Acetone		7	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		3	U
78-93-3	2-Butanone		7	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		3	U
75-27-4	Bromodichloromethane		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		1	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		3	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		3	U
108-90-7	Chlorobenzene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		1	U

VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GMOB3 Lab Sample ID: VBLKG16

Date Analyzed: 03/24/97 Time Analyzed: 21:42

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: HP03460

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	SB-01	2680801	>GMO18	22:27
02	SB-02	2680802	>GMO19	23:00
03	SB-03	2680803	>GMO20	23:53
04	SB-04	2680804	>GMO21	00:28
05	SB05A	2680806	>GMO22	01:15
06	SB-05	2680805	>GMO23	01:48
07	SB-29	2680808	>GMO24	02:30
08	SB-07	2680810	>GMO25	03:04
09	SB-06	2680809	>GMO26	04:10
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COMMENTS: _____

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG16

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: VBLKG16

Sample wt/vol: 5.0 (g/mL) G Lab File ID: >GMOB3

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

Moisture: not dec. _____ Date Analyzed: 03/24/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
74-87-3	Chloromethane		2	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-35-4	1,1-Dichloroethene		2	U
67-64-1	Acetone		7	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		1	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		3	U
78-93-3	2-Butanone		7	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		3	U
75-27-4	Bromodichloromethane		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		1	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		3	U
108-88-3	Toluene		1	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		3	U
108-90-7	Chlorobenzene		1	U
100-41-4	Ethylbenzene		1	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		1	U

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKB1 Lab Sample ID: VBLKK43

Date Analyzed: 03/20/97 Time Analyzed: 04:15

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: HP03973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	KMW-4	2677539	>KMK01	05:07
02	RB--1	2677540	>KMK02	05:42
03	RB-4-	2679085	>KMK03	06:17
04	RB-5-	2679086	>KMK04	06:52
05	FB-1-	2679087	>KMK05	07:28
06	TB-2-	2677695	>KMK06	08:28
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COMMENTS: _____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
74-87-3	Chloromethane		3	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-69-4	Trichlorofluoromethane		2	U
107-02-8	Acrolein		40	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		6	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		2	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		2	U
78-93-3	2-Butanone		3	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		1	U
75-27-4	Bromodichloromethane		1	U
110-75-8	2-Chloroethyl Vinyl Ether		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		2	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		5	U
108-88-3	Toluene		2	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		7	U
108-90-7	Chlorobenzene		1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK43

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Matrix: (soil/water) WATER Lab Sample ID: VBLKK43

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMKB1

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

% Moisture: not dec. _____ Date Analyzed: 03/20/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
100-41-4	Ethylbenzene		2	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		2	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMLB2 Lab Sample ID: VBLKK45

Date Analyzed: 03/21/97 Time Analyzed: 14:43

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: HP03973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW8DA	2680263	>KML20	15:49
02	MW9-A	2680265	>KML21	16:23
03	MWFBA	2680267	>KML22	16:58
04	TBAVR	2680268	>KML23	17:33
05	SW-1A	2680269	>KML24	18:08
06	SW-1B	2680270	>KML25	18:43
07	SW-2-	2680271	>KML26	19:20
08	SW-3-	2680272	>KML27	19:58
09	MW8-A	2680257	>KML28	20:32
10	MW8DP	2680259	>KML29	21:07
11	RB--6	2680807	>KML30	21:45
12	FB--2	2680811	>KML31	22:37
13	FIEFF	2680612	>KML32	23:12
14	FITBR	2680613	>KML33	23:46
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COMMENTS: _____.

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK45

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK45

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMLB2

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

% Moisture: not dec. _____ Date Analyzed: 03/21/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
74-87-3	Chloromethane		3	U
75-01-4	Vinyl Chloride		2	U
74-83-9	Bromomethane		3	U
75-00-3	Chloroethane		3	U
75-69-4	Trichlorofluoromethane		2	U
107-02-8	Acrolein		40	U
75-35-4	1,1-Dichloroethene		1	U
67-64-1	Acetone		6	U
75-15-0	Carbon Disulfide		3	U
75-09-2	Methylene Chloride		2	U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		2	U
75-34-3	1,1-Dichloroethane		2	U
156-59-2	cis-1,2-Dichloroethene		2	U
67-66-3	Chloroform		1	U
107-06-2	1,2-Dichloroethane		2	U
108-05-4	Vinyl Acetate		2	U
78-93-3	2-Butanone		3	U
71-55-6	1,1,1-Trichloroethane		1	U
56-23-5	Carbon Tetrachloride		1	U
71-43-2	Benzene		1	U
79-01-6	Trichloroethene		1	U
78-87-5	1,2-Dichloropropane		1	U
75-27-4	Bromodichloromethane		1	U
110-75-8	2-Chloroethyl Vinyl Ether		2	U
10061-01-5	cis-1,3-Dichloropropene		1	U
10061-02-6	trans-1,3-Dichloropropene		1	U
79-00-5	1,1,2-Trichloroethane		2	U
124-48-1	Dibromochloromethane		2	U
75-25-2	Bromoform		1	U
108-10-1	4-Methyl-2-Pentanone		5	U
108-88-3	Toluene		2	U
127-18-4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		7	U
108-90-7	Chlorobenzene		1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK45

Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: VBLKK45

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >KMLB2

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

% Moisture: not dec. _____ Date Analyzed: 03/21/97

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/L	Q
100-41-4	Ethylbenzene		2	U
1330-20-7	Xylene (total)		1	U
100-42-5	Styrene		1	U
79-34-5	1,1,2,2-Tetrachloroethane		2	U

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GMDT1 BFB Injection Date: 03/13/97

Instrument ID: HP03460 BFB Injection Time: 21:56

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	46.7
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	70.2
175	5.0 - 9.0% of mass 174	5.2 (7.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.2 (100.1)1
177	5.0 - 9.0% of mass 176	5.7 (8.2)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
01	VSTD100	100 ppb IC	>GMDI2	03/13/97	22:52
02	VSTD020	020 ppb IC	>GMDI4	03/14/97	00:04
03	VSTD300	300 ppb IC	>GMDI6	03/14/97	07:53
04	VSTD050	050 ppb IC	>GMDI7	03/14/97	08:28
05	VSTD004	004 ppb IC	>GMDI9	03/14/97	09:40
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VOLATILE ORGANICS INITIAL CALIBRATION DATA

ab Name: LANCASTER LABS Contract: ____.

de: LANCAS Case No.: ____. SAS No. ____. SDG No.: ____.

rument ID: HP03460 Calibration Date(s): 03/13/97 03/14/97

Calibration Times: 2252 0940

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

RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >GMD19 RRF 20= >GMD14
RRF 50= >GMD17 RRF100= >GMD12 RRF300= >GMD16

	COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
)	ılorodifluoromethane	1.072	1.969	1.815	1.888	1.600	1.669	21.6	2NDDEG	
	ɔromethane	# .719	1.070	1.088	.998	.774	.930	18.5	2NDDEG	#
	inyl Chloride	* .628	1.115	1.086	1.028	.873	.958	18.5	2NDDEG	*
	romomethane	.782	1.148	1.112	.999	.744	.957	19.4	2NDDEG	
	ɔroethane	.405	.647	.580	.555	.306	.499	28.0	AVG	a
	chlorofluoromethane	.694	1.350	1.497	1.328	1.204	1.215	25.5	2NDDEG	
	tnyl Ether	.787	.912	.861	.892	.767	.844	7.6	AVG	
	crolein	.166	.205	.197	.211	.168	.190	11.0	AVG	
	Dichloroethene	* 1.090	1.167	1.181	1.298	1.232	1.194	6.5	AVG	*
	n 113	1.868	2.153	2.197	2.361	2.309	2.178	8.8	AVG	
	cetone	.298	.418	.281	.298	.224	.304	23.3	2NDDEG	
	ethyl Iodide	2.879	3.247	3.332	3.506	3.468	3.286	7.6	AVG	
	on Disulfide	2.915	3.032	3.429	3.477	3.519	3.274	8.5	AVG	
	panol	.081	.088	.081	.095	.071	.083	10.5	AVG	
	Chloride	1.534	1.495	1.630	1.588	1.611	1.572	3.6	AVG	
	ene Chloride	1.384	1.457	1.365	1.387	1.343	1.387	3.1	AVG	
	l Alcohol	.156	.182	.168	.184	.158	.170	7.8	AVG	
	lonitrile	.277	.326	.316	.343	.275	.307	9.9	AVG	
	ethyl t-Butyl Ether	2.828	3.326	3.055	3.180	2.748	3.027	7.9	AVG	
	rans-1,2-Dichloroethene	1.209	1.320	1.279	1.432	1.357	1.319	6.3	AVG	
	xane	1.214	1.364	1.367	1.567	1.464	1.396	9.4	AVG	
	Dichloroethane	# 2.144	2.455	2.323	2.539	2.313	2.355	6.4	AVG	#
	-Propanol	.009	.022	.020	.020	.018	.018	28.1	1STDEG	
	-Chloro-1,3-Butadiene	1.456	1.549	1.566	1.763	1.599	1.586	7.1	AVG	
	Dichloropropane	1.375	1.501	1.519	1.605	1.410	1.482	6.2	AVG	
	1,2-Dichloroethene	1.296	1.472	1.435	1.514	1.386	1.421	5.9	AVG	
	ropionitrile	.108	.134	.118	.142	.107	.122	12.8	AVG	
	ethacrylonitrile	.400	.486	.429	.485	.393	.438	10.3	AVG	
	ahydrofuran	.373	.479	.402	.464	.335	.411	14.8	AVG	
	roform	* 2.334	2.691	2.529	2.755	2.496	2.561	6.5	AVG	*
	yclohexane	1.501	1.673	1.660	1.847	1.689	1.674	7.3	AVG	
	,1-Dichloropropene	1.543	1.731	1.702	1.881	1.650	1.701	7.2	AVG	
	Dichloroethane	1.408	1.730	1.592	1.678	1.390	1.560	9.9	AVG	
	l Acetate	.051	.068	.068	.068	.065	.064	11.5	AVG	

— RRFs out of control, but not compd of interest

a = The AVG response factor is being used due to poor curve fit.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

me: LANCASTER LABS Contract: _____.

de: LANCAS Case No.:_____. SAS No. _____. SDG No.: _____.

nstrument ID: HP03460 Calibration Date(s): 03/13/97 03/14/97

Calibration Times: 2252 0940

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

r RF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF 4= >GMD19 RRF 20= >GMD14
R 50= >GMD17 RRF100= >GMD12 RRF300= >GMD16

COMPOUND		RRF 4	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
2- tanone		.129	.169	.158	.161	.123	.148	13.9	AVG	
,1,1-Trichloroethane		.392	.461	.460	.502	.470	.457	8.8	AVG	
arbon Tetrachloride		.332	.415	.421	.475	.442	.417	12.7	AVG	
s utyl Alcohol		.011	.013	.012	.013	.009	.011	13.8	AVG	
e ene		.759	.846	.832	.880	.824	.824	6.3	AVG	
-Heptane		.195	.226	.223	.267	.250	.232	11.9	AVG	
-Butanol		.009	.011	.010	.012	.009	.010	10.7	AVG	
r hloroethene		.337	.374	.370	.407	.396	.377	7.2	AVG	
, Dichloropropane	*	.363	.423	.408	.425	.380	.400	6.8	AVG	*
ethyl Methacrylate		.216	.301	.275	.293	.234	.264	14.1	AVG	
ibromomethane		.363	.445	.416	.426	.371	.405	8.8	AVG	
, Dioxane		.004	.005	.004	.005	.004	.004	9.8	AVG	
c loroacetone		.003	.004	.003	.004	.003	.003	14.2	AVG	
yl Acetate		.152	.201	.179	.195	.159	.177	12.3	AVG	
ichloromethane		.526	.685	.674	.709	.658	.650	11.1	AVG	
opropane		.075	.090	.080	.090	.069	.081	11.5	AVG	
loroethyl Vinyl Ether		.249	.310	.297	.280	.254	.278	9.6	AVG	
is-1,3-Dichloropropene		.472	.605	.579	.591	.551	.560	9.4	AVG	
rans-1,3-Dichloropropene		.399	.509	.505	.524	.485	.484	10.2	AVG	
, 2-Trichloroethane		.317	.401	.383	.392	.355	.370	9.2	AVG	
ll xmochloromethane		.471	.653	.648	.663	.619	.611	13.1	AVG	
romoform	#	.335	.515	.511	.534	.492	.477	17.0	1STDEG	#
rans-1,4-Dichloro-2-Butene		.124	.155	.145	.150	.105	.136	15.2	2NDDEG	
-l thyl-2-Pentanone		.801	.689	.661	.713	.549	.682	13.3	AVG	
o ene	*	.970	1.125	1.145	1.231	1.157	1.125	8.5	AVG	*
thyl Methacrylate		.612	.727	.724	.751	.640	.691	8.8	AVG	
etrachloroethene		.354	.391	.402	.452	.431	.406	9.3	AVG	
, Dichloropropane		.648	.800	.762	.781	.660	.730	9.7	AVG	
-l tanone		.353	.421	.414	.434	.323	.389	12.4	AVG	
,2-Dibromoethane		.638	.803	.769	.819	.719	.750	9.8	AVG	
hlorobenzene	#	.833	.949	.938	1.010	.956	.937	6.9	AVG	#
, i,2-Tetrachloroethane		.406	.513	.501	.531	.480	.487	10.0	AVG	
th benzene	*	.361	.397	.405	.437	.378	.396	7.3	AVG	*
+p-Xylene		.453	.521	.525	.558	.515	.515	7.4	AVG	

LRFs out of control but not compds of interest

VOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

de: LANCAS Case No.: _____. SAS No. _____. SDG No.: _____.

strument ID: HP03460 Calibration Date(s): 03/13/97 03/14/97

Calibration Times: 2252 0940

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

i RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >GMDI9 RRF 20= >GMDI4
Ri 50= >GMDI7 RRF100= >GMDI2 RRF300= >GMDI6

COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
o ylene	.455	.498	.499	.523	.478	.491	5.3	AVG	
Styrene	.746	.887	.926	.947	.886	.878	8.9	AVG	
Isopropylbenzene	1.208	1.353	1.377	1.525	1.364	1.365	8.2	AVG	
C) ohexanone	.020	.026	.021	.021	.043	.026	35.8	AVG	a
1, 2,2-Tetrachloroethane	# .841	1.057	.990	1.037	.842	.953	11.0	AVG	#
Bromobenzene	.455	.509	.512	.546	.485	.501	6.8	AVG	
1,2,3-Trichloropropane	.191	.220	.202	.218	.176	.201	9.3	AVG	
n- opylbenzene	1.573	1.695	1.720	1.900	1.503	1.678	9.1	AVG	
2- lorotoluene	.316	.353	.360	.387	.367	.357	7.3	AVG	
1,3,5-Trimethylbenzene	1.001	1.069	1.081	1.175	1.070	1.079	5.8	AVG	
4-Chlorotoluene	.346	.380	.387	.412	.368	.379	6.4	AVG	
te -Butylbenzene	1.314	1.441	1.448	1.564	1.452	1.444	6.1	AVG	
pe hloroethane	.334	.363	.396	.394	.408	.379	7.9	AVG	
1 rimethylbenzene	1.026	1.139	1.079	1.206	1.021	1.094	7.2	AVG	
se ylbenzene	1.404	1.536	1.530	1.777	1.471	1.544	9.1	AVG	
hlorobenzene	.707	.801	.800	.853	.778	.788	6.7	AVG	
propyltoluene	1.145	1.166	1.160	1.327	1.187	1.197	6.2	AVG	
1,4-Dichlorobenzene	.795	.929	.895	.947	.911	.896	6.6	AVG	
n-Butylbenzene	1.199	1.270	1.214	1.382	1.247	1.262	5.7	AVG	
1, Dichlorobenzene	.745	.802	.728	.781	.808	.773	4.6	AVG	
1, Dibromo-3-Chloropropane	.162	.194	.142	.166	.210	.175	15.5	2NDDEG	
1,2,4-Trichlorobenzene	.554	.549	.405	.433	.523	.493	14.0	AVG	
Hexachlorobutadiene	.363	.315	.246	.314	.364	.320	15.1	2NDDEG	
Na thalene	1.074	1.043	.803	.702	.695	.863	21.2	2NDDEG	
1, 3-Trichlorobenzene	.507	.452	.370	.300	.191	.364	34.3	2NDDEG	
1,2-Dichloroethane-d4	1.322	1.434	1.438	1.686	1.321	1.440	10.3	AVG	
To ene-d8	1.036	1.036	1.146	1.276	1.126	1.124	8.8	AVG	
Bromofluorobenzene	.685	.720	.742	.862	.726	.747	9.0	AVG	

RRFs + RSD out of control, but not compds of interest

a = The AVG response factor is being used due to poor curve fit.

Calibration Report

Supporting Doc ICF 4/7/97

Title: Method 8240 Low Soil Calibration File for Inst. HP03460
Calibrated: 970314 11:09

Compound	Files: >GMD19 RF 4.00	>GMD14 RF 20.00	>GMD17 RF 50.00	>GMD12 RF 100.00	>GMD16 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
1) Dichlorodifluoromethane	1.07244	1.96916	1.81470	1.88849	1.60000	1.66896	21.607	.997969	.999896	-5.95	2.41	
2) Chloromethane	.71911	1.07049	1.08783	.99833	.77371	.92989	18.488	.994265	.999995	-12.55	2.25	
3) Vinyl Chloride	.68803	1.11489	1.08636	1.02840	.87337	.95821	18.529	.997840	.999995	-7.89	1.22	
4) Bromomethane	.78214	1.14835	1.11179	.99870	.74373	.95694	19.436	.992121	.999997	-15.67	2.12	
5) Chloroethane	.40513	.64707	.58005	.55503	.30577	.49861	27.967	.959261	.996439	-27.13	11.40	
6) Dichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	-	
7) Trichlorofluoromethane	.69395	1.35032	1.49722	1.32823	1.20420	1.21478	25.452	.998680	.999829	-5.27	1.21	
8) n-Pentane	-	-	-	-	-	-	-	-	-	-	-	
9) Furfuran	-	-	-	-	-	-	-	-	-	-	-	
0) Ethyl Ether	.78687	.91219	.86104	.89211	.76682	.84381	7.606	.998461	.999912	-5.81	1.65	
.1) Acrolein	.16643	.20531	.19708	.21051	.16834	.18953	10.969	.996271	.999733	-78.46	33.45	(Conc
12) 1,1-Dichloroethene	1.08990	1.16710	1.18059	1.29753	1.23238	1.19350	6.480	.999725	.999868	.116	2.35	
13) Freon 113	1.86819	2.15311	2.19715	2.36069	2.30875	2.17758	8.817	.999908	.999938	.943	1.97	
14) Acetone	.29785	.41773	.28147	.29779	.22376	.30372	23.256	.993895	.999326	-30.14	1.90	(Conc
15) Methyl Iodide	2.87908	3.24453	3.33187	3.50639	3.46760	3.28630	7.619	.999961	.999970	.971	1.54	
16) Carbon Disulfide	2.91460	3.03210	3.42941	3.47729	3.51892	3.27446	8.545	.999980	.999980	1.70	1.59	
17) 2-Propanol	.08138	.08777	.08120	.09512	.07144	.08338	10.532	.993419	.999289	-47.05	43.36	(Conc
18) Acetonitrile	.08674	.07495	.08583	.08121	.07685	.08111	6.464	.999693	.999931	-16.27	3.03	(Conc
19) Allyl Chloride	1.53409	1.49451	1.62975	1.58820	1.61130	1.57157	3.569	.999973	.999975	.656	.374	
20) 3-Chloro-1-Propene	-	-	-	-	-	-	-	-	-	-	-	
21) Methylene Chloride	1.38406	1.45741	1.36468	1.38743	1.34294	1.38730	3.101	.999939	.999984	-1.44	-.0947	
22) t-Butyl Alcohol	.15622	.18201	.16793	.18450	.15799	.16973	7.753	.998240	.999793	-23.93	22.85	(Conc
23) Acrylonitrile	.27657	.32630	.31582	.34293	.27536	.30740	9.850	.996404	.999680	-72.33	35.77	(Conc
24) Methyl t-Butyl Ether	2.82759	3.32558	3.05450	3.18046	2.74839	3.02731	7.935	.998595	.999900	-5.69	1.42	
25) trans-1,2-Dichloroethene	1.20887	1.31958	1.27877	1.43223	1.35707	1.31930	6.344	.999676	.999815	.119	2.34	
n-Hexane	1.21449	1.36431	1.36739	1.56743	1.46425	1.39557	9.398	.999487	.999740	.328	3.24	
Hexane	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethane	2.14400	2.45481	2.32250	2.53852	2.31273	2.35451	6.406	.999370	.999842	-2.10	2.05	
di-Isopropyl Ether	-	-	-	-	-	-	-	-	-	-	-	
30) 1-Propanol	.00923	.02155	.02027	.02032	.01759	.01779	28.109	.997356	.999731	-44.33	85.60	(Conc
31) 2-Chloro-1,3-Butadiene	1.45597	1.54852	1.56621	1.76279	1.59862	1.58642	7.056	.999206	.999756	-1.21	3.13	
32) 2,2-Dichloropropane	1.37459	1.50061	1.51870	1.60531	1.41030	1.48190	6.183	.998822	.999891	-3.86	2.36	
33) cis-1,2-Dichloroethene	1.29557	1.47245	1.43522	1.51388	1.38594	1.42061	5.935	.999472	.999929	-2.47	1.65	
34) 2-Butanone	.12944	.16861	.15826	.16066	.12263	.14792	13.850	.994300	.999800	-22.83	6.13	(Conc
35) Propionitrile	.10809	.13440	.11778	.14191	.10750	.12193	12.784	.993528	.999195	-40.07	46.09	(Conc
36) Ethyl Acetate	2.10552	1.47333	1.65007	1.66432	1.35867	1.65038	17.239	.996965	.999828	-8.02	2.42	
37) Methacrylonitrile	.39959	.48569	.42895	.48511	.39273	.43841	10.264	.996625	.999603	-17.34	15.09	(Conc

RF_n - Response Factor (Subscript is amount in UG/KG)

RF - Average Response Factor

%D - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/KG

Calibration Report

Title: Method 8240 Low Soil Calibration File for Inst. HP03460
Calibrated: 970314 11:09

No.	Compound	Files: >GMD19 RF 4.00	>GMD14 RF 20.00	>GMD17 RF 50.00	>GMD12 RF 100.00	>GMD16 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
38)	Methyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
39)	Tetrahydrofuran	.37346	.47929	.40203	.46351	.33489	.41064	14.764	.991440	.998963	-11.41	5.27	
40)	Chloroform	2.33369	2.69124	2.52933	2.75527	2.49613	2.56113	6.521	.999308	.999844	-2.45	1.99	
41)	Cyclohexane	1.50095	1.67323	1.66006	1.84719	1.68937	1.67416	7.338	.999352	.999804	-1.21	2.76	
42)	1,1-Dichloropropene	1.54297	1.73134	1.70172	1.88075	1.65050	1.70145	7.243	.998747	.999774	-3.08	2.93	
43)	1,2-Dichloroethane-d4	1.32221	1.43368	1.43767	1.68603	1.32130	1.44018	10.331	.995206	.999260	-6.09	5.42	
44)	1,2-Dichloroethane	1.40803	1.73002	1.59226	1.67780	1.39047	1.55971	9.915	.997530	.999828	-7.10	2.23	
45)	Vinyl Acetate	.05120	.06830	.06848	.06807	.06472	.06416	11.541	.999801	.999999	-1.82	.913	
46)	1,1,1-Trichloroethane	.39231	.46122	.45970	.50203	.46959	.45697	8.751	.999621	.999878	-.616	2.38	
47)	Carbon Tetrachloride	.33241	.41459	.42077	.47514	.44245	.41707	12.689	.999490	.999793	.103	3.28	
48)	Isobutyl Alcohol	.01092	.01272	.01173	.01257	.00888	.01136	13.778	.990162	.999465	-188.30	113.27	(Conc
49)	Benzene	.73926	.84575	.83194	.87971	.82357	.82404	6.312	.999689	.999939	-1.41	1.61	
50)	n-Heptane	.19494	.22626	.22315	.26740	.25005	.23236	11.909	.999349	.999588	1.17	3.95	
51)	Heptane	-	-	-	-	-	-	-	-	-	-	-	
52)	Isopropyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
53)	n-Butyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	
54)	n-Butanol	.00927	.01081	.01005	.01183	.00928	.01025	10.651	.995166	.999432	-83.35	102.35	(Conc
55)	Trichloroethene	.33714	.37353	.36998	.40709	.39592	.37673	7.164	.999848	.999884	.950	2.07	(Conc
56)	1,2-Dichloropropane	.36281	.42294	.40794	.42471	.37998	.39968	6.833	.999178	.999937	-3.78	1.56	
57)	Methyl Methacrylate	.21588	.30105	.27481	.29311	.23401	.26377	14.124	.996238	.999734	-8.28	3.08	
58)	Dibromomethane	.36323	.44546	.41644	.42642	.37145	.40460	8.822	.998731	.999942	-5.54	1.31	
59)	1,4-Dioxane	.00398	.00477	.00424	.00482	.00394	.00435	9.752	.996866	.999601	-79.33	75.15	(Conc
60)	Monochloroacetone	.00314	.00353	.00338	.00384	.00259	.00330	14.181	.986407	.998994	-182.50	152.95	(Conc
61)	n-Propyl Acetate	.15166	.20142	.17899	.19541	.15883	.17726	12.331	.996890	.999677	-7.25	2.92	
62)	Bromodichloromethane	.52596	.68489	.67404	.70880	.65752	.65024	11.062	.999593	.999948	-1.75	1.84	
	2-Nitropropane	.07531	.08960	.08037	.09000	.06850	.08076	11.475	.994265	.999378	-18.85	8.50	(Conc
	2-Chloroethyl Vinyl Ether	.24865	.30989	.29709	.28023	.25393	.27796	9.565	.999258	.999977	-11.23	-.373	(Conc
	Epichlorohydrin	-	-	-	-	-	-	-	-	-	-	-	
66)	cis-1,3-Dichloropropene	.47246	.60494	.57873	.59108	.55129	.55970	9.401	.999676	.999979	-2.43	.960	
67)	trans-1,3-Dichloropropene	.39934	.50947	.50498	.52401	.48450	.48446	10.247	.999568	.999965	-2.14	1.67	
68)	1,1,2-Trichloroethane	.31710	.40073	.38310	.39221	.35457	.36954	9.221	.999322	.999967	-3.71	1.24	
69)	Dibromochloromethane	.47051	.65288	.64794	.66279	.61860	.61054	13.102	.999654	.999985	-1.97	1.51	
70)	Bromoform	.33477	.51542	.51137	.53375	.49177	.47742	16.992	.999496	.999961	-1.95	2.11	
71)	cis-1,4-Dichloro-2-Butene	-	-	-	-	-	-	-	-	-	-	-	
72)	trans-1,4-Dichloro-2-Butene	.12432	.15545	.14479	.14955	.10544	.13591	15.210	.989860	.999626	-39.51	22.15	(Conc
73)	4-Methyl-2-Pentanone	.80061	.68906	.66070	.71264	.54916	.68243	13.341	.994999	.999552	-19.72	6.77	(Conc
74)	Toluene-d8	1.03579	1.03620	1.14594	1.27599	1.12649	1.12408	8.793	.998724	.999740	-1.89	3.87	

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

$\overline{RF}$ - Average Response Factor

SD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Ytn - Y intercept (nth degree) in UG/KG

Calibration Report

Title: Method 8240 Low Soil Calibration File for Inst. HP03460
Calibrated: 970314 11:09

	Files: >GM019	>GM014	>GM017	>GM012	>GM016						
	RF	RF	RF	RF	RF						
Compound	4.00	20.00	50.00	100.00	300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
75) Toluene	.96969	1.12453	1.14471	1.23077	1.15735	1.12541	8.516	.999686	.999915	-.595	2.24
76) Ethyl Methacrylate	.61200	.72727	.72376	.75141	.64032	.69095	8.817	.998180	.999906	-5.59	2.36
77) Tetrachloroethene	.35359	.39067	.40212	.45172	.43143	.40591	9.328	.999704	.999821	.938	2.93
78) 1,3-Dichloropropane	.64804	.79998	.76204	.78136	.66020	.73032	9.719	.998018	.999921	-6.63	1.87
79) 2-Hexanone	.35328	.42059	.41409	.43428	.32257	.38896	12.442	.992848	.999596	-22.55	8.70 (Conc
80) Butyl Acetate	-	-	-	-	-	-	-	-	-	-	-
81) 1,2-Dibromoethane	.63751	.80331	.76888	.81943	.71923	.74967	9.807	.998815	.999877	-3.99	2.23
82) Chlorobenzene	.83304	.94943	.93782	1.00974	.95606	.93722	6.877	.999749	.999913	-.542	1.89
83) 1,1,1,2-Tetrachloroethane	.40639	.51332	.50122	.53121	.48047	.48652	9.958	.999292	.999917	-2.70	2.05
84) Ethylbenzene	.36108	.39696	.40546	.43748	.37837	.39587	7.301	.998465	.999823	-3.93	2.97
85) m+p-Xylene	.45340	.52122	.52547	.55845	.51507	.51472	7.417	.999524	.999923	-3.41	4.16 (Conc
86) Isoamyl Acetate	-	-	-	-	-	-	-	-	-	-	-
87) o-Xylene	.45465	.49815	.49892	.52346	.47778	.49059	5.259	.999429	.999936	-2.54	1.78
88) Styrene	.74562	.88657	.92632	.94652	.88596	.87820	8.946	.999673	.999984	-1.65	1.70
89) Butyl Acrylate	-	-	-	-	-	-	-	-	-	-	-
90) Cumene	-	-	-	-	-	-	-	-	-	-	-
91) Isopropylbenzene	1.20839	1.35294	1.37714	1.52513	1.36381	1.36548	8.226	.999031	.999794	-2.00	3.12
92) Cyclohexanone	.02029	.02578	.02146	.02115	.04263	.02626	35.772	.987729	.999832	291.18	-53.48 (Conc
93) 4-Bromofluorobenzene	.68523	.71972	.74200	.86174	.72649	.74704	9.022	.997657	.999515	-3.25	4.53
94) 1,1,2,2-Tetrachloroethane	.84133	1.05695	.98952	1.03705	.84232	.95343	10.991	.996871	.999819	-7.91	2.60
95) Bromobenzene	.45483	.50910	.51234	.54632	.48479	.50148	6.792	.998989	.999883	-3.25	2.41
96) 1,2,3-Trichloropropane	.19053	.21997	.20227	.21832	.17583	.20138	9.302	.996627	.999698	-7.81	2.91
97) n-Propylbenzene	1.57313	1.69507	1.72012	1.90011	1.50317	1.67832	9.083	.995754	.999565	-7.10	4.35
98) 2-Chlorotoluene	.31621	.35337	.35972	.38743	.36675	.35670	7.290	.999737	.999913	-.340	2.16
99) 1,3,5-Trimethylbenzene	1.00073	1.06916	1.08136	1.17504	1.07002	1.07926	5.774	.999344	.999859	-1.80	2.47
4-Chlorotoluene	.34609	.37964	.38727	.41218	.36828	.37869	6.424	.999094	.999892	-2.93	2.41
tert-Butylbenzene	1.31436	1.44113	1.44839	1.56438	1.45201	1.44405	6.135	.999571	.999892	-1.18	2.20
Pentachloroethane	.33441	.36286	.39630	.39436	.40807	.37920	7.943	.999953	.999988	2.00	.875
103) 1,2,4-Trimethylbenzene	1.02571	1.13869	1.07882	1.20581	1.02134	1.09407	7.178	.997999	.999674	-4.59	3.14
104) sec-Butylbenzene	1.40436	1.53603	1.52996	1.77696	1.47110	1.54368	9.124	.997192	.999476	-4.19	4.51
105) bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-
106) 1,3-Dichlorobenzene	.70735	.80063	.80020	.85305	.77762	.78777	6.703	.999390	.999907	-2.20	2.12
107) p-Isopropyltoluene	1.14470	1.16597	1.16041	1.32673	1.18738	1.19704	6.190	.998986	.999680	-1.57	3.31
108) 1,4-Dichlorobenzene	.79513	.92922	.89503	.94743	.91127	.89562	6.643	.999870	.999948	-.441	1.26
109) Dicyclopentadiene	-	-	-	-	-	-	-	-	-	-	-
110) Benzyl Chloride	-	-	-	-	-	-	-	-	-	-	-
111) 1,3-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-

$_{RF}$ - Response Factor (Subscript is amount in UG/KG)

$\overline{RF}$ - Average Response Factor

%D - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/KG

Calibration Report

Title: Method 8240 Low Soil Calibration File for Inst. HP03460
Calibrated: 970314 11:09

Po.	Compound	Files: >GM019 RF 4.00	>GM014 RF 20.00	>GM017 RF 50.00	>GM012 RF 100.00	>GM016 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
112)	1,4-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
3)	n-Butylbenzene	1.19902	1.26996	1.21391	1.38204	1.24697	1.26238	5.737	.999140	.999705	-1.61	2.85
4)	1,2-Dichlorobenzene	.74482	.80250	.72755	.78105	.80778	.77274	4.577	.999833	.999930	2.16	.222
115)	1,2-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
116)	1,2-Dibromo-3-Chloropropane	.16181	.19439	.14227	.16563	.20988	.17479	15.472	.996807	.999588	9.65	-1.01
7)	1,2,4-Trichlorobenzene	.55366	.54884	.40527	.43253	.52346	.49275	14.015	.997641	.999736	6.40	-3.47
8)	Hexachlorobutadiene	.36278	.31459	.24610	.31392	.36403	.32028	15.051	.998057	.999354	8.16	1.22
119)	Naphthalene	1.07370	1.04277	.80271	.70223	.69477	.86323	21.242	.999555	.999555	-6.37	-6.26
120)	1,2,3-Trichlorobenzene	.50692	.45217	.37018	.30006	.19089	.36404	34.280	.979312	.999949	-32.39	2.22

F - Response Factor (Subscript is amount in UG/KG)

$\overline{RF}$ - Average Response Factor

% D - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Y tn - Y intercept (nth degree) in UG/KG

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GMOT1 BFB Injection Date: 03/24/97

Instrument ID: HP03460 BFB Injection Time: 07:30

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.3
75	30.0 - 60.0% of mass 95	45.6
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	72.6
175	5.0 - 9.0% of mass 174	5.3 (7.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	72.3 (99.5)1
177	5.0 - 9.0% of mass 176	4.4 (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
01	VSTD050	050 ppb CC	>GMOS1	03/24/97	07:52
02	VBLKG15	VBLKG15	>GMOB1	03/24/97	08:36
03	06--6	2679080	>GMO01	03/24/97	09:21
04	06--6MS	2679081	>GMO02	03/24/97	09:54
05	06--6MSD	2679082	>GMO03	03/24/97	10:27
06	01--8	2679073	>GMO04	03/24/97	11:00
07	03-20	2679076	>GMO05	03/24/97	11:33
08	01-44	2679074	>GMO07	03/24/97	12:07
09	01-44DL	2679074	>GMO08	03/24/97	12:46
10	07-14	2679083	>GMO09	03/24/97	13:19
11	06-36	2679084	>GMO10	03/24/97	14:11
12	04-20	2679077	>GMO12	03/24/97	15:18
13	02--9	2679075	>GMO13	03/24/97	16:07
14	06-36DL	2679084	>GMO14	03/24/97	16:42
15	LCSLG15	LCSLG15	>GMO15	03/24/97	17:16
16	04-29	2679078	>GMO16	03/24/97	18:17
17	05-10	2679079	>GMO17	03/24/97	19:07
18					
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03460 Calibration Date: 03/24/97 Time: 0752

Lab File ID: >GMOS1 Init. Calib. Date(s): 03/13/97 03/14/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

	COMPOUND	RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Chloromethane		.930	.947	43.04	50.0	13.9
*	Vinyl Chloride	*	.958	.945	43.46	50.0	13.1*
	Bromomethane		.957	.927	40.62	50.0	18.8
	Chloroethane		.499	.416	41.70	50.0	16.6
*	1,1-Dichloroethene	*	1.194	1.278	53.53	50.0	-7.1*
	Acetone		.304	.242	72.66	100.0	27.3 J, UJ
	Carbon Disulfide		3.274	3.837	58.59	50.0	-17.2
	Methylene Chloride		1.387	1.382	49.80	50.0	.4
	trans-1,2-Dichloroethene		1.319	1.357	51.44	50.0	-2.9
#	1,1-Dichloroethane	#	2.355	2.376	50.46	50.0	-.9#
	cis-1,2-Dichloroethene		1.421	1.434	50.46	50.0	-.9
*	Chloroform	*	2.561	2.584	50.44	50.0	-.9*
	1,2-Dichloroethane		1.560	1.500	48.08	50.0	3.8
	Vinyl Acetate		.064	.056	44.01	50.0	12.0
	2-Butanone		.148	.134	90.63	100.0	9.4
	1,1,1-Trichloroethane		.457	.483	52.83	50.0	-5.7
	Carbon Tetrachloride		.417	.450	53.95	50.0	-7.9
	Benzene		.824	.849	51.53	50.0	-3.1
	Trichloroethene		.377	.398	52.87	50.0	-5.7
*	1,2-Dichloropropane	*	.400	.414	51.74	50.0	-3.5*
	Bromodichloromethane		.650	.693	53.26	50.0	-6.5
	cis-1,3-Dichloropropene		.560	.569	50.86	50.0	-1.7
	trans-1,3-Dichloropropene		.484	.473	48.80	50.0	2.4
	1,1,2-Trichloroethane		.370	.369	49.90	50.0	.2
	Dibromochloromethane		.611	.647	52.98	50.0	-6.0
#	Bromoform	#	.477	.496	48.40	50.0	3.2#
	4-Methyl-2-Pentanone		.682	.560	82.07	100.0	17.9
*	Toluene	*	1.125	1.146	50.92	50.0	-1.8*
	Tetrachloroethene		.406	.445	54.87	50.0	-9.7
	2-Hexanone		.389	.332	85.39	100.0	14.6
#	Chlorobenzene	#	.937	.940	50.14	50.0	-.3#
*	Ethylbenzene	*	.396	.402	50.73	50.0	-1.5*
	m+p-Xylene		.515	.529	102.71	100.0	-2.7
	o-Xylene		.491	.503	51.28	50.0	-2.6

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03460 Calibration Date: 03/24/97 Time: 0752

Lab File ID: >GMOS1 Init. Calib. Date(s): 03/13/97 03/14/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND	RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Styrene	.878	.895	50.95	50.0	-1.9
1,1,2,2-Tetrachloroethane #	.953	.924	48.48	50.0	3.0#
1,2-Dichloroethane-d4	1.440	1.424	49.43	50.0	1.1
Toluene-d8	1.124	1.107	49.25	50.0	1.5
4-Bromofluorobenzene	.747	.752	50.31	50.0	-.6

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GMOS1 Date Analyzed: 03/24/97

Instrument ID: HP03460 Time Analyzed: 07:52

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

	EPA SAMPLE NO.	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	47464	9.32	189983	10.92	148341	15.22
	UPPER LIMIT	94928		379966		296682	
	LOWER LIMIT	23732		94992		74171	
01	VBLKG15	47471	9.32	191705	10.92	158474	15.22
02	06--6	45857	9.32	188349	10.92	150104	15.21
03	06--6MS	47139	9.32	186486	10.92	145626	15.22
04	06--6MSD	45572	9.32	181335	10.93	145700	15.21
05	01--8	42618	9.33	175653	10.94	142822	15.22
06	03-20	40202	9.34	166977	10.94	135839	15.22
07	01-44	39863	9.35	178324	10.94	141959	15.23
08	01-44DL	41528	9.33	179598	10.92	147265	15.22
09	07-14	38992	9.36	171450	10.97	138177	15.27
10	06-36	40456	9.35	177391	10.96	142917	15.26
11	04-20	42305	9.34	181528	10.93	144885	15.21
12	02--9	42065	9.31	181171	10.92	144336	15.21
13	06-36DL	44772	9.33	190023	10.93	159114	15.22
14	LCSLG15	47510	9.34	195606	10.94	149220	15.22
15	04-29	43145	9.31	181236	10.92	149323	15.22
16	05-10	47098	9.32	195262	10.91	149201	15.22
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >GMOT2 BFB Injection Date: 03/24/97

Instrument ID: HP03460 BFB Injection Time: 19:55

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	46.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.5
175	5.0 - 9.0% of mass 174	5.2 (7.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	72.0 (97.9)1
177	5.0 - 9.0% of mass 176	4.5 (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
01	VSTD050	050 ppb CC	>GMOS2	03/24/97	20:16
02	VBLKG16	VBLKG16	>GMOB3	03/24/97	21:42
03	SB-01	2680801	>GMO18	03/24/97	22:27
04	SB-02	2680802	>GMO19	03/24/97	23:00
05	SB-03	2680803	>GMO20	03/24/97	23:53
06	SB-04	2680804	>GMO21	03/25/97	00:28
07	SB05A	2680806	>GMO22	03/25/97	01:15
08	SB-05	2680805	>GMO23	03/25/97	01:48
09	SB-29	2680808	>GMO24	03/25/97	02:30
10	SB-07	2680810	>GMO25	03/25/97	03:04
11	SB-06	2680809	>GMO26	03/25/97	04:10
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18					
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03460 Calibration Date: 03/24/97 Time: 2016

Lab File ID: >GMOS2 Init. Calib. Date(s): 03/13/97 03/14/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

	COMPOUND	RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Chloromethane	.930	1.027	46.93	50.0	6.1#
*	Vinyl Chloride	.958	.963	44.29	50.0	11.4*
	Bromomethane	.957	.962	42.32	50.0	15.4
	Chloroethane	.499	.406	40.71	50.0	18.6
*	1,1-Dichloroethene	1.194	1.270	53.21	50.0	-6.4*
	Acetone	.304	.281	85.84	100.0	14.2
	Carbon Disulfide	3.274	3.730	56.95	50.0	-13.9
	Methylene Chloride	1.387	1.414	50.96	50.0	-1.9
	trans-1,2-Dichloroethene	1.319	1.371	51.95	50.0	-3.9
#	1,1-Dichloroethane	2.355	2.470	52.46	50.0	-4.9#
	cis-1,2-Dichloroethene	1.421	1.471	51.79	50.0	-3.6
*	Chloroform	2.561	2.654	51.81	50.0	-3.6*
	1,2-Dichloroethane	1.560	1.561	50.05	50.0	-.1
	Vinyl Acetate	.064	.062	48.35	50.0	3.3
	2-Butanone	.148	.151	102.40	100.0	-2.4
	1,1,1-Trichloroethane	.457	.487	53.30	50.0	-6.6
	Carbon Tetrachloride	.417	.454	54.41	50.0	-8.8
	Benzene	.824	.880	53.38	50.0	-6.8
	Trichloroethene	.377	.395	52.43	50.0	-4.9
*	1,2-Dichloropropane	.400	.420	52.48	50.0	-5.0*
	Bromodichloromethane	.650	.702	53.96	50.0	-7.9
	cis-1,3-Dichloropropene	.560	.551	49.19	50.0	1.6
	trans-1,3-Dichloropropene	.484	.476	49.10	50.0	1.8
	1,1,2-Trichloroethane	.370	.390	52.76	50.0	-5.5
	Dibromochloromethane	.611	.685	56.11	50.0	-12.2
#	Bromoform	.477	.538	52.68	50.0	-5.4#
	4-Methyl-2-Pentanone	.682	.645	94.54	100.0	5.5
*	Toluene	1.125	1.167	51.83	50.0	-3.7*
	Tetrachloroethene	.406	.435	53.55	50.0	-7.1
	2-Hexanone	.389	.397	101.98	100.0	-2.0
#	Chlorobenzene	.937	.994	53.02	50.0	-6.0#
*	Ethylbenzene	.396	.406	51.28	50.0	-2.6*
	m+p-Xylene	.515	.523	101.63	100.0	-1.6
	o-Xylene	.491	.517	52.64	50.0	-5.3

7A

VOLATILE CONTINUING CALIBRATION CHECK

b Name: LANCASTER LABS Contract: _____.

b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03460 Calibration Date: 03/24/97 Time: 2016

ab File ID: >GMOS2 Init. Calib. Date(s): 03/13/97 03/14/97

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

in RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND	RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Styrene	.878	.905	51.54	50.0	-3.1
1,1,2,2-Tetrachloroethane #	.953	1.040	54.52	50.0	-9.0#
1,2-Dichloroethane-d4	1.440	1.497	51.99	50.0	-4.0
Toluene-d8	1.124	1.199	53.34	50.0	-6.7
4-Bromofluorobenzene	.747	.854	57.14	50.0	-14.3

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >GMOS2 Date Analyzed: 03/24/97

Instrument ID: HP03460 Time Analyzed: 20:16

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	50575	9.33	200847	10.93	152906	15.22
	UPPER LIMIT	101150		401694		305812	
	LOWER LIMIT	25288		100424		76453	
	EPA SAMPLE NO.						
01	VBLKG16	49677	9.32	204164	10.92	166079	15.23
02	SB-01	44503	9.33	190052	10.93	154269	15.23
03	SB-02	42173	9.33	181718	10.92	148391	15.21
04	SB-03	43203	9.30	183100	10.91	149082	15.20
05	SB-04	41494	9.32	175318	10.91	144588	15.21
06	SB05A	41841	9.31	176705	10.92	143278	15.22
07	SB-05	39220	9.32	162037	10.92	124819	15.21
08	SB-29	41659	9.29	180454	10.90	136927	15.20
09	SB-07	42682	9.31	178678	10.90	127584	15.19
10	SB-06	44213	9.30	192372	10.91	153508	15.21
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18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMIT4 BFB Injection Date: 03/18/97

Instrument ID: HP03973 BFB Injection Time: 12:52

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.9
75	30.0 - 60.0% of mass 95	46.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	60.6
175	5.0 - 9.0% of mass 174	4.6 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	59.0 (97.2)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)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
01	VSTD004	004 PPB IC	>KMII1	03/18/97	13:17
02	VSTD020	020 PPB IC	>KMII2	03/18/97	13:54
03	VSTD050	050 PPB IC	>KMII3	03/18/97	14:31
04	VSTD100	100 PPB IC	>KMII4	03/18/97	15:07
05	VSTD300	300 PPB IC	>KMII5	03/18/97	15:44
06					
07					
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12					
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15					
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19					
20					
21					
22					

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS . Contract: ____.

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

Instrument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

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

____.

RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 4= >KMI11 RRF 20= >KMI12
RRF 50= >KMI13 RRF100= >KMI14 RRF300= >KMI15

	COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
	Chlorodifluoromethane	1.210	1.299	1.400	1.505	1.520	1.387	9.6	AVG	
#	Chloromethane	.958	1.072	1.094	1.125	1.084	1.067	6.0	AVG	#
*	Vinyl Chloride	.997	1.116	1.215	1.266	1.226	1.164	9.3	AVG	*
	Bromomethane	1.040	1.198	1.200	1.205	1.058	1.140	7.3	AVG	
	Chloroethane	.696	.762	.801	.836	.784	.776	6.7	AVG	
	Trichlorofluoromethane	.932	1.017	1.134	1.218	1.268	1.114	12.5	AVG	
	Ethyl Ether	1.044	1.096	1.145	1.139	1.118	1.108	3.7	AVG	
	Acrolein	.234	.250	.230	.207	.228	.230	6.7	AVG	
*	1,1-Dichloroethene	1.253	1.146	1.393	1.408	1.402	1.321	8.8	AVG	*
	Freon 113	2.759	2.063	2.479	2.466	2.463	2.446	10.1	AVG	
	Acetone	.385	.324	.298	.269	.291	.313	14.3	AVG	
	Methyl Iodide	2.844	2.788	3.185	3.239	3.216	3.054	7.2	AVG	
	Carbon Disulfide	3.146	2.903	3.543	3.716	3.801	3.422	11.2	AVG	
	2-Propanol	.062	.062	.066	.063	.068	.064	4.0	AVG	
	Allyl Chloride	.853	.824	.847	.893	.893	.862	3.5	AVG	
	Methylene Chloride	1.570	1.412	1.528	1.548	1.528	1.517	4.0	AVG	
	t-Butyl Alcohol	.177	.159	.167	.154	.160	.163	5.5	AVG	
	Acrylonitrile	.326	.395	.369	.335	.362	.357	7.7	AVG	
	Methyl t-Butyl Ether	4.005	3.855	4.013	3.979	3.782	3.927	2.6	AVG	
	trans-1,2-Dichloroethene	1.388	1.289	1.497	1.528	1.494	1.439	6.9	AVG	
	n-Hexane	1.799	1.607	2.040	1.985	2.049	1.896	10.0	AVG	
#	1,1-Dichloroethane	2.608	2.468	2.793	2.839	2.790	2.700	5.8	AVG	#
	Isopropanol	.007	.013	.017	.018	.020	.015	32.4	2NDDEG	
	2-Chloro-1,3-Butadiene	1.819	1.770	2.164	2.235	2.210	2.039	11.1	AVG	
	2,2-Dichloropropane	1.487	1.430	1.645	1.641	1.544	1.549	6.1	AVG	
	cis-1,2-Dichloroethene	1.457	1.413	1.588	1.621	1.587	1.533	6.0	AVG	
	Propionitrile	.146	.120	.141	.143	.150	.140	8.3	AVG	
	Methacrylonitrile	.534	.453	.496	.503	.512	.500	5.9	AVG	
	Tetrahydrofuran	.349	.423	.430	.448	.453	.421	10.0	AVG	
*	Chloroform	2.707	2.500	2.801	2.815	2.721	2.709	4.7	AVG	*
	Cyclohexane	2.230	2.023	2.437	2.398	2.359	2.290	7.3	AVG	
	1,1-Dichloropropene	1.927	1.772	2.130	2.114	2.027	1.994	7.4	AVG	
	1,2-Dichloroethane	1.711	1.700	1.816	1.772	1.630	1.726	4.1	AVG	
	Vinyl Acetate	.018	.035	.053	.055	.060	.044	40.1	2NDDEG	

— RRFs out of control but not compds of interest

RO, JH

VOLATILE ORGANICS INITIAL CALIBRATION DATA

me: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____. SAS No. _____. SDG No.: _____.

r rument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

a ix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) CAP

___.

in RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

L FILE ID: RRF 4= >KMII1 RRF 20= >KMII2
RRF 50= >KMII3 RRF100= >KMII4 RRF300= >KMII5

COMPOUND		RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
2 utanone		.131	.138	.129	.121	.136	.131	5.1	AVG	
1 ,1-Trichloroethane		.397	.362	.439	.439	.431	.414	8.2	AVG	
Carbon Tetrachloride		.329	.301	.363	.368	.357	.344	8.2	AVG	
Isobutyl Alcohol		.010	.005	.007	.007	.008	.008	20.7	2NDDEG	—
B zene		.926	.848	.981	.981	.943	.936	5.9	AVG	
n eptane		.234	.214	.267	.265	.271	.250	10.1	AVG	
n-Butanol		.005	.003	.005	.006	.007	.005	23.8	2NDDEG	—
T chloroethene		.322	.301	.363	.365	.365	.343	8.7	AVG	
1 -Dichloropropane	*	.433	.379	.418	.420	.416	.413	4.9	AVG	*
' Methacrylate		.291	.258	.285	.283	.272	.278	4.7	AVG	
D nomethane		.312	.302	.334	.332	.321	.320	4.3	AVG	
oxane		.003	.003	.003	.003	.003	.003	10.2	AVG	—
n- opyl Acetate		.163	.155	.162	.162	.165	.162	2.3	AVG	
Bromodichloromethane		.549	.524	.586	.587	.565	.562	4.7	AVG	
2-Nitropropane		.104	.113	.093	.085	.089	.097	12.1	AVG	
2 hloroethyl Vinyl Ether		.257	.297	.282	.254	.270	.272	6.6	AVG	
c -1,3-Dichloropropene		.515	.512	.574	.571	.565	.547	5.7	AVG	
trans-1,3-Dichloropropene		.408	.448	.489	.491	.483	.464	7.8	AVG	
1 1,2-Trichloroethane		.356	.346	.366	.361	.345	.355	2.6	AVG	
D romochloromethane		.466	.474	.513	.511	.485	.489	4.5	AVG	
B moform	#	.334	.331	.367	.366	.344	.348	4.9	AVG	#
trans-1,4-Dichloro-2-Butene		.150	.134	.144	.138	.117	.137	9.2	AVG	
4 ethyl-2-Pentanone		.762	.654	.622	.574	.597	.642	11.5	AVG	
T uene	*	1.184	1.207	1.392	1.405	1.362	1.310	8.1	AVG	*
Etnyl Methacrylate		.591	.681	.756	.752	.744	.705	10.0	AVG	
Tetrachloroethene		.300	.315	.379	.380	.377	.350	11.3	AVG	
1 -Dichloropropane		.672	.702	.752	.733	.676	.707	4.9	AVG	
2 exanone		.260	.338	.378	.344	.374	.339	14.0	AVG	
1,2-Dibromoethane		.546	.594	.652	.644	.619	.611	7.0	AVG	
Chlorobenzene	#	.840	.873	.989	.997	.975	.935	7.8	AVG	#
1 ,1,2-Tetrachloroethane		.370	.399	.448	.450	.431	.420	8.2	AVG	
E ylbenzene	*	.380	.375	.451	.448	.416	.414	8.7	AVG	*
m+p-Xylene		.491	.511	.590	.592	.551	.547	8.4	AVG	
o ylene		.490	.484	.564	.571	.536	.529	7.7	AVG	

RRFs out of control but not compds. of interest

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date(s): 03/18/97 03/18/97

Calibration Times: 1317 1544

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

Min RRF for SPCC(#) = 0.300 (0.10 for Bromoform) Max %RSD for CCC(*) = 30.0%

FILE ID: RRF 4= >KMI11 RRF 20= >KMI12
RRF 50= >KMI13 RRF100= >KMI14 RRF300= >KMI15

COMPOUND	RRF 4	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Styrene	.760	.892	1.009	1.003	.933	.920	11.1	AVG	
Isopropylbenzene	1.379	1.395	1.626	1.626	1.501	1.505	7.9	AVG	
Cyclohexanone	.025	.032	.036	.023	.022	.028	22.8	2NDDEG	
1,1,2,2-Tetrachloroethane	# .842	.811	.834	.810	.703	.800	7.0	AVG	#
Bromobenzene	.375	.419	.470	.470	.428	.432	9.2	AVG	
1,2,3-Trichloropropane	.174	.171	.177	.169	.146	.167	7.5	AVG	
n-Propylbenzene	1.909	1.707	1.990	1.976	1.621	1.841	9.1	AVG	
2-Chlorotoluene	.321	.313	.354	.356	.316	.332	6.3	AVG	
1,3,5-Trimethylbenzene	1.142	1.122	1.299	1.292	1.005	1.172	10.6	AVG	
4-Chlorotoluene	.354	.366	.398	.395	.338	.370	7.0	AVG	
tert-Butylbenzene	1.308	1.353	1.532	1.520	1.119	1.367	12.4	AVG	
1,2,4-Trichloroethane	.215	.265	.269	.279	.206	.247	13.7	AVG	
1,2,4-Trimethylbenzene	1.061	1.132	1.289	1.266	.927	1.135	13.2	AVG	
sec-Butylbenzene	1.400	1.424	1.816	1.794	1.329	1.553	15.0	AVG	
1,3-Dichlorobenzene	.546	.597	.715	.703	.562	.624	12.7	AVG	
p-Isopropyltoluene	1.179	1.194	1.400	1.371	.926	1.214	15.6	2NDDEG	
1,4-Dichlorobenzene	.800	.809	.871	.884	.660	.805	11.1	AVG	
n-Butylbenzene	1.198	1.217	1.480	1.446	1.000	1.268	15.6	2NDDEG	
1,2-Dichlorobenzene	.688	.684	.743	.731	.532	.676	12.5	AVG	
1,2-Dibromo-3-Chloropropane	.139	.131	.144	.143	.106	.133	12.1	AVG	
1,2,4-Trichlorobenzene	.418	.445	.501	.481	.421	.453	8.1	AVG	
Hexachlorobutadiene	.187	.180	.218	.200	.183	.194	8.2	AVG	
Naphthalene	.980	.964	1.063	.997	.864	.974	7.4	AVG	
1,2,3-Trichlorobenzene	.367	.382	.424	.384	.358	.383	6.6	AVG	
1,2-Dichloroethane-d4	1.457	1.533	1.567	1.543	1.499	1.520	2.8	AVG	
Toluene-d8	1.043	1.125	1.236	1.250	1.258	1.182	8.0	AVG	
4-Bromofluorobenzene	.552	.623	.679	.685	.629	.634	8.5	AVG	

— RRFs out of control but no compd. of interest

Calibration Report

Supporting Data CF 4/4/97

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Amp No.	Compound	Files: >KMI1 RF 4.00	>KMI2 RF 20.00	>KMI3 RF 50.00	>KMI4 RF 100.00	>KMI5 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
1)	Dichlorodifluoromethane	1.20983	1.29948	1.39979	1.50509	1.52011	1.38686	9.598	.999941	.999943	2.48	2.18	
2)	Freon 114/114a	-	-	-	-	-	-	-	-	-	-	-	(Conc
3)	Chloromethane	.95832	1.07170	1.09391	1.12487	1.08396	1.06655	5.966	.999895	.999986	-.593	1.24	
4)	Vinyl Chloride	.99650	1.11628	1.21518	1.26614	1.22555	1.16393	9.330	.999881	.999968	.338	2.08	
5)	Bromomethane	1.04020	1.19806	1.20017	1.20516	1.05750	1.14022	7.338	.998813	.999978	-5.15	1.49	
6)	Chloroethane	.69579	.76193	.80072	.83645	.78387	.77575	6.747	.999678	.999956	-1.18	1.97	
7)	Dichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	-	
8)	Trichlorofluoromethane	.93225	1.01725	1.13418	1.21845	1.26831	1.11409	12.496	.999888	.999951	3.82	2.37	
9)	n-Pentane	-	-	-	-	-	-	-	-	-	-	-	
10)	Ethyl Ether	1.04387	1.09577	1.14516	1.13901	1.11825	1.10841	3.695	.999966	.999997	-.455	.639	
11)	Furfuran	-	-	-	-	-	-	-	-	-	-	-	
12)	Acrolein	.23422	.24983	.22995	.20708	.22809	.22983	6.668	.999318	.999750	11.32	-33.29	(Conc
13)	1,1-Dichloroethene	1.25279	1.14637	1.39289	1.40846	1.40230	1.32056	8.845	.999925	.999941	1.34	2.09	
14)	Freon 113	2.75856	2.06322	2.47853	2.46648	2.46293	2.44594	10.139	.999921	.999926	.777	1.22	
15)	Freon 113/113a	-	-	-	-	-	-	-	-	-	-	-	
16)	Acetone	.38516	.32362	.29755	.26867	.29060	.31312	14.306	.999465	.999821	.0684	-8.23	(Conc
17)	Methyl Iodide	2.84375	2.78824	3.18542	3.23860	3.21611	3.05442	7.181	.999956	.999971	1.02	1.72	
18)	Carbon Disulfide	3.14593	2.90264	3.54268	3.71625	3.80137	3.42177	11.234	.999919	.999927	3.11	2.59	
19)	2-Propanol	.06154	.06232	.06577	.06306	.06766	.06407	4.001	.999769	.999948	13.87	-2.59	(Conc
20)	Acetonitrile	-	-	-	-	-	-	-	-	-	-	-	(Conc
21)	Allyl Chloride	.85331	.82391	.84750	.89290	.89276	.86207	3.498	.999964	.999964	1.25	1.19	
22)	3-Chloro-1-Propene	-	-	-	-	-	-	-	-	-	-	-	
23)	Methylene Chloride	1.56966	1.41163	1.52818	1.54775	1.52781	1.51700	4.045	.999967	.999982	.205	.938	
)	t-Butyl Alcohol	.17694	.15894	.16696	.15397	.15969	.16330	5.464	.999821	.999898	-2.33	-13.90	(Conc
)	Acrylonitrile	.32583	.39473	.36887	.33540	.36235	.35743	7.700	.999535	.999781	8.32	-24.59	(Conc
)	Methyl t-Butyl Ether	4.00474	3.85494	4.01263	3.97914	3.78196	3.92668	2.620	.999823	.999995	-2.01	.571	
27)	trans-1,2-Dichloroethene	1.38754	1.28947	1.49730	1.52806	1.49381	1.43924	6.891	.999899	.999956	.527	1.94	
28)	n-Hexane	1.79914	1.60722	2.04007	1.98475	2.04911	1.89606	10.036	.999888	.999897	2.23	1.65	
29)	Hexane	-	-	-	-	-	-	-	-	-	-	-	
30)	1,1-Dichloroethane	2.60839	2.46759	2.79295	2.83851	2.79023	2.69954	5.809	.999935	.999969	.502	1.61	
31)	di-Isopropyl Ether	-	-	-	-	-	-	-	-	-	-	-	
32)	1-Propanol	.00745	.01333	.01703	.01808	.01975	.01513	32.373	.999901	.999927	111.64	99.74	(Conc
33)	2-Chloro-1,3-Butadiene	1.81860	1.76954	2.16360	2.23485	2.21008	2.03934	11.083	.999902	.999934	1.61	2.65	
34)	2,2-Dichloropropane	1.48705	1.43033	1.64486	1.64101	1.54404	1.54946	6.089	.999658	.999964	-1.50	1.81	
35)	cis-1,2-Dichloroethene	1.45694	1.41272	1.58761	1.62103	1.58691	1.53304	6.004	.999925	.999971	.417	1.70	
36)	Propionitrile	.14579	.12023	.14145	.14275	.15021	.14008	8.281	.999869	.999942	16.42	6.32	(Conc
37)	Ethyl Acetate	-	-	-	-	-	-	-	-	-	-	-	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Cp No.	Compound	Files: >KMI11 RF 4.00	>KMI12 RF 20.00	>KMI13 RF 50.00	>KMI14 RF 100.00	>KMI15 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
38)	Methyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
39)	Methacrylonitrile	.53357	.45324	.49587	.50340	.51210	.49964	5.910	.999950	.999960	3.31	1.33	(Conc
40)	Tetrahydrofuran	.34881	.42316	.42963	.44840	.45346	.42069	10.010	.999982	.999986	1.68	1.30	
41)	Chloroform	2.70716	2.49993	2.80106	2.81547	2.72133	2.70899	4.658	.999875	.999973	-.507	1.38	
42)	Cyclohexane	2.23020	2.02327	2.43695	2.39796	2.35915	2.28951	7.333	.999888	.999941	.249	1.62	
43)	1,1-Dichloropropene	1.92729	1.77200	2.12962	2.11402	2.02692	1.99397	7.422	.999763	.999944	-.589	1.94	
44)	1,2-Dichloroethane-d4	1.45694	1.53349	1.56744	1.54253	1.49879	1.51984	2.824	.999934	.999998	-1.28	.287	
45)	1,2-Dichloroethane	1.71065	1.69958	1.81570	1.77220	1.62957	1.72554	4.140	.999475	.999989	-3.50	.934	
46)	Vinyl Acetate	.01767	.03453	.05266	.05492	.06047	.04405	40.111	.999678	.999879	7.19	4.82	
47)	2-Butanone	.13141	.13807	.12945	.12083	.13564	.13108	5.081	.999218	.999868	5.57	-5.13	(Conc
48)	1,1,1-Trichloroethane	.39658	.36201	.43915	.43888	.43149	.41362	8.167	.999889	.999941	.599	1.96	
49)	Carbon Tetrachloride	.32885	.30073	.36276	.36814	.35729	.34355	8.248	.999839	.999939	.370	2.23	
50)	Isobutyl Alcohol	.00973	.00545	.00706	.00736	.00809	.00754	20.703	.999115	.999491	59.46	.286	(Conc
51)	Benzene	.92645	.84759	.98147	.98065	.94317	.93587	5.858	.999821	.999960	-.603	1.64	
52)	n-Heptane	.23350	.21408	.26730	.26519	.27133	.25028	10.082	.999923	.999925	2.19	1.90	
53)	Heptane	-	-	-	-	-	-	-	-	-	-	-	
54)	Isopropyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
55)	n-Butyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	
56)	n-Butanol	.00484	.00350	.00514	.00602	.00680	.00526	23.759	.999519	.999817	128.39	85.59	(Conc
57)	Trichloroethene	.32160	.30149	.36316	.36517	.36482	.34325	8.685	.999938	.999948	1.33	1.94	(Conc
58)	Freon 112/112a	-	-	-	-	-	-	-	-	-	-	-	
59)	1,2-Dichloropropane	.43291	.37880	.41819	.41984	.41563	.41307	4.912	.999965	.999977	.242	.911	
60)	Methyl Methacrylate	.29066	.25769	.28473	.28325	.27211	.27769	4.696	.999853	.999976	-1.14	1.00	
61)	Dibromomethane	.31165	.30204	.33437	.33235	.32104	.32029	4.282	.999876	.999981	-.796	1.18	
62)	1,4-Dioxane	.00334	.00281	.00322	.00284	.00262	.00296	10.244	.999326	.999780	-85.36	-14.54	(Conc
63)	Monochloroacetone	-	-	-	-	-	-	-	-	-	-	-	(Conc
64)	n-Propyl Acetate	.16338	.15531	.16243	.16183	.16529	.16165	2.339	.999976	.999995	1.05	.187	
65)	Bromodichloromethane	.54854	.52398	.58593	.58661	.56474	.56196	4.718	.999853	.999976	-.721	1.40	
66)	2-Nitropropane	.10425	.11299	.09299	.08463	.08853	.09668	12.115	.999590	.999722	-3.62	-8.75	(Conc
67)	2-Chloroethyl Vinyl Ether	.25707	.29711	.28217	.25437	.26989	.27212	6.553	.999647	.999777	-.0758	-4.87	(Conc
68)	Epichlorohydrin	-	-	-	-	-	-	-	-	-	-	-	
69)	cis-1,3-Dichloropropene	.51545	.51197	.57382	.57076	.56523	.54745	5.658	.999959	.999979	.342	1.21	
70)	trans-1,3-Dichloropropene	.40799	.44780	.48931	.49146	.48347	.46401	7.750	.999955	.999990	.220	1.36	
71)	1,1,2-Trichloroethane	.35616	.34617	.36613	.36147	.34501	.35499	2.615	.999836	.999993	-1.79	.664	
72)	Dibromochloromethane	.46353	.47375	.51314	.51064	.48492	.48920	4.511	.999781	.999988	-1.56	1.21	
73)	Bromoform	.33432	.33111	.36671	.36646	.34379	.34848	4.928	.999667	.999978	-1.83	1.54	
74)	2,3-Dichloro-1,3-Butadiene	-	-	-	-	-	-	-	-	-	-	-	(Conc

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

mp No.	Compound	Files: >KH111 RF 4.00	>KH112 RF 20.00	>KH113 RF 50.00	>KH114 RF 100.00	>KH115 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2	
75)	cis-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
76)	trans-1,3-Dichlorobutene-2	-	-	-	-	-	-	-	-	-	-	-	
77)	cis-1,4-Dichloro-2-Butene	-	-	-	-	-	-	-	-	-	-	-	
78)	trans-1,4-Dichloro-2-Butene	.15017	.13368	.14394	.13791	.11691	.13652	9.235	.998228	.999978	-22.71	4.34	(Conc
79)	4-Methyl-2-Pentanone	.76235	.65383	.62218	.57406	.59742	.64197	11.452	.999809	.999905	-1.56	-5.75	(Conc
80)	Toluene-d8	1.04298	1.12539	1.23550	1.25015	1.25825	1.18246	8.006	.999989	.999990	1.29	1.35	
81)	Toluene	1.18380	1.20687	1.39220	1.40511	1.36217	1.31003	8.104	.999866	.999968	.0379	1.93	
82)	Ethyl Methacrylate	.59120	.68066	.75578	.75213	.74418	.70479	10.002	.999959	.999987	.425	1.43	
83)	Tetrachloroethene	.30028	.31476	.37915	.38030	.37720	.35034	11.257	.999925	.999956	1.13	2.16	
84)	1,3-Dichloropropane	.67233	.70201	.75157	.73324	.67586	.70700	4.936	.999489	.999990	-3.31	1.04	
85)	2-Hexanone	.26007	.33771	.37789	.34350	.37401	.33864	14.000	.999588	.999781	5.08	-.375	(Conc
86)	Butyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
87)	1,2-Dibromoethane	.54648	.59432	.65245	.64434	.61880	.61128	7.004	.999836	.999987	-1.08	1.27	
88)	Chlorobenzene	.84028	.87276	.98934	.99696	.97485	.93484	7.792	.999916	.999977	.245	1.71	
89)	1,1,1,2-Tetrachloroethane	.36995	.39882	.44830	.45007	.43121	.41967	8.240	.999813	.999980	-.660	1.78	
90)	Ethylbenzene	.38010	.37500	.45149	.44769	.41590	.41404	8.720	.999464	.999946	-1.77	2.31	
91)	m+p-Xylene	.49073	.51079	.58986	.59231	.55073	.54688	8.370	.999527	.999963	-3.41	4.40	(Conc
92)	Isoamyl Acetate	-	-	-	-	-	-	-	-	-	-	-	
93)	Butyl Acrylate	-	-	-	-	-	-	-	-	-	-	-	
94)	o-Xylene	.48976	.48423	.56402	.57116	.53649	.52913	7.679	.999630	.999954	-1.12	2.24	
95)	Styrene	.76020	.89216	1.00945	1.00332	.93271	.91957	11.065	.999524	.999980	-1.94	2.06	
96)	Cumene	-	-	-	-	-	-	-	-	-	-	-	
97)	Isopropylbenzene	1.37914	1.39497	1.62552	1.62622	1.50098	1.50537	7.942	.999433	.999958	-2.05	2.23	
1)	Cyclohexanone	.02540	.03219	.03606	.02252	.02174	.02758	22.769	.994087	.995511	-168.44	-32.57	(Conc
2)	4-Bromofluorobenzene	.55164	.62312	.67904	.68485	.62950	.63363	8.475	.999447	.999980	-2.42	1.95	
3)	1,1,2,2-Tetrachloroethane	.84221	.81132	.83425	.80989	.70290	.80011	7.017	.998590	.999990	-6.53	.912	
01)	Bromobenzene	.37511	.41901	.46975	.47028	.42830	.43249	9.182	.999290	.999974	-2.75	2.16	
02)	1,2,3-Trichloropropane	.17408	.17079	.17680	.16925	.14556	.16730	7.470	.998341	.999992	-7.19	.899	
103)	n-Propylbenzene	1.90917	1.70666	1.98973	1.97647	1.62067	1.84054	9.080	.996838	.999885	-7.33	3.07	
04)	2-Chlorotoluene	.32111	.31348	.35427	.35575	.31645	.33221	6.320	.998937	.999951	-3.78	2.24	
05)	1,3,5-Trimethylbenzene	1.14214	1.12162	1.29897	1.29219	1.00499	1.17198	10.613	.994713	.999824	-9.43	3.91	
106)	4-Chlorotoluene	.35367	.36649	.39804	.39481	.33778	.37016	7.042	.998161	.999960	-5.96	2.16	
107)	tert-Butylbenzene	1.30817	1.35300	1.53196	1.51995	1.11948	1.36651	12.437	.991864	.999723	-11.94	4.63	
08)	Pentachloroethane	.21521	.26512	.26893	.27924	.20555	.24681	13.706	.992200	.999606	-11.55	4.65	
09)	bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	
110)	1,2,4-Trimethylbenzene	1.06075	1.13208	1.28948	1.26603	.92694	1.13506	13.204	.991401	.999740	-12.37	4.68	
11)	sec-Butylbenzene	1.39971	1.42358	1.81636	1.79374	1.32939	1.55256	15.022	.991733	.999696	-10.62	5.39	

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

Calibration Report

Title: Method 8240 Water ID File for Inst. HP03973
Calibrated: 970318 20:54

Cmp No.	Compound	Files: >KMI11 RF 4.00	>KMI12 RF 20.00	>KMI13 RF 50.00	>KMI14 RF 100.00	>KMI15 RF 300.00	$\overline{RF}$	% RSD	CORR1	CORR2	Yint1	Yint2
112)	1,3-Dichlorobenzene	.54551	.59715	.71493	.70273	.56167	.62440	12.720	.995680	.999884	-8.10	3.82
113)	p-Isopropyltoluene	1.17899	1.19407	1.40006	1.37145	.92574	1.21406	15.635	.985172	.999380	-15.59	6.46
114)	1,4-Dichlorobenzene	.79994	.80883	.87123	.88373	.65992	.80473	11.058	.992939	.999704	-11.32	4.26
115)	1,2,3-Trichlorobutene-3	-	-	-	-	-	-	-	-	-	-	-
116)	Dicyclopentadiene	-	-	-	-	-	-	-	-	-	-	-
117)	Benzyl Chloride	-	-	-	-	-	-	-	-	-	-	-
118)	1,3-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
119)	1,4-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
120)	n-Butylbenzene	1.19842	1.21683	1.47975	1.44606	1.00023	1.26826	15.557	.987031	.999505	-14.24	6.16
121)	1,2-Dichlorobenzene	.68843	.68414	.74341	.73053	.53234	.67577	12.463	.991387	.999733	-13.23	4.27
122)	1,2-Diethylbenzene	-	-	-	-	-	-	-	-	-	-	-
123)	1,2-Dibromo-3-Chloropropane	.13924	.13145	.14437	.14310	.10552	.13274	12.075	.992146	.999729	-12.45	4.19
124)	1,2,4-Trichlorobenzene	.41826	.44515	.50130	.48135	.42100	.45341	8.125	.998519	.999972	-5.46	1.84
125)	Hexachlorobutadiene	.18694	.17990	.21842	.20035	.18254	.19363	8.230	.999004	.999876	-4.33	1.35
126)	Naphthalene	.98014	.96420	1.06305	.99690	.86412	.97368	7.381	.998328	.999968	-6.76	1.18
127)	1,2,3-Trichlorobenzene	.36724	.38180	.42409	.38374	.35842	.38306	6.583	.999392	.999878	-4.23	.148

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

Yintn - Y intercept (nth degree) in UG/L

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMKT1 BFB Injection Date: 03/20/97

Instrument ID: HP03973 BFB Injection Time: 03:07

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	46.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	64.4
175	5.0 - 9.0% of mass 174	4.4 (6.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	62.3 (96.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.8)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
01	VSTD050	050 PPB CC	>KMKS1	03/20/97	03:29
02	VBLKK43	VBLKK43	>KMKB1	03/20/97	04:15
03	KMW-4	2677539	>KMK01	03/20/97	05:07
04	RB--1	2677540	>KMK02	03/20/97	05:42
05	RB-4-	2679085	>KMK03	03/20/97	06:17
06	RB-5-	2679086	>KMK04	03/20/97	06:52
07	FB-1-	2679087	>KMK05	03/20/97	07:28
08	TB-2-	2677695	>KMK06	03/20/97	08:28
09					
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7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

Lab File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Chloromethane	#	1.067	.976	45.74	50.0	8.5	#
Vinyl Chloride	*	1.164	1.109	47.63	50.0	4.7	*
Bromomethane		1.140	1.170	51.30	50.0	-2.6	
Chloroethane		.776	.775	49.95	50.0	.1	
Trichlorofluoromethane		1.114	1.215	54.52	50.0	-9.0	
Acrolein		.230	.243	528.42	500.0	-5.7	
1,1-Dichloroethene	*	1.321	1.422	53.84	50.0	-7.7	*
Acetone		.313	.306	97.84	100.0	2.2	
Carbon Disulfide		3.422	3.814	55.73	50.0	-11.5	
Methylene Chloride		1.517	1.517	49.99	50.0	.0	
Acrylonitrile		.357	.381	532.67	500.0	-6.5	
trans-1,2-Dichloroethene		1.439	1.547	53.73	50.0	-7.5	
1,1-Dichloroethane	#	2.700	2.778	51.46	50.0	-2.9	#
cis-1,2-Dichloroethene		1.533	1.620	52.83	50.0	-5.7	
Chloroform	*	2.709	2.857	52.73	50.0	-5.5	*
1,2-Dichloroethane		1.726	1.793	51.95	50.0	-3.9	
Vinyl Acetate		.044	.046	44.80	50.0	10.4	
2-Butanone		.131	.139	105.74	100.0	-5.7	
1,1,1-Trichloroethane		.414	.454	54.82	50.0	-9.6	
Carbon Tetrachloride		.344	.393	57.25	50.0	-14.5	
Benzene		.936	.984	52.58	50.0	-5.2	
Trichloroethene		.343	.379	55.25	50.0	-10.5	
1,2-Dichloropropane	*	.413	.415	50.20	50.0	-.4	*
Bromodichloromethane		.562	.605	53.82	50.0	-7.6	
2-Chloroethyl Vinyl Ether		.272	.317	116.65	100.0	-16.7	
cis-1,3-Dichloropropene		.547	.577	52.67	50.0	-5.3	
trans-1,3-Dichloropropene		.464	.489	52.69	50.0	-5.4	
1,1,2-Trichloroethane		.355	.375	52.88	50.0	-5.8	
Dibromochloromethane		.489	.532	54.33	50.0	-8.7	
Bromoform	#	.348	.380	54.55	50.0	-9.1	#
4-Methyl-2-Pentanone		.642	.712	110.85	100.0	-10.8	
Toluene	*	1.310	1.461	55.76	50.0	-11.5	*
Tetrachloroethene		.350	.406	58.01	50.0	-16.0	
2-Hexanone		.339	.456	134.77	100.0	-34.8	

RD, JD

J, UJ

FORM VII VOA 1/87 Rev.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/20/97 Time: 0329

Lab File ID: >KMKS1 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chlorobenzene	#	.935	1.043	55.79	50.0	-11.6#
Ethylbenzene	*	.414	.471	56.82	50.0	-13.6*
m+p-Xylene		.547	.627	114.69	100.0	-14.7
o-Xylene		.529	.596	56.34	50.0	-12.7
Styrene		.920	1.058	57.53	50.0	-15.1
1,1,2,2-Tetrachloroethane	#	.800	.812	50.75	50.0	-1.5#
1,2-Dichloroethane-d4		1.520	1.639	53.90	50.0	-7.8
Toluene-d8		1.182	1.370	57.94	50.0	-15.9
4-Bromofluorobenzene		.634	.744	58.72	50.0	-17.4

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >KMKS1 Date Analyzed: 03/20/97

Instrument ID: HP03973 Time Analyzed: 03:29

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	35981	8.67	167504	10.29	132054	14.56
	UPPER LIMIT	71962		335008		264108	
	LOWER LIMIT	17991		83752		66027	
	EPA SAMPLE NO.						
01	VBLKK43	34883	8.67	166429	10.28	142756	14.56
02	KMW-4	35473	8.68	163250	10.28	141538	14.57
03	RB--1	35329	8.69	161143	10.29	142230	14.56
04	RB-4-	35599	8.70	161239	10.28	140313	14.56
05	RB-5-	35276	8.67	161121	10.28	141285	14.56
06	FB-1-	34421	8.68	163384	10.28	142092	14.55
07	TB-2-	34453	8.68	162037	10.28	139989	14.55
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22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

5A

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >KMLT2 BFB Injection Date: 03/21/97

Instrument ID: HP03973 BFB Injection Time: 13:22

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.0
75	30.0 - 60.0% of mass 95	46.1
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	65.9
175	5.0 - 9.0% of mass 174	5.1 (7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	64.0 (97.1)1
177	5.0 - 9.0% of mass 176	3.9 (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
01	VSTD050	50 PPB CC	>KMLS3	03/21/97	13:54
02	VBLKK45	VBLKK45	>KMLB2	03/21/97	14:43
03	MW8DA	2680263	>KML20	03/21/97	15:49
04	MW9-A	2680265	>KML21	03/21/97	16:23
05	MWFBA	2680267	>KML22	03/21/97	16:58
06	TBAVR	2680268	>KML23	03/21/97	17:33
07	SW-1A	2680269	>KML24	03/21/97	18:08
08	SW-1B	2680270	>KML25	03/21/97	18:43
09	SW-2-	2680271	>KML26	03/21/97	19:20
10	SW-3-	2680272	>KML27	03/21/97	19:58
11	MW8-A	2680257	>KML28	03/21/97	20:32
12	MW8DP	2680259	>KML29	03/21/97	21:07
13	RB--6	2680807	>KML30	03/21/97	21:45
14	FB--2	2680811	>KML31	03/21/97	22:37
15	FIEFF	2680612	>KML32	03/21/97	23:12
16	FITBR	2680613	>KML33	03/21/97	23:46
17					
18					
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/21/97 Time: 1354

Lab File ID: >KMLS3 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		RRF	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Chloromethane	#	1.067	1.048	49.11	50.0	1.8#	
Vinyl Chloride	*	1.164	1.137	48.84	50.0	2.3*	
Bromomethane		1.140	1.179	51.69	50.0	-3.4	
Chloroethane		.776	.785	50.60	50.0	-1.2	
Trichlorofluoromethane		1.114	1.053	47.24	50.0	5.5	
Acrolein		.230	.178	386.54	500.0	22.7	J, UJ
1,1-Dichloroethene	*	1.321	1.301	49.26	50.0	1.5*	
Acetone		.313	.249	79.41	100.0	20.6	
Carbon Disulfide		3.422	2.966	43.34	50.0	13.3	
Methylene Chloride		1.517	1.447	47.69	50.0	4.6	
Acrylonitrile		.357	.303	424.53	500.0	15.1	
trans-1,2-Dichloroethene		1.439	1.446	50.22	50.0	-.4	
1,1-Dichloroethane	#	2.700	2.591	47.99	50.0	4.0#	
cis-1,2-Dichloroethene		1.533	1.541	50.26	50.0	-.5	
Chloroform	*	2.709	2.692	49.70	50.0	.6*	
1,2-Dichloroethane		1.726	1.721	49.86	50.0	.3	
Vinyl Acetate		.044	.046	44.91	50.0	10.2	RS, JD
2-Butanone		.131	.115	87.58	100.0	12.4	
1,1,1-Trichloroethane		.414	.421	50.87	50.0	-1.7	
Carbon Tetrachloride		.344	.362	52.72	50.0	-5.4	
Benzene		.936	.933	49.85	50.0	.3	
Trichloroethene		.343	.357	52.01	50.0	-4.0	
1,2-Dichloropropane	*	.413	.386	46.78	50.0	6.4*	
Bromodichloromethane		.562	.579	51.49	50.0	-3.0	
2-Chloroethyl Vinyl Ether		.272	.237	86.96	100.0	13.0	
cis-1,3-Dichloropropene		.547	.547	49.99	50.0	.0	
trans-1,3-Dichloropropene		.464	.468	50.42	50.0	-.8	
1,1,2-Trichloroethane		.355	.367	51.73	50.0	-3.5	
Dibromochloromethane		.489	.524	53.57	50.0	-7.1	
Bromoform	#	.348	.371	53.17	50.0	-6.3#	
4-Methyl-2-Pentanone		.642	.515	80.25	100.0	19.7	
Toluene	*	1.310	1.363	52.01	50.0	-4.0*	
Tetrachloroethene		.350	.381	54.41	50.0	-8.8	
2-Hexanone		.339	.310	91.67	100.0	8.3	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03973 Calibration Date: 03/21/97 Time: 1354

Lab File ID: >KMLS3 Init. Calib. Date(s): 03/18/97 03/18/97

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

Min RRF50 for SPCC(#)= 0.300 (0.10 for Bromoform) Max %Drift for CCC(*)= 20.0%

COMPOUND		$\overline{RRF}$	RRF 50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Chlorobenzene	#	.935	1.000	53.46	50.0	-6.9#
Ethylbenzene	*	.414	.441	53.22	50.0	-6.4*
m+p-Xylene		.547	.588	107.48	100.0	-7.5
o-Xylene		.529	.565	53.36	50.0	-6.7
Styrene		.920	1.003	54.51	50.0	-9.0
1,1,2,2-Tetrachloroethane	#	.800	.780	48.75	50.0	2.5#
1,2-Dichloroethane-d4		1.520	1.392	45.78	50.0	8.4
Toluene-d8		1.182	1.116	47.19	50.0	5.6
4-Bromofluorobenzene		.634	.638	50.31	50.0	-.6

FORM VII VOA 1/87 Rev.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >KMLS3 Date Analyzed: 03/21/97

Instrument ID: HP03973 Time Analyzed: 13:54

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	37030	8.68	170715	10.30	135131	14.55
	UPPER LIMIT	74060		341430		270262	
	LOWER LIMIT	18515		85358		67566	
	EPA SAMPLE NO.						
01	VBLKK45	34957	8.67	166084	10.29	143565	14.57
02	MW8DA	35276	8.68	165689	10.28	144829	14.57
03	MW9-A	35449	8.69	162528	10.29	140229	14.56
04	MWFBA	35300	8.69	163001	10.29	140868	14.55
05	TBAVR	34390	8.69	156618	10.29	138507	14.56
06	SW-1A	34584	8.68	156006	10.30	137493	14.57
07	SW-1B	34800	8.70	159207	10.30	138265	14.56
08	SW-2-	33765	8.70	158204	10.30	137356	14.57
09	SW-3-	34670	8.69	158344	10.29	135827	14.57
10	MW8-A	33650	8.70	157821	10.30	137498	14.57
11	MW8DP	34270	8.68	159172	10.28	136784	14.56
12	RB--6	34433	8.70	158771	10.30	135666	14.56
13	FB--2	33312	8.70	158004	10.30	137518	14.57
14	FIEFF	34001	8.69	156457	10.30	137191	14.57
15	FITBR	33612	8.69	156832	10.29	133697	14.56
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
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 area values with an asterisk.

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03460 (HP4)

First Shift pm

Second Shift DAIT

Third Shift

FILE	SAMPLE	LL#	DATE	TIME	SHIFT	D.F.	NOTES
>GM001	BFBJAN03	50nG BFB	01/13/97	1:3e		0.00	
>GM011	VSTD300	300 ppb IC	03/13/97	22:16		1.00	pm
>GM012	VSTD100	100 ppb IC	03/13/97	22:52		1.00	
>GM013	VSTD050	050 ppb IC	03/13/97	23:28		1.00	pm
>GM014	VSTD020	020 ppb IC	03/14/97	00:04		1.00	
>GM015	VSTD004	004 ppb IC	03/14/97	00:40		1.00	pm
>GM016	VSTD300	300 ppb IC	03/14/97	07:53		1.00	
>GM016	VSTD300	300 ppb IC	03/14/97	07:53		1.00	REPROCESSED!
>GM017	VSTD050	050 ppb IC	03/14/97	08:28		1.00	
>GM018	VSTD050	050 ppb IC	03/13/97	23:28		1.00	REPROCESSED!
>GM019	VSTD004	004 ppb IC	03/14/97	09:04		1.00	pm
>GM0X1	CLEANBLK	VES#2	03/14/97	09:40		1.00	
>GM0X2	CLEANBLK	VES#3	03/14/97	10:15	G0701	1.00	pm
>GM0X3	CLEANBLK	VES#4	03/14/97	10:51	G0701	1.00	
>GM0X4	CLEANBLK	VES#5	03/14/97	11:27	G0701	1.00	
>GM603	DSNTB	2671099	03/06/97	12:02	G0701	1.00	
>GM604	DSN1L	2671098	03/06/97	21:22	G0621	1.00	reprocessed
			03/06/97	21:55	G0621	1.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03460 (HP4)

First Shift MM

Second Shift OAH

Third Shift

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>GM0T1	BFBJAN23	50nG BFB	03/24/97	07:30		0.00	
>GM0S1	VSTD050	050 ppb CC	03/24/97	07:52		1.00	
>GM0B1	VBLKG15	VBLKG15	03/24/97	08:36	G0801	1.00	
>GM001	06--6	2679080	03/24/97	09:21	G0801	1.00	
>GM002	06--6MS	2679081	03/24/97	09:54	G0801	1.00	
>GM003	06--6MSD	2679082	03/24/97	10:27	G0801	1.00	
>GMH01	VSTD004	MDL-	03/17/97	11:14	G0421	1.00	reprocessed
>GM004	01--8	2679073	03/24/97	11:00	G0801	1.00	
>GMH02	VSTD004	MDL-	03/17/97	11:49	G0421	1.00	reprocessed
>GM005	03-20	2679076	03/24/97	11:33	G0801	1.00	
>GMH03	VSTD004	MDL-	03/17/97	12:25	G0421	1.00	reprocessed
>GM007	01-44	2679074	03/24/97	12:07	G0801	1.00	
>GMH04	VSTD004	MDL-	03/17/97	13:01	G0421	1.00	reprocessed
>GM505	VSTD004	MDL-	03/05/97	07:30	G0641	1.00	
>GMH05	VSTD004	MDL-	03/17/97	13:36	G0421	1.00	
>GM005	03-20	2679076	03/24/97	11:33	G0801	1.00	REPROCESSED!
>GMH06	VSTD004	MDL-	03/17/97	14:11	G0421	1.00	
>GM008	01-44DL	2679074	03/24/97	12:46	G0801	1.00	
>GMH07	VSTD004	MDL-	03/17/97	14:46	G0421	1.00	reprocessed
>GM009	07-14	2679083	03/24/97	13:19	G0801	1.00	
>GMH08	VSTD004	MDL-	03/17/97	15:22	G0421	1.00	reprocessed
>GMH08	VSTD004	MDL-	03/17/97	15:22	G0421	1.00	REPROCESSED!
>GM010	06-36	2679084	03/24/97	14:11	G0801	1.00	
>GM011	02--9	2679075	03/24/97	14:45	G0801	1.00	MM
>GM012	04-20	2679077	03/24/97	15:18	G0801	1.00	
>GM013	02--9	2679075	03/24/97	16:07	G0801	1.00	
>GM014	06-36DL	2679084	03/24/97	16:42	G0801	1.00	
>GM015	LCSLG15	LCSLG15	03/24/97	17:16	G0801	1.00	
>GM016	04-29	2679078	03/24/97	18:17	G0801	1.00	
>GM017	05-10	2679079	03/24/97	19:07	G0801	1.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03460 (HP4)

First Shift —

Second Shift DAIT

Third Shift CAD

8240 low soils

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>GM0T2	BFBJAN23	50nG BFB	03/24/97	19:55		0.00	
>GM0S2	VSTD050	050 ppb CC	03/24/97	20:16		1.00	
>GM0B2	VBLKG16	VBLKG16	03/24/97	20:59	G0801	1.00	NV
>GM0B3	VBLKG16	VBLKG16	03/24/97	21:42	G0801	1.00	
>GM018	SB-01	2680801	03/24/97	22:27	G0801	1.00	
>GM019	SB-02	2680802	03/24/97	23:00	G0801	1.00	
>GM020	SB-03	2680803	03/24/97	23:53	G0801	1.00	
>GM021	SB-04	2680804	03/25/97	00:28	G0801	1.00	
>GM022	SB05A	2680806	03/25/97	01:15	G0801	1.00	
>GM023	SB-05	2680805	03/25/97	01:48	G0801	1.00	
>GM024	SB-29	2680808	03/25/97	02:30	G0801	1.00	
>GM025	SB-07	2680810	03/25/97	03:04	G0801	1.00	
>GM025	SB-07	2680810	03/25/97	03:04	G0801	1.00	REPROCESSED!
>GM026	SB-06	2680809	03/25/97	04:10	G0801	1.00	
>GM0XA	CLEANBLK	2680809	03/25/97	05:24	G0801	1.00	X

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift TSS

8240B Waters Third Shift JRN

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMIT4	BFB	50nG BFB	03/18/97	12:52		0.00	
>KMII1	VSTD004	004 PPB IC	03/18/97	13:17		1.00	
>KMII2	VSTD020	020 PPB IC	03/18/97	13:54		1.00	
>KMII3	VSTD050	050 PPB IC	03/18/97	14:31		1.00	
>KMII4	VSTD100	100 PPB IC	03/18/97	15:07		1.00	
>KMII5	VSTD300	300 PPB IC	03/18/97	15:44		1.00	
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	
>KMI12	HYTZHMS	2675558	03/18/97	19:05	K0771	5.00	
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	NU
>KMIB3	VBLKK40	VBLKK40	03/18/97	17:06	K0771	1.00	REPROCESSED!
>KMI14	HYTZHMSD	2675558	03/18/97	20:45	K0771	5.00	
>KMI10	EXBLKB	2675653	03/18/97	17:53	K0771	1.00	REPROCESSED!
>KMI11	HYTZH	2675558	03/18/97	18:31	K0771	5.00	REPROCESSED!
>KMI13	HYTZHMS	2675558	03/18/97	20:10	K0771	5.00	REPROCESSED!
>KMI15	EXBLKC	2678334	03/18/97	21:19	K0771	1.00	
>KMI16	A-28-	2676414	03/18/97	22:03	K0771	1.00	
>KMI17	A-28-MS	2676414	03/18/97	22:50	K0771	1.00	
>KMI18	77184	2677184	03/18/97	23:45	K0771	5.00	
>KMI19	CSBXZ	2678079	03/19/97	00:19	K0771	5.00	
>KMI20	ZH941	2675109	03/19/97	00:51	K0771	5.00	

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift —

82XOB waters Third Shift JRN

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMKT1	BFB	50nG BFB	03/20/97	03:07		0.00	
>KMKS1	VSTD050	050 PPB CC	03/20/97	03:29		1.00	
>KMKB1	VBLKK43	VBLKK43	03/20/97	04:15	K0781	1.00	
>KMK01	KMW-4	2677539	03/20/97	05:07	K0781	1.00	
>KMK02	RB--1	2677540	03/20/97	05:42	K0781	1.00	
>KMK03	RB-4-	2679085	03/20/97	06:17	K0781	1.00	
>KMK04	RB-5-	2679086	03/20/97	06:52	K0781	1.00	
>KMK05	FB-1-	2679087	03/20/97	07:28	K0781	1.00	
>KMK06	TB-2-	2677695	03/20/97	08:28	K0781	1.00	
>KMKX1	CLEAN BLK		03/20/97	10:22	K0781	1.00	NU in house
>KMKX2	0.125PPB	ACRYLON	03/20/97	10:58	K0781	1.00	↓ ↓

LANCASTER LABORATORIES INC.
RUNLOG FOR HEWLETT PACKARD GC/MS SYSTEM #HP03973 (HP8)

First Shift JAL

Second Shift TSS

Third Shift

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
>KMLT2	BFB	50nG BFB	03/21/97	13:22		0.00	
>KMLS3	VSTD050	50 PPB CC	03/21/97	13:54		1.00	
>KML82	VBLKK45	VBLKK45	03/21/97	14:43	K0801	1.00	
>KML20	MW8DA	2680263	03/21/97	15:49	K0801	1.00	
>KML21	MW9-A	2680265	03/21/97	16:23	K0801	1.00	
>KML22	MWFBA	2680267	03/21/97	16:58	K0801	1.00	
>KML23	TBAVR	2680268	03/21/97	17:33	K0801	1.00	
>KML24	SW-1A	2680269	03/21/97	18:08	K0801	1.00	
>KML25	SW-1B	2680270	03/21/97	18:43	K0801	1.00	
>KML26	SW-2-	2680271	03/21/97	19:20	K0801	1.00	
>KML27	SW-3-	2680272	03/21/97	19:58	K0801	1.00	
>KML28	MW8-A	2680257	03/21/97	20:32	K0801	1.00	
>KML29	MW8DP	2680259	03/21/97	21:07	K0801	1.00	
>KML30	RB--6	2680807	03/21/97	21:45	K0801	1.00	
>KML31	FB--2	2680811	03/21/97	22:37	K0801	1.00	
>KML32	FIEFF	2680612	03/21/97	23:12	K0801	1.00	
>KML33	FITBR	2680613	03/21/97	23:46	K0801	1.00	

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units) ug/L	Quantitation Limit 5x	Quantitation Limit 10x
S	S	MB	SB11LL0084	none			
S	Aq	MB	SB11LW0085	none			
S	S	MB	SB11LL0080	none			
S	Aq	MB	SB11LW0086	none			
S	Aq	FB	LB-4	none			
S	Aq	FB	RB-5	diethylphthalate	2		20
S	Aq	FB	RB-6	phenanthrene	1	5	
				bis(2-ethylhexyl)phthalate	9		40

1 – V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 – MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

• = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

SOIL SEMIVOLATILE SURROGATE RECOVERY

ab Name: LANCASTER LABS Contract: _____.

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

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKLC0784	80	88	97	79	72	74		0
02	SBLKLC0804	73	72	74	65	61	68		0
03	078LCLCS4	89	88	102	75	72	87		0
04	080LCLCS4	80	81	77	70	65	74		0
05	01--8	88	84	85	81	72	84		0
06	01-44	87	82	82	71	65	78		0
07	02--9	100	109	111	104	93	98		0
08	02--9DL	93	133 D	135	117 D	102	137 D		0
09	03-20	89	84	80	79	72	90		0
10	04-20	97	96	99	100	97	99		0
11	04-20DL	89	126 D	125	118 D	105	141 D		0
12	04-20DL2	53	111	109	102	94	0 D		0
13	04-29	98	100	101	96	92	100		0
14	04-29DL	75	112	118	107	86	136 D		0
15	05-10	78	99	103	93	89	96		0
16	05-10DL	0 D	88	95	78	0 D	0 D		0
17	06--6	89	86	95	72	68	79		0
18	06--6MS	91	86	89	83	74	98		0
19	06--6MSD	81	79	77	74	68	85		0
20	07-14	90	79	77	74	69	62		0
21	07-14DL	80	95	96	89	82	65		0
22	07-14DL2	80	92	95	89	83	65		0
23	06-36	72	70	74	70	62	81		0
24	SB-01	80	80	76	71	63	65		0
25	SB-02	76	75	73	69	62	75		0
26	SB-03	81	80	80	68	65	74		0
27	SB-04	74	72	75	69	63	66		0
28	SB-05	95	91	101	89	87	78		0
29	SB-05DL	34	108	81	55	49	0 D		0
30	SB05A	80	81	79	66	66	76		0
31	SB-29	103	78	95	76	72	62		0
32	SB-29DL	44	82	86	66	72	100		0
33	SB-29DL2	39	86	96	74	71	0 D		0
34	SB-06	136 D	89	100	86	80	74		0
35	SB-06DL	52	93	85	79	78	99		0
36	SB-06DL2	0 D	85	0 D	74	72	0 D		0
37	SB-07	111	101	113	93	87	69		0
38	SB-07DL	0 D	90	0 D	79	74	0 D		0

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4 (PHL)	= Phenol-d6	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

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

no quals for dilution. can't use to eval ext. efficiency

FORM II SV-2 1/87 Rev.

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

ab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	SBLKWB0783	90	83	95	37	59	80		0
02	SBLKWD0806	82	76	74	38	55	87		0
03	078WBLCS3	94	88	88	39	59	86		0
04	080WDLCS6	87	84	78	40	57	100		0
05	RB-4-	81	80	91	33	54	76		0
06	RB-5-	85	89	98	35	56	80		0
07	RB--6	72	76	74	36	55	78		0
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d6	(10-94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

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

FORM II SV-1 1/87 Rev.

Soil QC Windows

Compound Name	Soil LCS	Soil MS/MSD
Phenol	16.8 - 136.8	23.7 - 131.1
bis(2-Chloroethyl)ether	16.7 - 143.3	24.7 - 138.1
2-Chlorophenol	21.3 - 129.3	16.6 - 135.4
1,3-Dichlorobenzene	14.1 - 135.3	23.2 - 126.4
1,4-Dichlorobenzene	14.8 - 136	23 - 118.4
1,2-Dichlorobenzene	14.4 - 142.8	27 - 127.8
2-Methylphenol	68.1 - 105.9	54.8 - 109.4
2,2'-oxybis(1-Chloropropane)	40.4 - 95.4	29.1 - 101.9
4-Methylphenol	61.2 - 105	53.2 - 100.6
N-Nitroso-di-n-propylamine	20.6 - 153.8	32.5 - 146.5
Hexachloroethane	13.4 - 138.2	18.2 - 131.6
Nitrobenzene	18.5 - 140.3	33.1 - 129.7
Isophorone	29.4 - 126.6	18.6 - 134.4
2-Nitrophenol	16.2 - 144.6	21.6 - 138
2,4-Dimethylphenol	0 - 125.5	0 - 123.6
bis(2-chloroethoxy)methane	18.2 - 138.2	28. - 130.6
2,4-Dichlorophenol	18.8 - 135.2	24.5 - 125.9
1,2,4-Trichlorobenzene	18.3 - 137.1	54.6 - 103.2
Naphthalene	21.3 - 128.7	20.9 - 127.7
4-Chloroaniline	0 - 81.1	0 - 92.1
Hexachlorobutadiene	17.3 - 143.9	26.1 - 134.1
4-Chloro-3-methylphenol	18.6 - 145.2	28.8 - 133.2
2-Methylnaphthalene	74.1 - 91.3	53.9 - 104.3
Hexachlorocyclopentadiene	0 - 106	0 - 115.4
2 4,6-Trichlorophenol	14 - 146.6	6.9 - 146.1
2,4,5-Trichlorophenol	78.9 - 104.1	53.7 - 113.7
2-Chloronaphthalene	20 - 143.6	32.8 - 131.8
2-Nitroaniline	74.8 - 115.6	62.2 - 118.6
Dimethylphthalate	21 - 145.8	34.1 - 134.3
2,6-Dinitrotoluene	25.9 - 148.9	35.6 - 139.4
Acenaphthylene	16.2 - 133.8	19 - 131.2
3-Nitroaniline	20.8 - 86.5	16.0 - 69.5
Acenaphthene	16.6 - 136.6	18.2 - 134.6
2,4-Dinitrophenol	5.4 - 136.2	0 - 127.9

Compound Name	Soil LCS	Soil MS/MSD
4-Nitrophenol	15 - 149.4	17 - 142.4
Dibenzofuran	76.8 - 97.8	57.8 - 106.4
2,4-Dinitrotoluene	20.4 - 157.8	31.8 - 142.2
Diethylphthalate	20.6 - 156.2	33.2 - 140.6
4-Chlorophenyl phenylether	18.3 - 149.1	30.7 - 134.5
Fluorene	38.3 - 121.1	16 - 139
4-Nitroaniline	46.7 - 111.5	32.5 - 106.9
4,6-Dinitro-2-methylphenol	7.9 - 142.3	11.8 - 128.8
N-Nitrosodiphenylamine	20.1 - 146.7	32.9 - 135.5
4-Bromophenyl phenylether	20.6 - 152.6	34.1 - 141.5
Hexachlorobenzene	16.6 - 160.6	27.8 - 151.4
Pentachlorophenol	9.6 - 141.6	9.3 - 137.7
Phenanthrene	18.2 - 141.2	0 - 179.4
Anthracene	16 - 133	14.2 - 133.6
Carbazole	70.8 - 109.8	57.8 - 115.2
Di-n-butylphthalate	18.5 - 157.7	26.7 - 146.7
Fluoranthene	17.1 - 144.3	0 - 197
Pyrene	15.1 - 148.3	0 - 240.7
Butylbenzylphthalate	23.2 - 154	32.2 - 149.8
3,3'-Dichlorobenzidine	5.1 - 141.3	0 - 142.9
Benzo(a)anthracene	43.9 - 121.9	0 - 178.6
bis(2-ethylhexyl)phthalate	10.6 - 170.2	20.6 - 156.8
Chrysene	42.7 - 123.7	0 - 197.8
Di-n-octylphthalate	10.4 - 164	26.8 - 154.6
Benzo(b)fluoranthene	42.1 - 122.5	0 - 169.9
Benzo(k)fluoranthene	43.4 - 125	26.7 - 139.5
Benzo(a)pyrene	42.7 - 121.3	0 - 176.6
Indeno(1,2,3-cd)pyrene	37.7 - 130.7	2.2 - 153.4
Dibenz(a,h)anthracene	41.2 - 128.2	0 - 163.5
Benzo(g,h,i)perylene	10.8 - 147	0 - 165.2

Water QC Windows

Compound Name	Water LCS	Water MS/MSD
Phenol	26.3 - 60.5	28.7 - 57.5
bis(2-Chloroethyl)ether	64.2 - 110.4	66.2 - 110.6
2-Chlorophenol	58.7 - 100.7	58.7 - 100.7
1,3-Dichlorobenzene	48.8 - 101	54.5 - 98.9
1,4-Dichlorobenzene	53.6 - 105.8	55.3 - 101.5
1,2-Dichlorobenzene	54.6 - 106.8	59.4 - 106.8
2-Methylphenol	41.7 - 104.1	45.8 - 106.4
2,2'-oxybis(1-Chloropropane)	41.2 - 97.9	48.0 - 92.9
4-Methylphenol	33.8 - 98.6	29.8 - 104.8
N-Nitroso-di-n-propylamine	59.2 - 125.8	64.3 - 123.7
Hexachloroethane	36.4 - 92.2	41.4 - 91.8
Nitrobenzene	64.9 - 108.1	65.8 - 107.8
Isophorone	63.3 - 103.5	63.5 - 104.3
2-Nitrophenol	60.5 - 116.9	60.3 - 119.1
2,4-Dimethylphenol	29.6 - 99.8	29.3 - 98.9
bis(2-chloroethoxy)methane	62.7 - 107.1	62.9 - 109.1
2,4-Dichlorophenol	63 - 100.2	0 - 267.6
1,2,4-Trichlorobenzene	29.1 - 125.1	57.1 - 100.9
Naphthalene	34 - 120.4	63.1 - 97.3
4-Chloroaniline	22.6 - 102	9.9 - 106.5
Hexachlorobutadiene	24.6 - 96	34.6 - 91.3
4-Chloro-3-methylphenol	62.7 - 104.7	61.2 - 105
2-Methylnaphthalene	48.9 - 108.1	63.7 - 98.5
Hexachlorocyclopentadiene	0 - 98.6	0 - 101.9
2,4,6-Trichlorophenol	49.3 - 121.3	43.2 - 124.8
2,4,5-Trichlorophenol	67.2 - 106.8	66.4 - 107.2
2-Chloronaphthalene	65.6 - 108.2	67.2 - 107.4
2-Nitroaniline	59.4 - 112.2	59.5 - 112.3
Dimethylphthalate	0 - 117.2	1.4 - 115.4
2,6-Dinitrotoluene	71.2 - 116.2	71.7 - 114.9
Acenaphthylene	35.1 - 121.5	65.6 - 96.2
3-Nitroaniline	37.5 - 104.9	35.6 - 107.4
Acenaphthene	35.5 - 122.5	64.3 - 98.5
2,4-Dinitrophenol	29.9 - 116.9	27.4 - 112.6

Compound Name	Water LCS	Water MS/MSD
4-Nitrophenol	18 - 63	13.3 - 62.5
Dibenzofuran	68 - 104.6	67.7 - 104.3
2,4-Dinitrotoluene	70.4 - 120.2	68.1 - 119.1
Diethylphthalate	38.3 - 122.3	41.6 - 119.6
4-Chlorophenyl phenylether	65.6 - 110.6	65.7 - 110.1
Fluorene	63.1 - 103.9	63.7 - 104.5
4-Nitroaniline	49.9 - 123.1	50 - 120.8
4,6-Dinitro-2-methylphenol	52.8 - 130.8	51.4 - 136.6
N-Nitrosodiphenylamine	64 - 114.4	63.6 - 115.2
4-Bromophenyl phenylether	64.9 - 117.7	66.9 - 116.1
Hexachlorobenzene	53.1 - 139.5	52.4 - 140.6
Pentachlorophenol	44.9 - 112.7	31.1 - 116.3
Phenanthrene	37.2 - 127.2	69 - 101.4
Anthracene	33.6 - 118.8	60.2 - 97.4
Carbazole	73.2 - 113.3	72.3 - 114.5
Di-n-butylphthalate	62.3 - 115.7	62.8 - 116.2
Fluoranthene	36.2 - 129.8	63.9 - 107.1
Pyrene	33.2 - 133.4	58.3 - 110.5
Butylbenzylphthalate	51.2 - 116.6	49.9 - 116.5
3,3'-Dichlorobenzidine	44.9 - 118.1	51.7 - 111.7
Benzo(a)anthracene	37 - 128.8	64.6 - 104.8
bis(2-ethylhexyl)phthalate	42 - 142.8	58.7 - 128.3
Chrysene	36.5 - 130.7	62 - 107.8
Di-n-octylphthalate	58.8 - 129.6	61.3 - 123.7
Benzo(b)fluoranthene	34.3 - 127.3	61.6 - 104.2
Benzo(k)fluoranthene	35.4 - 130.2	63.8 - 107
Benzo(a)pyrene	32.8 - 121	57.3 - 99.9
Indeno(1,2,3-cd)pyrene	34.2 - 133.8	56.3 - 116.3
Dibenz(a,h)anthracene	59.8 - 114.4	58.4 - 114.8
Benzo(g,h,i)perylene	31.1 - 136.1	55.2 - 116.4

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

File ID: >DC583 Lab Sample ID:SBLKLC078

Date Extracted: 03/19/97 Extraction:(SepF/Cont/Sonc/Sox) SONC

Date Analyzed: 03/25/97 Time Analyzed: 23:26

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: HP03301

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	078LCLCS4	078LCLCS	>DC584	03/26/97
02	06--6	2679080	>DC585	03/26/97
03	06--6MS	2679081	>DC616	03/26/97
04	06--6MSD	2679082	>DC617	03/26/97
05	01--8	2679073	>DC618	03/26/97
06	01-44	2679074	>DC619	03/26/97
07	02--9	2679075	>DC620	03/26/97
08	03-20	2679076	>DC621	03/26/97
09	04-20	2679077	>DC622	03/27/97
10	04-29	2679078	>DC623	03/27/97
11	05-10	2679079	>DC624	03/27/97
12	07-14	2679083	>DC625	03/27/97
13	06-36	2679084	>DC626	03/27/97
14	02--9DL	2679075DL	>DC636	03/27/97
15	04-20DL	2679077DL	>DC637	03/27/97
16	04-29DL	2679078DL	>DC638	03/27/97
17	05-10DL	2679079DL	>DC639	03/27/97
18	07-14DL	2679083DL	>DC640	03/27/97
19	04-20DL2	2679077DL2	>DC641	03/27/97
20	07-14DL2	2679083DL2	>DC643	03/27/97

COMMENTS: _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLC0784

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLC078

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >DC583

Level: (low/med) LOW Date Received:

Moisture: not dec. _____. dec. _____. Date Extracted: 03/19/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/25/97

PC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
108-95-2	Phenol		33	U
111-44-4	bis(2-Chloroethyl)ether		67	U
95-57-8	2-Chlorophenol		33	U
541-73-1	1,3-Dichlorobenzene		33	U
106-46-7	1,4-Dichlorobenzene		33	U
95-50-1	1,2-Dichlorobenzene		33	U
95-48-7	2-Methylphenol		67	U
108-60-1	2,2'-oxybis(1-Chloropropane)		100	U
106-44-5	4-Methylphenol		100	U
621-64-7	N-Nitroso-di-n-propylamine		67	U
67-72-1	Hexachloroethane		67	U
98-95-3	Nitrobenzene		33	U
78-59-1	Isophorone		67	U
88-75-5	2-Nitrophenol		67	U
105-67-9	2,4-Dimethylphenol		67	U
111-91-1	bis(2-Chloroethoxy)methane		33	U
120-83-2	2,4-Dichlorophenol		33	U
120-82-1	1,2,4-Trichlorobenzene		33	U
91-20-3	Naphthalene		33	U
106-47-8	4-Chloroaniline		100	U
87-68-3	Hexachlorobutadiene		67	U
59-50-7	4-Chloro-3-methylphenol		67	U
91-57-6	2-Methylnaphthalene		33	U
77-47-4	Hexachlorocyclopentadiene		170	U
88-06-2	2,4,6-Trichlorophenol		67	U
95-95-4	2,4,5-Trichlorophenol		67	U
91-58-7	2-Chloronaphthalene		33	U
88-74-4	2-Nitroaniline		67	U
131-11-3	Dimethylphthalate		33	U
606-20-2	2,6-Dinitrotoluene		67	U
208-96-8	Acenaphthylene		33	U
99-09-2	3-Nitroaniline		67	U
83-32-9	Acenaphthene		33	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLC0784

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLC078

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >DC583

Level: (low/med) LOW Date Received:

Moisture: not dec. _____. dec. _____. Date Extracted: 03/19/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/25/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL UG/KG	Q
51-28-5	2,4-Dinitrophenol		170	U
100-02-7	4-Nitrophenol		170	U
132-64-9	Dibenzofuran		33	U
121-14-2	2,4-Dinitrotoluene		67	U
84-66-2	Diethylphthalate		67	U
7005-72-3	4-Chlorophenyl-phenylether		67	U
86-73-7	Fluorene		33	U
100-01-6	4-Nitroaniline		100	U
534-52-1	4,6-Dinitro-2-methylphenol		170	U
86-30-6	N-Nitrosodiphenylamine (1)		67	U
101-55-3	4-Bromophenyl-phenylether		100	U
118-74-1	Hexachlorobenzene		100	U
87-86-5	Pentachlorophenol		170	U
85-01-8	Phenanthrene		33	U
120-12-7	Anthracene		33	U
86-74-8	Carbazole		33	U
84-74-2	Di-n-butylphthalate		33	U
206-44-0	Fluoranthene		33	U
129-00-0	Pyrene		67	U
85-68-7	Butylbenzylphthalate		67	U
91-94-1	3,3'-Dichlorobenzidine		130	U
56-55-3	Benzo(a)anthracene		33	U
117-81-7	bis(2-Ethylhexyl)phthalate		67	U
218-01-9	Chrysene		33	U
117-84-0	Di-n-octylphthalate		67	U
205-99-2	Benzo(b)fluoranthene		67	U
207-08-9	Benzo(k)fluoranthene		130	U
50-32-8	Benzo(a)pyrene		67	U
193-39-5	Indeno(1,2,3-cd)pyrene		67	U
53-70-3	Dibenz(a,h)anthracene		67	U
191-24-2	Benzo(g,h,i)perylene		67	U

(1) - Cannot be separated from Diphenylamine

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Name: LANCASTER LABS Contract: _____.

ab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

ab File ID: >CC366 Lab Sample ID: SBLKWB078

Date Extracted: 03/19/97 Extraction: (SepF/Cont/Sonc/Sox) SEPF

ate Analyzed: 03/21/97 Time Analyzed: 20:32

Matrix: (soil/water) WATER Level: (low/med) LOW

nstrument ID: HP02550

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	078WBLCS3	078WBLCS	>CC367	03/21/97
02	RB-4-	2679085	>CC368	03/21/97
03	RB-5-	2679086	>CC369	03/21/97

OMMENTS: _____

_____

FORM IV SV 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWB0783

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWB078

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >CC366

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/19/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/21/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWB0783

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWB078

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >CC366

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/19/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/21/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

(1) - Cannot be separated from Diphenylamine

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC536 Lab Sample ID: SBLKLC080

Date Extracted: 03/21/97 Extraction: (SepF/Cont/Sonc/Sox) SONC

Date Analyzed: 03/24/97 Time Analyzed: 19:46

Matrix: (soil/water) SOIL Level: (low/med) LOW

Instrument ID: HP03301

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	080LCLCS4	080LCLCS	>DC537	03/24/97
02	SB-01	2680801	>DC556	03/25/97
03	SB-02	2680802	>DC557	03/25/97
04	SB-03	2680803	>DC558	03/25/97
05	SB-04	2680804	>DC559	03/25/97
06	SB05A	2680806	>DC561	03/25/97
07	SB-29	2680808	>DC562	03/25/97
08	SB-06	2680809	>DC563	03/25/97
09	SB-07	2680810	>DC564	03/25/97
10	SB-05	2680805	>DC566	03/25/97
11	SB-29DL	2680808DL	>DC567	03/25/97
12	SB-29DL2	2680808DL2	>DC576	03/25/97
13	SB-06DL	2680809DL	>DC577	03/25/97
14	SB-06DL2	2680809DL2	>DC580	03/25/97
15	SB-05DL	2680805DL	>DC581	03/25/97
16	SB-07DL	2680810DL	>DC582	03/25/97

COMMENTS: _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLC0804

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLC080

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >DC536

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/21/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/24/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
108-95-2	Phenol	33	U
111-44-4	bis(2-Chloroethyl)ether	67	U
95-57-8	2-Chlorophenol	33	U
541-73-1	1,3-Dichlorobenzene	33	U
106-46-7	1,4-Dichlorobenzene	33	U
95-50-1	1,2-Dichlorobenzene	33	U
95-48-7	2-Methylphenol	67	U
108-60-1	2,2'-oxybis(1-Chloropropane)	100	U
106-44-5	4-Methylphenol	100	U
621-64-7	N-Nitroso-di-n-propylamine	67	U
67-72-1	Hexachloroethane	67	U
98-95-3	Nitrobenzene	33	U
78-59-1	Isophorone	67	U
88-75-5	2-Nitrophenol	67	U
105-67-9	2,4-Dimethylphenol	67	U
111-91-1	bis(2-Chloroethoxy)methane	33	U
120-83-2	2,4-Dichlorophenol	33	U
120-82-1	1,2,4-Trichlorobenzene	33	U
91-20-3	Naphthalene	33	U
106-47-8	4-Chloroaniline	100	U
87-68-3	Hexachlorobutadiene	67	U
59-50-7	4-Chloro-3-methylphenol	67	U
91-57-6	2-Methylnaphthalene	33	U
77-47-4	Hexachlorocyclopentadiene	170	U
88-06-2	2,4,6-Trichlorophenol	67	U
95-95-4	2,4,5-Trichlorophenol	67	U
91-58-7	2-Chloronaphthalene	33	U
88-74-4	2-Nitroaniline	67	U
131-11-3	Dimethylphthalate	33	U
606-20-2	2,6-Dinitrotoluene	67	U
208-96-8	Acenaphthylene	33	U
99-09-2	3-Nitroaniline	67	U
83-32-9	Acenaphthene	33	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKLC0804

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLC080

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >DC536

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/21/97

Extraction: (SepF/Cont/Sonc/Sox) SONC Date Analyzed: 03/24/97

GPC Cleanup: (Y/N) Y pH: _____. Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MDL UG/KG	Q
51-28-5	2,4-Dinitrophenol	170	U
100-02-7	4-Nitrophenol	170	U
132-64-9	Dibenzofuran	33	U
121-14-2	2,4-Dinitrotoluene	67	U
84-66-2	Diethylphthalate	67	U
7005-72-3	4-Chlorophenyl-phenylether	67	U
86-73-7	Fluorene	33	U
100-01-6	4-Nitroaniline	100	U
534-52-1	4,6-Dinitro-2-methylphenol	170	U
86-30-6	N-Nitrosodiphenylamine (1)	67	U
101-55-3	4-Bromophenyl-phenylether	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	170	U
85-01-8	Phenanthrene	33	U
120-12-7	Anthracene	33	U
86-74-8	Carbazole	33	U
84-74-2	Di-n-butylphthalate	33	U
206-44-0	Fluoranthene	33	U
129-00-0	Pyrene	67	U
85-68-7	Butylbenzylphthalate	67	U
91-94-1	3,3'-Dichlorobenzidine	130	U
56-55-3	Benzo(a)anthracene	33	U
117-81-7	bis(2-Ethylhexyl)phthalate	67	U
218-01-9	Chrysene	33	U
117-84-0	Di-n-octylphthalate	67	U
205-99-2	Benzo(b)fluoranthene	67	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	67	U
193-39-5	Indeno(1,2,3-cd)pyrene	67	U
53-70-3	Dibenz(a,h)anthracene	67	U
191-24-2	Benzo(g,h,i)perylene	67	U

(1) - Cannot be separated from Diphenylamine

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

b File ID: >FC452 Lab Sample ID:SBLKWD080

ate Extracted: 03/21/97 Extraction:(SepF/Cont/Sonc/Sox) SEPF

te Analyzed: 03/23/97 Time Analyzed: 21:57

atrix: (soil/water) WATER Level:(low/med) LOW

strument ID: HP02861

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	080WDLCS6	080WDLCS	>FC453	03/23/97
02	080WDLCSD	080WDLCSD	>FC454	03/23/97
03	080WDUS	080WDUS	>FC455	03/24/97
04	080WDMS	080WDMS	>FC456	03/24/97
05	080WDMSD	080WDMSD	>FC457	03/24/97
06	F-6-1	2679854	>FC458	03/24/97
07	F-6-2	2679856	>FC459	03/24/97
08	F-7--	2679858	>FC473	03/24/97
09	F-15-	2679860	>FC474	03/24/97
10	F-16-	2679862	>FC475	03/25/97
11	F-17-	2679864	>FC476	03/25/97
12	FIEFF	2680612	>FC477	03/25/97
13	RB--6	2680807	>FC478	03/25/97

OMMENTS: _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWD0806

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Matrix: (soil/water) WATER Lab Sample ID: SBLKWD080

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >FC452

Level: (low/med) LOW Date Received:

Moisture: not dec. _____. dec. _____. Date Extracted: 03/21/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/23/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKWD0806

Lab Name: LANCASTER LABS Contract: _____.

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

Matrix: (soil/water) WATER Lab Sample ID: SBLKWD080

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: >FC452

Level: (low/med) LOW Date Received:

% Moisture: not dec. _____. dec. _____. Date Extracted: 03/21/97

Extraction: (SepF/Cont/Sonc/Sox) SEPF Date Analyzed: 03/23/97

GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

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

(1) - Cannot be separated from Diphenylamine

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >CC340 DFTPP Injection Date: 03/20/97

Instrument ID: HP02550 DFTPP Injection Time: 16:37

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	52.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	23.6
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	9.4
442	Greater than 40.0% of mass 198	62.6
443	17.0 - 23.0% of mass 442	12.2 (19.6)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
01	SSTD80	STD0737	>CC341	03/20/97	17:06
02	SSTD160	STD0737	>CC342	03/20/97	18:03
03	SSTD120	STD0737	>CC343	03/20/97	18:55
04	SSTD05	STD0737	>CC344	03/20/97	19:48
05	SSTD50	STD0737	>CC345	03/20/97	20:40
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

Instrument ID: HP02550 Calibration Date(s): 03/20/97 03/20/97

_____.

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >CC344 RRF50 = >CC345
RRF80 = >CC341 RRF120= >CC343 RRF160= >CC342

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.917	2.109	2.072	2.197	1.974	2.054	5.4	AVG	
N-Nitrosodimethylamine	1.174	1.268	1.277	1.364	1.265	1.270	5.3	AVG	
-Picoline	1.895	1.935	2.020	2.075	1.934	1.972	3.7	AVG	
henol *	2.168	2.090	2.236	2.049	1.854	2.079	7.0	AVG	*
Aniline	2.605	2.490	2.714	2.570	2.367	2.549	5.1	AVG	
bis(2-Chloroethyl)ether	1.685	1.688	1.774	1.657	1.497	1.660	6.1	AVG	
-Chlorophenol	1.593	1.535	1.591	1.500	1.311	1.506	7.7	AVG	
,3-Dichlorobenzene	1.637	1.598	1.565	1.518	1.329	1.529	7.9	AVG	
1,4-Dichlorobenzene *	1.692	1.614	1.612	1.529	1.316	1.553	9.3	AVG	*
Benzyl alcohol	.982	.974	1.126	1.000	.907	.998	8.0	AVG	
,2-Dichlorobenzene	1.571	1.504	1.517	1.403	1.218	1.442	9.7	AVG	
-Methylphenol	1.434	1.380	1.547	1.400	1.272	1.407	7.1	AVG	
2,2'-oxybis(1-Chloropropane)	4.562	4.338	4.451	4.212	3.246	4.162	12.7	AVG	
bis(2-Chloroisopropyl)ether	4.562	4.338	4.451	4.212	3.246	4.162	12.7	AVG	
-Methylphenol	1.452	1.396	1.625	1.307	1.082	1.372	14.6	AVG	
nd 4-Methylphenol	1.452	1.396	1.625	1.307	1.082	1.372	14.6	AVG	
xophenone	4.660	3.876	4.388	3.573	3.057	3.911	16.3	2NDDEG	
itroso-di-n-propylamine #	1.508	1.242	1.434	1.136	.971	1.258	17.4	2NDDEG	#
oluidine	2.586	2.322	2.565	2.284	2.253	2.402	6.7	AVG	
exachloroethane	.720	.744	.727	.720	.624	.707	6.7	AVG	
Nitrobenzene	.514	.545	.531	.540	.487	.523	4.5	AVG	
sophorone	.950	.931	.994	.936	.864	.935	5.0	AVG	
-Nitrophenol *	.198	.239	.245	.246	.230	.232	8.5	AVG	*
-,4-Dimethylphenol	.450	.445	.457	.445	.411	.442	4.0	AVG	
Benzoic acid	.267	.313	.359	.392	.383	.343	15.3	1STDEG	
is(2-Chloroethoxy)methane	.585	.575	.579	.550	.494	.557	6.7	AVG	
,4-Dichlorophenol *	.312	.314	.329	.315	.286	.311	5.1	AVG	*
,2,4-Trichlorobenzene	.351	.342	.337	.324	.293	.329	6.9	AVG	
Naphthalene	1.186	1.117	1.111	1.016	.797	1.045	14.5	AVG	
-Chloroaniline	.508	.493	.527	.494	.442	.493	6.4	AVG	
exachlorobutadiene *	.208	.202	.197	.190	.171	.194	7.5	AVG	*
-Chloro-3-methylphenol *	.363	.368	.420	.374	.327	.370	9.0	AVG	*
2-Methylnaphthalene	.676	.647	.682	.615	.539	.632	9.3	AVG	
-Methylnaphthalene	.667	.629	.670	.597	.523	.617	9.8	AVG	
exachlorocyclopentadiene #	.221	.378	.342	.429	.416	.357	23.3	AVG	# (2)
,4,6-Trichlorophenol *	.441	.442	.441	.460	.419	.441	3.3	AVG	*
2,4,5-Trichlorophenol	.445	.475	.482	.484	.438	.465	4.6	AVG	
-Chloronaphthalene	1.363	1.318	1.239	1.272	1.152	1.269	6.3	AVG	

(2) USE AVG RF DUE TO POOR CURVE FIT OF 3/20/97

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

Instrument ID: HP02550 Calibration Date(s): 03/20/97 03/20/97

___.

n RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >CC344 RRF50 = >CC345
RF80 = >CC341 RRF120= >CC343 RRF160= >CC342

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
2-Nitroaniline	.534	.650	.659	.681	.613	.627	9.2	AVG
Dimethylphthalate	1.606	1.546	1.698	1.566	1.365	1.556	7.8	AVG
,6-Dinitrotoluene	.259	.344	.408	.378	.339	.346	16.2	2NDDEG
cenaphthylene	2.105	2.065	2.040	2.032	1.690	1.986	8.5	AVG
3-Nitroaniline	.340	.427	.480	.461	.406	.423	13.0	AVG
Acenaphthene *	1.410	1.358	1.299	1.296	1.126	1.298	8.2	AVG *
,4-Dinitrophenol #	.105	.144	.204	.198	.179	.166	24.9	AVG # (C
-Nitrophenol #	.145	.195	.225	.224	.196	.197	16.4	2NDDEG #
Dibenzofuran	1.791	1.707	1.701	1.567	1.323	1.618	11.3	AVG
2,4-Dinitrotoluene	.413	.478	.572	.469	.367	.460	16.7	AVG (*
-Naphthylamine	1.013	1.005	1.083	1.022	.864	.998	8.1	AVG
-Naphthylamine	1.208	1.071	1.205	1.116	.933	1.106	10.3	AVG
Diethylphthalate	1.655	1.539	1.760	1.496	1.241	1.538	12.7	AVG
4-Chlorophenyl-phenylether	.685	.592	.597	.507	.413	.559	18.4	2NDDEG
luorene	1.360	1.239	1.243	1.058	.865	1.153	16.8	2NDDEG
troaniline	.292	.379	.447	.399	.329	.369	16.4	2NDDEG
Dinitro-2-methylphenol	.088	.136	.164	.161	.159	.142	22.6	1STDEG
itrosodiphenylamine (1) *	.588	.557	.527	.570	.562	.561	4.0	AVG *
z-Diphenylhydrazine	1.423	1.342	1.181	1.389	1.299	1.327	7.1	AVG
-Nitronaphthalene	.165	.170	.163	.172	.169	.168	2.0	AVG
4-Bromophenyl-phenylether	.258	.242	.234	.244	.235	.243	4.0	AVG
exachlorobenzene	.299	.286	.279	.287	.275	.285	3.3	AVG
ntachlorophenol *	.123	.153	.177	.175	.168	.159	14.1	AVG *
henanthrene	1.171	1.152	1.107	1.097	1.007	1.107	5.7	AVG
Anthracene	1.151	1.168	1.144	1.128	1.031	1.125	4.8	AVG
arbazole	.947	1.032	1.050	.982	.858	.974	7.9	AVG
-n-butylphthalate	1.391	1.549	1.701	1.476	1.186	1.461	13.1	AVG
luoranthene *	.990	1.115	1.186	.985	.797	1.015	14.7	AVG *
Benzidine	.904	.882	.909	.808	.729	.846	9.1	AVG
rene	1.955	1.803	1.891	1.732	1.513	1.779	9.6	AVG
tylbenzylphthalate	.815	.948	.988	.918	.836	.901	8.2	AVG
,3'-Dichlorobenzidine	.405	.533	.543	.571	.565	.523	13.0	AVG
Benzo(a)anthracene	1.376	1.353	1.337	1.341	1.289	1.339	2.4	AVG
s(2-Ethylhexyl)phthalate	1.140	1.242	1.296	1.266	1.092	1.207	7.2	AVG
rysene	1.207	1.269	1.252	1.250	1.219	1.240	2.1	AVG
-n-octylphthalate *	2.037	2.356	2.647	2.503	2.566	2.422	9.9	AVG *
7,12-Dimethylbenz[a]anthrace	.434	.560	.631	.612	.633	.574	14.6	AVG
nzo(b)fluoranthene	1.349	1.417	1.491	1.472	1.470	1.440	4.0	AVG

(1) Cannot be separated from Diphenylamine

FORM VI SV-1 1/87 Rev.

CURVE WAS FIT DIFFERENT FROM CURVE FIT DATE 3/20/97

1175

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02550 Calibration Date(s): 03/20/97 03/20/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5 = >CC344 RRF50 = >CC345
RRF80 = >CC341 RRF120= >CC343 RRF160= >CC342

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
Benzo(k)fluoranthene	1.208	1.330	1.375	1.329	1.375	1.323	5.2	AVG
Benzo(a)pyrene *	1.035	1.208	1.240	1.263	1.249	1.199	7.8	AVG
Indeno(1,2,3-cd)pyrene	.772	.943	.859	.955	.829	.872	8.9	AVG
Dibenz(a,h)anthracene	.693	.927	.842	.929	.822	.842	11.5	AVG
Benzo(g,h,i)perylene	.780	.952	.837	.947	.803	.864	9.4	AVG
2-Fluorophenol	1.521	1.604	1.519	1.574	1.412	1.526	4.8	AVG
Phenol-d5	2.085	2.036	2.185	2.071	1.866	2.049	5.7	AVG
Phenol-d6	2.085	2.036	2.185	2.071	1.866	2.049	5.7	AVG
Nitrobenzene-d5	.473	.513	.489	.520	.484	.496	4.1	AVG
2-Fluorobiphenyl	1.513	1.400	1.293	1.359	1.214	1.356	8.3	AVG
2,4,6-Tribromophenol	.210	.235	.283	.234	.201	.233	13.6	AVG
Terphenyl-d14	1.147	1.093	1.169	1.037	.909	1.071	9.7	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

5B

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

Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >CC360 DFTPP Injection Date: 03/21/97

Instrument ID: HP02550 DFTPP Injection Time: 19:03

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	59.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	45.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	24.0
365	Greater than 1.00% of mass 198	3.19
441	Present, but less than mass 443	9.9
442	Greater than 40.0% of mass 198	69.6
443	17.0 - 23.0% of mass 442	13.5 (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
01	SSTD80	STD0737	>CC361	03/21/97	19:31
02	SBLKWB0783	SBLKWB078	>CC366	03/21/97	20:32
03	078WBLCS3	078WBLCS	>CC367	03/21/97	21:25
04	RB-4-	2679085	>CC368	03/21/97	22:17
05	RB-5-	2679086	>CC369	03/21/97	23:09
06	SBLKWB0803	SBLKWB080	>CC370	03/22/97	00:02
07	080WBLCS3	080WBLCS	>CC371	03/22/97	00:55
08	080WBLCSD	080WBLCSD	>CC372	03/22/97	01:47
09	NVSQR	2679553	>CC373	03/22/97	02:39
10	NVSQRMS	2679553MS	>CC374	03/22/97	03:32
11	NVSQRMSD	2679553MSD	>CC375	03/22/97	04:24
12					
13					
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17					
18					
19					
20					
21					
22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP02550 Calibration Date: 03/21/97 Time: 19:31

Lab File ID: >CC361 Init. Calib. Date(s): 03/20/97 03/20/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Pyridine		2.054	2.344	91.30	80.0	-14.1	
N-Nitrosodimethylamine		1.270	1.506	94.92	80.0	-18.6	
2-Picoline		1.972	2.177	88.32	80.0	-10.4	
Phenol	*	2.079	2.252	86.64	80.0	-8.3	*
Aniline		2.549	2.747	86.20	80.0	-7.7	
bis(2-Chloroethyl)ether		1.660	1.785	86.02	80.0	-7.5	
2-Chlorophenol		1.506	1.573	83.57	80.0	-4.5	
1,3-Dichlorobenzene		1.529	1.542	80.67	80.0	-.8	
1,4-Dichlorobenzene	*	1.553	1.547	79.71	80.0	.4	*
Benzyl alcohol		.998	1.074	86.14	80.0	-7.7	
1,2-Dichlorobenzene		1.442	1.477	81.89	80.0	-2.4	
2-Methylphenol		1.407	1.487	84.54	80.0	-5.7	
2,2'-oxybis(1-Chloropropane)		4.162	4.887	93.94	80.0	-17.4	
bis(2-Chloroisopropyl)ether		4.162	4.887	93.94	80.0	-17.4	
4-Methylphenol		1.372	1.469	85.64	80.0	-7.0	
3- and 4-Methylphenol		1.372	1.469	85.64	80.0	-7.0	
Acetophenone		3.911	3.964	77.30	80.0	3.4	
N-Nitroso-di-n-propylamine	#	1.258	1.332	82.44	80.0	-3.0	#
o-Toluidine		2.402	2.431	80.98	80.0	-1.2	
Hexachloroethane		.707	.766	86.69	80.0	-8.4	
Nitrobenzene		.523	.573	87.57	80.0	-9.5	
Isophorone		.935	1.008	86.28	80.0	-7.9	
2-Nitrophenol	*	.232	.250	86.44	80.0	-8.0	*
2,4-Dimethylphenol		.442	.459	83.10	80.0	-3.9	
Benzoic acid		.343	.340	75.30	80.0	5.9	
bis(2-Chloroethoxy)methane		.557	.572	82.25	80.0	-2.8	
2,4-Dichlorophenol	*	.311	.310	79.62	80.0	.5	*
1,2,4-Trichlorobenzene		.329	.320	77.83	80.0	2.7	
Naphthalene		1.045	1.079	82.55	80.0	-3.2	
4-Chloroaniline		.493	.493	79.97	80.0	.0	
Hexachlorobutadiene	*	.194	.185	76.28	80.0	4.6	*
4-Chloro-3-methylphenol	*	.370	.379	81.80	80.0	-2.2	*
2-Methylnaphthalene		.632	.614	77.70	80.0	2.9	
1-Methylnaphthalene		.617	.602	77.97	80.0	2.5	
Hexachlorocyclopentadiene	#	.357	.412	92.18	80.0	-15.2	#
2,4,6-Trichlorophenol	*	.441	.436	79.17	80.0	1.0	*
2,4,5-Trichlorophenol		.465	.463	79.59	80.0	.5	
2-Chloronaphthalene		1.269	1.259	79.37	80.0	.8	

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02550 Calibration Date: 03/21/97 Time: 19:31

Lab File ID: >CC361 Init. Calib. Date(s): 03/20/97 03/20/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.627	.716	91.30	80.0	-14.1
Dimethylphthalate		1.556	1.592	81.82	80.0	-2.3
2,6-Dinitrotoluene		.346	.376	76.53	80.0	4.3
Acenaphthylene		1.986	2.013	81.05	80.0	-1.3
3-Nitroaniline		.423	.447	84.53	80.0	-5.7
Acenaphthene	*	1.298	1.274	78.53	80.0	1.8*
2,4-Dinitrophenol	#	.166	.176	84.83	80.0	-6.0#
4-Nitrophenol	#	.197	.211	75.41	80.0	5.7#
Dibenzofuran		1.618	1.581	78.19	80.0	2.3
2,4-Dinitrotoluene		.460	.481	83.66	80.0	-4.6
1-Naphthylamine		.998	1.032	82.77	80.0	-3.5
2-Naphthylamine		1.106	1.109	80.16	80.0	-.2
Diethylphthalate		1.538	1.587	82.54	80.0	-3.2
4-Chlorophenyl-phenylether		.559	.516	68.38	80.0	14.5
Fluorene		1.153	1.090	69.76	80.0	12.8
4-Nitroaniline		.369	.384	70.79	80.0	11.5
4,6-Dinitro-2-methylphenol		.142	.159	81.84	80.0	-2.3
N-Nitrosodiphenylamine (1)	*	.561	.568	81.05	80.0	-1.3*
1,2-Diphenylhydrazine		1.327	1.504	90.67	80.0	-13.3
1-Nitronaphthalene		.168	.175	83.46	80.0	-4.3
4-Bromophenyl-phenylether		.243	.238	78.52	80.0	1.9
Hexachlorobenzene		.285	.279	78.22	80.0	2.2
Pentachlorophenol	*	.159	.160	80.20	80.0	-.2*
Phenanthrene		1.107	1.111	80.28	80.0	-.3
Anthracene		1.125	1.129	80.34	80.0	-.4
Carbazole		.974	.955	78.48	80.0	1.9
Di-n-butylphthalate		1.461	1.593	87.25	80.0	-9.1
Fluoranthene	*	1.015	.951	75.02	80.0	6.2*
Benzidine		.846	.937	354.16	320.0	-10.7
Pyrene		1.779	2.153	96.85	80.0	-21.1
Butylbenzylphthalate		.901	1.096	97.29	80.0	-21.6
3,3'-Dichlorobenzidine		.523	.502	76.72	80.0	4.1
Benzo(a)anthracene		1.339	1.362	81.34	80.0	-1.7
bis(2-Ethylhexyl)phthalate		1.207	1.444	95.66	80.0	-19.6
Chrysene		1.240	1.256	81.05	80.0	-1.3
Di-n-octylphthalate	*	2.422	2.810	92.83	80.0	-16.0*
7,12-Dimethylbenz[a]anthrace		.574	.623	86.88	80.0	-8.6
Benzo(b)fluoranthene		1.440	1.452	80.66	80.0	-.8

(1) Cannot be separated from Diphenylamine

QB 5/97

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02550 Calibration Date: 03/21/97 Time: 19:31

Lab File ID: >CC361 Init. Calib. Date(s): 03/20/97 03/20/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(k)fluoranthene	1.323	1.367	82.64	80.0	-3.3
Benzo(a)pyrene *	1.199	1.219	81.34	80.0	-1.7*
Indeno(1,2,3-cd)pyrene	.872	.910	83.52	80.0	-4.4
Dibenz(a,h)anthracene	.842	.868	82.39	80.0	-3.0
Benzo(g,h,i)perylene	.864	.874	80.98	80.0	-1.2
2-Fluorophenol	1.526	1.625	85.17	80.0	-6.5
Phenol-d5	2.049	2.213	86.42	80.0	-8.0
Phenol-d6	2.049	2.213	86.42	80.0	-8.0
Nitrobenzene-d5	.496	.542	87.37	80.0	-9.2
2-Fluorobiphenyl	1.356	1.325	78.20	80.0	2.2
2,4,6-Tribromophenol	.233	.226	77.81	80.0	2.7
Terphenyl-d14	1.071	1.290	96.35	80.0	-20.4

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >CC361 Date Analyzed: 03/21/97

Instrument ID: HP02550 Time Analyzed: 19:31

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	51367	11.51	188267	14.92	88051	19.80
	UPPER LIMIT	102734		376534		176102	
	LOWER LIMIT	25684		94134		44026	
	EPA SAMPLE NO.						
01	SBLKWB0783	36741	11.52	124983	14.93	54240	19.81
02	078WBLCS3	39790	11.51	142835	14.92	65318	19.82
03	RB-4-	36146	11.51	123355	14.91	53741	19.80
04	RB-5-	34254	11.51	120456	14.91	51090	19.80
05	SBLKWB0803	39503	11.51	136447	14.91	61308	19.80
06	080WBLCS3	35719	11.51	124605	14.92	57521	19.81
07	080WBLCSD	35312	11.51	131025	14.92	62799	19.81
08	NVSQR	36898	11.52	130227	14.93	61132	19.82
09	NVSQRMS	39845	11.52	148083	14.93	66406	19.82
10	NVSQRMSD	47369	11.53	172177	14.93	77120	19.83
11							
12							
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19							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >CC361 Date Analyzed: 03/21/97

Instrument ID: HP02550 Time Analyzed: 19:31

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	126225	23.97	56450	30.88	41140	35.98
	UPPER LIMIT	252450		112900		82280	
	LOWER LIMIT	63113		28225		20570	
	EPA SAMPLE NO.						
01	SBLKWB0783	84012	23.98	48035	30.88	33810	35.98
02	078WBLCS3	97187	23.98	59200	30.89	48676	35.99
03	RB-4-	85574	23.97	46335	30.87	34132	35.98
04	RB-5-	81217	23.97	42861	30.87	32810	35.98
05	SBLKWB0803	94349	23.98	50849	30.88	40221	35.99
06	080WBLCS3	85367	23.98	57882	30.89	42818	36.00
07	080WBLCSD	101613	23.98	57663	30.89	43188	36.01
08	NVSQR	91646	23.99	51998	30.87	38795	35.99
09	NVSQRMS	91907	23.98	48723	30.89	36099	36.00
10	NVSQRMSD	106943	23.99	57728	30.90	45881	36.01
11							
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22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

File ID: >FC330 DFTPP Injection Date: 03/17/97

Instrument ID: HP02861 DFTPP Injection Time: 19:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	52.6
70	Less than 2.0% of mass 69	.3 (.6)1
127	40.0 - 60.0% of mass 198	41.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	24.4
365	Greater than 1.00% of mass 198	2.58
441	Present, but less than mass 443	10.7
442	Greater than 40.0% of mass 198	73.4
443	17.0 - 23.0% of mass 442	14.1 (19.2)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
01	SSTD120	STD0737	>FC334	03/17/97	23:20
02	SSTD05	STD0737	>FC335	03/18/97	00:13
03	SSTD50	STD0737	>FC336	03/18/97	01:05
04	SSTD80	STD0737	>FC337	03/18/97	01:57
05	SSTD160	STD0737	>FC338	03/18/97	02:50
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SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

nstrument ID: HP02861 Calibration Date(s): 03/17/97 03/18/97

_____.

RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >FC335 RRF50 = >FC336
RF80 = >FC337 RRF120= >FC334 RRF160= >FC338

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD	
Pyridine	1.586	1.610	1.584	1.535	1.414	1.546	5.1	AVG	
N-Nitrosodimethylamine	.918	.967	.938	.954	.871	.930	4.1	AVG	
Picoline	1.584	1.530	1.492	1.493	1.366	1.493	5.4	AVG	
enol *	1.790	1.695	1.636	1.541	1.351	1.603	10.4	AVG	*
niline	2.103	2.059	1.989	1.936	1.715	1.960	7.7	AVG	
bis(2-Chloroethyl)ether	1.320	1.278	1.239	1.164	1.061	1.213	8.4	AVG	
Chlorophenol	1.430	1.404	1.371	1.280	1.169	1.331	8.0	AVG	
3-Dichlorobenzene	1.652	1.534	1.505	1.401	1.271	1.472	9.8	AVG	
.,4-Dichlorobenzene *	1.662	1.545	1.524	1.410	1.276	1.483	9.9	AVG	*
Benzyl alcohol	.812	.843	.806	.774	.701	.787	6.9	AVG	
2-Dichlorobenzene	1.603	1.476	1.443	1.314	1.186	1.404	11.3	AVG	
Methylphenol	1.214	1.180	1.130	1.109	1.001	1.127	7.2	AVG	
2'-oxybis(1-Chloropropane)	3.755	3.691	3.621	3.688	3.303	3.612	5.0	AVG	
bis(2-Chloroisopropyl)ether	3.755	3.691	3.621	3.688	3.303	3.612	5.0	AVG	
4-Methylphenol	1.246	1.220	1.174	1.112	.993	1.149	8.8	AVG	
and 4-Methylphenol	1.246	1.220	1.174	1.112	.993	1.149	8.8	AVG	
ophenone	3.864	3.419	3.237	2.814	2.468	3.161	17.1	2NDDEG	
oso-di-n-propylamine #	1.205	1.102	1.058	.892	.759	1.003	17.6	2NDDEG	#
uidine	2.068	2.014	1.943	1.804	1.606	1.887	9.8	AVG	
chloroethane	.650	.696	.689	.649	.588	.655	6.6	AVG	
robenzene	.449	.461	.456	.452	.425	.449	3.0	AVG	
Isophorone	.762	.777	.763	.757	.701	.752	3.9	AVG	
2-Nitrophenol *	.189	.226	.223	.222	.211	.214	7.2	AVG	*
4-Dimethylphenol	.419	.408	.402	.392	.369	.398	4.8	AVG	
nzoic acid	.273	.327	.316	.362	.332	.322	10.0	AVG	
is(2-Chloroethoxy)methane	.487	.470	.467	.435	.401	.452	7.6	AVG	
2,4-Dichlorophenol *	.319	.329	.327	.310	.291	.315	5.0	AVG	*
2,4-Trichlorobenzene	.399	.375	.372	.352	.328	.365	7.3	AVG	
phthalene	1.129	1.049	1.036	.953	.884	1.010	9.3	AVG	
hloroaniline	.475	.475	.468	.453	.415	.457	5.5	AVG	
Hexachlorobutadiene *	.249	.243	.246	.236	.219	.238	5.0	AVG	*
4-Chloro-3-methylphenol *	.340	.355	.347	.343	.311	.339	5.0	AVG	*
Methylnaphthalene	.669	.631	.618	.571	.499	.597	10.9	AVG	
xachlorocyclopentadiene #	.416	.538	.553	.551	.528	.517	11.2	AVG	#
2,4,6-Trichlorophenol *	.461	.494	.484	.478	.460	.475	3.1	AVG	*
2,4,5-Trichlorophenol	.522	.528	.523	.506	.485	.513	3.4	AVG	
Chloronaphthalene	1.401	1.321	1.304	1.215	1.171	1.282	7.1	AVG	
Nitroaniline	.453	.553	.532	.587	.541	.533	9.3	AVG	

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

strument ID: HP02861 Calibration Date(s): 03/17/97 03/18/97

RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >FC335 RRF50 = >FC336
RF80 = >FC337 RRF120= >FC334 RRF160= >FC338

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
Dimethylphthalate	1.528	1.494	1.466	1.445	1.344	1.455	4.8	AVG
2,6-Dinitrotoluene	.249	.333	.328	.336	.320	.313	11.6	AVG
cenaphthylene	2.089	2.017	1.991	1.869	1.770	1.947	6.5	AVG
Nitroaniline	.307	.384	.374	.396	.368	.366	9.4	AVG
Acenaphthene *	1.410	1.301	1.278	1.186	1.119	1.259	8.9	AVG *
2,4-Dinitrophenol #	.152	.190	.184	.216	.199	.188	12.4	AVG #
Nitrophenol #	.198	.215	.202	.230	.203	.209	6.2	AVG #
benzofuran	1.882	1.738	1.714	1.621	1.525	1.696	7.9	AVG
4,4-Dinitrotoluene	.431	.472	.454	.462	.424	.448	4.6	AVG
1-Naphthylamine	1.060	.964	.945	.987	.894	.970	6.3	AVG
Naphthylamine	1.181	1.007	.980	1.067	.947	1.036	8.9	AVG
ethylphthalate	1.530	1.491	1.456	1.442	1.297	1.443	6.2	AVG
Chlorophenyl-phenylether	.715	.616	.610	.538	.500	.596	13.8	AVG
Fluorene	1.438	1.178	1.160	1.005	.947	1.146	16.7	2NDDEG
4-Nitroaniline	.302	.304	.300	.319	.283	.302	4.3	AVG
6-Dinitro-2-methylphenol	.089	.140	.137	.148	.148	.132	18.7	1STDEG
rosodiphenylamine (1) *	.488	.510	.495	.497	.510	.500	2.0	AVG *
iphenylhydrazine	.964	.980	.973	.970	.986	.975	.9	AVG
tronaphthalene	.138	.150	.146	.144	.148	.145	3.2	AVG
omophenyl-phenylether	.247	.255	.248	.249	.246	.249	1.4	AVG
xachlorobenzene	.351	.342	.336	.337	.325	.338	2.8	AVG
Pentachlorophenol *	.184	.199	.200	.209	.199	.198	4.6	AVG *
Phenanthrene	1.169	1.119	1.077	1.025	1.000	1.078	6.4	AVG
thracene	1.151	1.122	1.101	1.044	1.008	1.085	5.4	AVG
rbazole	1.008	.949	.950	.891	.846	.929	6.7	AVG
Di-n-butylphthalate	1.318	1.347	1.401	1.314	1.217	1.319	5.1	AVG
Fluoranthene *	1.276	1.126	1.183	1.073	.988	1.129	9.7	AVG *
nzidine	.777	.667	.702	.594	.557	.659	13.2	AVG
rene	1.701	1.633	1.736	1.474	1.401	1.589	9.2	AVG
utylbenzylphthalate	.667	.749	.763	.751	.728	.732	5.2	AVG
3,3'-Dichlorobenzidine	.433	.478	.487	.554	.530	.496	9.5	AVG
nzo(a)anthracene	1.352	1.314	1.325	1.278	1.230	1.300	3.6	AVG
s(2-Ethylhexyl)phthalate	.922	1.062	1.056	1.042	.996	1.015	5.7	AVG
rysene	1.204	1.224	1.212	1.236	1.187	1.213	1.6	AVG
Di-n-octylphthalate *	1.531	1.897	1.832	1.931	2.035	1.845	10.3	AVG *
7 12-Dimethylbenz[a]anthrace	.463	.574	.568	.571	.591	.554	9.3	AVG
nzo(b)fluoranthene	1.340	1.358	1.359	1.347	1.386	1.358	1.3	AVG
nzo(k)fluoranthene	1.239	1.282	1.268	1.305	1.310	1.281	2.3	AVG

(1) Cannot be separated from Diphenylamine

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

trument ID: HP02861 Calibration Date(s): 03/17/97 03/18/97

RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

B FILE ID: RRF5 = >FC335 RRF50 = >FC336
F80 = >FC337 RRF120= >FC334 RRF160= >FC338

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	CAL. METHOD
Benzo(a)pyrene *	1.090	1.183	1.205	1.236	1.217	1.186	4.8	AVG *
Indeno(1,2,3-cd)pyrene	.862	.991	1.056	1.068	.963	.988	8.4	AVG
benz(a,h)anthracene	.818	.991	1.042	1.057	.953	.972	9.8	AVG
nzo(g,h,i)perylene	.881	.990	1.050	1.061	.947	.986	7.6	AVG
2-Fluorophenol	1.277	1.266	1.230	1.186	1.071	1.206	6.9	AVG
enol-d5	1.700	1.703	1.631	1.579	1.399	1.602	7.8	AVG
enol-d6	1.700	1.703	1.631	1.579	1.399	1.602	7.8	AVG
Nitrobenzene-d5	.397	.442	.431	.445	.418	.427	4.6	AVG
2-Fluorobiphenyl	1.480	1.390	1.362	1.277	1.219	1.346	7.5	AVG
4,6-Tribromophenol	.318	.356	.349	.371	.307	.340	7.9	AVG
rphenyl-d14	1.056	1.018	1.093	.970	.899	1.007	7.5	AVG

6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >FC450 DFTPP Injection Date: 03/23/97

Instrument ID: HP02861 DFTPP Injection Time: 20:34

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	61.9
70	Less than 2.0% of mass 69	.2 (.4)1
127	40.0 - 60.0% of mass 198	45.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	Greater than 1.00% of mass 198	2.18
441	Present, but less than mass 443	8.7
442	Greater than 40.0% of mass 198	56.6
443	17.0 - 23.0% of mass 442	10.9 (19.3)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
01	SSTD80	STD0737	>FC451	03/23/97	20:58
02	SBLKWD0806	SBLKWD080	>FC452	03/23/97	21:57
03	080WDLCS6	080WDLCS	>FC453	03/23/97	22:49
04	080WDLCSD	080WDLCSD	>FC454	03/23/97	23:41
05	080WDUS	080WDUS	>FC455	03/24/97	00:34
06	080WDMS	080WDMS	>FC456	03/24/97	01:26
07	080WDMSD	080WDMSD	>FC457	03/24/97	02:18
08	F-6-1	2679854	>FC458	03/24/97	03:10
09	F-6-2	2679856	>FC459	03/24/97	04:02
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02861 Calibration Date: 03/23/97 Time: 20:58

Lab File ID: >FC451 Init. Calib. Date(s): 03/17/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Pyridine		1.546	1.575	83.29	80.0	-4.1	
N-Nitrosodimethylamine		.930	.936	86.72	80.0	-8.4	
2-Picoline		1.493	1.491	81.65	80.0	-2.1	
Phenol	*	1.603	1.645	82.05	80.0	-2.6	*
Aniline		1.960	1.983	81.51	80.0	-1.9	
bis(2-Chloroethyl)ether		1.213	1.252	81.93	80.0	-2.4	
2-Chlorophenol		1.331	1.372	80.37	80.0	-.5	
1,3-Dichlorobenzene		1.472	1.505	78.19	80.0	2.3	
1,4-Dichlorobenzene	*	1.483	1.530	78.44	80.0	2.0	*
Benzyl alcohol		.787	.804	82.03	80.0	-2.5	
1,2-Dichlorobenzene		1.404	1.441	76.84	80.0	3.9	
2-Methylphenol		1.127	1.138	80.42	80.0	-.5	
2,2'-oxybis(1-Chloropropane)		3.612	3.849	97.41	80.0	-21.8	
bis(2-Chloroisopropyl)ether		3.612	3.849	97.41	80.0	-21.8	
4-Methylphenol		1.149	1.179	82.76	80.0	-3.5	
3- and 4-Methylphenol		1.149	1.179	82.76	80.0	-3.5	
Acetophenone		3.161	3.191	79.40	80.0	.8	
N-Nitroso-di-n-propylamine	#	1.003	1.044	86.00	80.0	-7.5	#
o-Toluidine		1.887	1.932	79.24	80.0	1.0	
Hexachloroethane		.655	.704	80.37	80.0	-.5	
Nitrobenzene		.449	.458	83.73	80.0	-4.7	
Isophorone		.752	.769	80.93	80.0	-1.2	
2-Nitrophenol	*	.214	.226	85.31	80.0	-6.6	*
2,4-Dimethylphenol		.398	.409	83.79	80.0	-4.7	
Benzoic acid		.322	.324	82.89	80.0	-3.6	
bis(2-Chloroethoxy)methane		.452	.467	81.40	80.0	-1.8	
2,4-Dichlorophenol	*	.315	.324	79.48	80.0	.7	*
1,2,4-Trichlorobenzene		.365	.373	78.25	80.0	2.2	
Naphthalene		1.010	1.031	79.91	80.0	.1	
4-Chloroaniline		.457	.469	80.85	80.0	-1.1	
Hexachlorobutadiene	*	.238	.247	81.24	80.0	-1.6	*
4-Chloro-3-methylphenol	*	.339	.354	83.70	80.0	-4.6	*
2-Methylnaphthalene		.597	.634	81.40	80.0	-1.8	
Hexachlorocyclopentadiene	#	.517	.532	85.08	80.0	-6.4	#
2,4,6-Trichlorophenol	*	.475	.465	79.88	80.0	.1	*
2,4,5-Trichlorophenol		.513	.503	79.71	80.0	.4	
2-Chloronaphthalene		1.282	1.255	78.72	80.0	1.6	
2-Nitroaniline		.533	.562	89.92	80.0	-12.4	

JB, USD

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02861 Calibration Date: 03/23/97 Time: 20:58

Lab File ID: >FC451 Init. Calib. Date(s): 03/17/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Dimethylphthalate		1.455	1.485	77.74	80.0	2.8
2,6-Dinitrotoluene		.313	.339	76.44	80.0	4.5
Acenaphthylene		1.947	1.959	81.14	80.0	-1.4
3-Nitroaniline		.366	.399	83.02	80.0	-3.8
Acenaphthene	*	1.259	1.259	78.51	80.0	1.9*
2,4-Dinitrophenol	#	.188	.220	83.75	80.0	-4.7#
4-Nitrophenol	#	.209	.237	76.74	80.0	4.1#
Dibenzofuran		1.696	1.723	80.59	80.0	-.7
2,4-Dinitrotoluene		.448	.499	82.19	80.0	-2.7
1-Naphthylamine		.970	1.033	77.19	80.0	3.5
2-Naphthylamine		1.036	1.114	80.02	80.0	-.0
Diethylphthalate		1.443	1.567	77.94	80.0	2.6
4-Chlorophenyl-phenylether		.596	.613	79.16	80.0	1.1
Fluorene		1.146	1.165	77.27	80.0	3.4
4-Nitroaniline		.302	.370	76.76	80.0	4.1
4,6-Dinitro-2-methylphenol		.132	.151	81.11	80.0	-1.4
N-Nitrosodiphenylamine (1)	*	.500	.480	84.83	80.0	-6.0*
1,2-Diphenylhydrazine		.975	.930	82.04	80.0	-2.5
1-Nitronaphthalene		.145	.141	81.30	80.0	-1.6
4-Bromophenyl-phenylether		.249	.240	82.26	80.0	-2.8
Hexachlorobenzene		.338	.341	88.43	80.0	-10.5
Pentachlorophenol	*	.198	.217	90.71	80.0	-13.4*
Phenanthrene		1.078	1.080	79.55	80.0	.6
Anthracene		1.085	1.104	80.39	80.0	-.5
Carbazole		.929	1.012	80.11	80.0	-.1
Di-n-butylphthalate		1.319	1.551	81.17	80.0	-1.5
Fluoranthene	*	1.129	1.352	82.83	80.0	-3.5*
Benzidine		.659	.601	259.20	320.0	19.0
Pyrene		1.589	1.291	67.82	80.0	15.2
Butylbenzylphthalate		.732	.720	69.21	80.0	13.5
3,3'-Dichlorobenzidine		.496	.572	82.00	80.0	-2.5
Benzo(a)anthracene		1.300	1.262	70.29	80.0	12.1
bis(2-Ethylhexyl)phthalate		1.015	.978	64.74	80.0	19.1
Chrysene		1.213	1.254	76.32	80.0	4.6
Di-n-octylphthalate	*	1.845	1.836	71.23	80.0	11.0*
7,12-Dimethylbenz[a]anthrace		.554	.556	79.01	80.0	1.2
Benzo(b)fluoranthene		1.358	1.308	77.97	80.0	2.5
Benzo(k)fluoranthene		1.281	1.257	80.03	80.0	-.0

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP02861 Calibration Date: 03/23/97 Time: 20:58

Lab File ID: >FC451 Init. Calib. Date(s): 03/17/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Benzo(a)pyrene	* 1.186	1.185	79.34	80.0	.8*	
Indeno(1,2,3-cd)pyrene	.988	1.056	81.23	80.0	-1.5	
Dibenz(a,h)anthracene	.972	1.044	82.88	80.0	-3.6	
Benzo(g,h,i)perylene	.986	1.047	80.34	80.0	-.4	
2-Fluorophenol	1.206	1.240	81.59	80.0	-2.0	
Phenol-d5	1.602	1.623	81.07	80.0	-1.3	
Phenol-d6	1.602	1.623	81.07	80.0	-1.3	
Nitrobenzene-d5	.427	.435	82.21	80.0	-2.8	
2-Fluorobiphenyl	1.346	1.330	77.80	80.0	2.7	
2,4,6-Tribromophenol	.340	.407	98.30	80.0	-22.9	JD, VJD
Terphenyl-d14	1.007	.892	72.77	80.0	9.0	

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >FC451 Date Analyzed: 03/23/97

Instrument ID: HP02861 Time Analyzed: 20:58

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	34707		10.76	121045		13.80	64804		18.17
	UPPER LIMIT	69414			242090			129608		
	LOWER LIMIT	17354			60523			32402		
	EPA SAMPLE NO.									
01	SBLKWD0806	33267		10.76	121689		13.80	66544		18.17
02	080WDLCS6	37544		10.76	133419		13.81	70670		18.17
03	080WDLCSD	32461		10.75	115538		13.80	62626		18.17
04	080WDUS	34106		10.76	122269		13.80	64245		18.16
05	080WDMS	35410		10.75	126823		13.79	66701		18.16
06	080WDMSD	34985		10.75	123596		13.80	65837		18.17
07	F-6-1	32450		10.73	114866		13.78	61155		18.15
08	F-6-2	38990		10.73	139249		13.78	74357		18.15
09										
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >FC47Y DFTPP Injection Date: 03/24/97

Instrument ID: HP02861 DFTPP Injection Time: 20:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	65.4
70	Less than 2.0% of mass 69	.3 (.4)1
127	40.0 - 60.0% of mass 198	46.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.8
365	Greater than 1.00% of mass 198	2.06
441	Present, but less than mass 443	8.9
442	Greater than 40.0% of mass 198	58.2
443	17.0 - 23.0% of mass 442	11.1 (19.0)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
01	SSTD80	STD0837	>FC472	03/24/97	20:51
02	F-7--	2679858	>FC473	03/24/97	22:02
03	F-15-	2679860	>FC474	03/24/97	23:09
04	F-16-	2679862	>FC475	03/25/97	00:07
05	F-17-	2679864	>FC476	03/25/97	01:05
06	FIEFF	2680612	>FC477	03/25/97	02:03
07	RB--6	2680807	>FC478	03/25/97	03:01
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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP02861 Calibration Date: 03/24/97 Time: 20:51

Lab File ID: >FC472 Init. Calib. Date(s): 03/17/97 03/18/97

RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Pyridine		1.546	1.427	73.83	80.0	7.7	
N-Nitrosodimethylamine		.930	.857	73.71	80.0	7.9	
2-Picoline		1.493	1.372	73.53	80.0	8.1	
Phenol	*	1.603	1.555	77.62	80.0	3.0	*
Aniline		1.960	1.895	77.33	80.0	3.3	
bis(2-Chloroethyl)ether		1.213	1.209	79.74	80.0	.3	
2-Chlorophenol		1.331	1.313	78.91	80.0	1.4	
1,3-Dichlorobenzene		1.472	1.444	78.47	80.0	1.9	
1,4-Dichlorobenzene	*	1.483	1.498	80.80	80.0	-1.0	*
Benzyl alcohol		.787	.806	81.91	80.0	-2.4	
1,2-Dichlorobenzene		1.404	1.434	81.68	80.0	-2.1	
2-Methylphenol		1.127	1.148	81.52	80.0	-1.9	
2,2'-oxybis(1-Chloropropane)		3.612	3.858	85.45	80.0	-6.8	
bis(2-Chloroisopropyl)ether		3.612	3.858	85.45	80.0	-6.8	
4-Methylphenol		1.149	1.210	84.29	80.0	-5.4	
3- and 4-Methylphenol		1.149	1.210	84.29	80.0	-5.4	
Acetophenone		3.161	3.165	79.72	80.0	.3	
N-Nitroso-di-n-propylamine	#	1.003	1.034	81.49	80.0	-1.9	#
o-Toluidine		1.887	1.977	83.81	80.0	-4.8	
Hexachloroethane		.655	.720	88.06	80.0	-10.1	
Nitrobenzene		.449	.411	73.33	80.0	8.3	
Isophorone		.752	.722	76.77	80.0	4.0	
2-Nitrophenol	*	.214	.211	78.68	80.0	1.6	*
2,4-Dimethylphenol		.398	.380	76.45	80.0	4.4	
Benzoic acid		.322	.331	82.25	80.0	-2.8	
bis(2-Chloroethoxy)methane		.452	.454	80.33	80.0	-.4	
2,4-Dichlorophenol	*	.315	.307	78.04	80.0	2.4	*
1,2,4-Trichlorobenzene		.365	.355	77.71	80.0	2.9	
Naphthalene		1.010	1.009	79.89	80.0	.1	
4-Chloroaniline		.457	.464	81.10	80.0	-1.4	
Hexachlorobutadiene	*	.238	.232	78.02	80.0	2.5	*
4-Chloro-3-methylphenol	*	.339	.369	87.12	80.0	-8.9	*
2-Methylnaphthalene		.597	.665	89.03	80.0	-11.3	
Hexachlorocyclopentadiene	#	.517	.459	70.96	80.0	11.3	#
2,4,6-Trichlorophenol	*	.475	.414	69.58	80.0	13.0	*
2,4,5-Trichlorophenol		.513	.456	71.05	80.0	11.2	
2-Chloronaphthalene		1.282	1.147	71.56	80.0	10.5	
2-Nitroaniline		.533	.513	76.87	80.0	3.9	

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

ab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

nstrument ID: HP02861 Calibration Date: 03/24/97 Time: 20:51

File ID: >FC472 Init. Calib. Date(s): 03/17/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
Dimethylphthalate		1.455	1.428	78.49	80.0	1.9	
2,6-Dinitrotoluene		.313	.337	86.01	80.0	-7.5	
Acenaphthylene		1.947	1.871	76.88	80.0	3.9	
3-Nitroaniline		.366	.411	89.88	80.0	-12.4	
Acenaphthene	*	1.259	1.205	76.55	80.0	4.3	*
2,4-Dinitrophenol	#	.188	.236	100.43	80.0	-25.5	# JD, VJD
4-Nitrophenol	#	.209	.222	84.68	80.0	-5.8	#
Dibenzofuran		1.696	1.695	79.95	80.0	.1	
2,4-Dinitrotoluene		.448	.515	91.86	80.0	-14.8	
1-Naphthylamine		.970	1.099	90.66	80.0	-13.3	
2-Naphthylamine		1.036	1.247	96.29	80.0	-20.4	JD, VJD
Diethylphthalate		1.443	1.581	87.65	80.0	-9.6	
4-Chlorophenyl-phenylether		.596	.611	82.08	80.0	-2.6	
Fluorene		1.146	1.155	83.18	80.0	-4.0	
4-Nitroaniline		.302	.401	106.31	80.0	-32.9	JD, VJD
4,6-Dinitro-2-methylphenol		.132	.153	85.13	80.0	-6.4	
N-Nitrosodiphenylamine (1)	*	.500	.462	73.95	80.0	7.6	*
1,2-Diphenylhydrazine		.975	.892	73.20	80.0	8.5	
1-Nitronaphthalene		.145	.141	77.53	80.0	3.1	
4-Bromophenyl-phenylether		.249	.224	72.06	80.0	9.9	
Hexachlorobenzene		.338	.293	69.18	80.0	13.5	
Pentachlorophenol	*	.198	.198	80.08	80.0	-.1	*
Phenanthrene		1.078	1.029	76.36	80.0	4.6	
Anthracene		1.085	1.057	77.90	80.0	2.6	
Carbazole		.929	.969	83.52	80.0	-4.4	
Di-n-butylphthalate		1.319	1.430	86.71	80.0	-8.4	
Fluoranthene	*	1.129	1.187	84.13	80.0	-5.2	*
Benzidine		.659	.628	304.69	320.0	4.8	
Pyrene		1.589	1.452	73.09	80.0	8.6	
Butylbenzylphthalate		.732	.776	84.83	80.0	-6.0	
3,3'-Dichlorobenzidine		.496	.542	87.28	80.0	-9.1	
Benzo(a)anthracene		1.300	1.317	81.04	80.0	-1.3	
bis(2-Ethylhexyl)phthalate		1.015	1.188	93.61	80.0	-17.0	
Chrysene		1.213	1.187	78.32	80.0	2.1	
Di-n-octylphthalate	*	1.845	2.005	86.96	80.0	-8.7	*
7,12-Dimethylbenz[a]anthrace		.554	.558	80.65	80.0	-.8	
Benzo(b)fluoranthene		1.358	1.297	76.43	80.0	4.5	
Benzo(k)fluoranthene		1.281	1.249	78.00	80.0	2.5	

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP02861 Calibration Date: 03/24/97 Time: 20:51

File ID: >FC472 Init. Calib. Date(s): 03/17/97 03/18/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	* 1.186	1.179	79.52	80.0	.6*
Indeno(1,2,3-cd)pyrene	.988	1.000	81.00	80.0	-1.2
Dibenz(a,h)anthracene	.972	1.001	82.40	80.0	-3.0
Benzo(g,h,i)perylene	.986	1.004	81.49	80.0	-1.9
2-Fluorophenol	1.206	1.144	75.88	80.0	5.2
Phenol-d5	1.602	1.540	76.88	80.0	3.9
Phenol-d6	1.602	1.540	76.88	80.0	3.9
Nitrobenzene-d5	.427	.393	73.77	80.0	7.8
2-Fluorobiphenyl	1.346	1.202	71.46	80.0	10.7
2,4,6-Tribromophenol	.340	.343	80.79	80.0	-1.0
Terphenyl-d14	1.007	.931	73.92	80.0	7.6

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >FC472 Date Analyzed: 03/24/97

Instrument ID: HP02861 Time Analyzed: 20:51

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	37160		10.82	150159		13.95	95817		18.53
	UPPER LIMIT	74320			300318			191634		
	LOWER LIMIT	18580			75080			47909		
	EPA SAMPLE NO.									
01	F-7--	36149		10.84	150943		14.01	92009		18.60
02	F-15-	29845		10.80	114122		13.88	73115		18.42
03	F-16-	28811		10.79	108558		13.86	71872		18.40
04	F-17-	29205		10.81	119149		13.91	78914		18.49
05	FIEFF	32544		10.81	130716		13.89	88696		18.48
06	RB--6	24142		10.81	96152		13.89	63948		18.49
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >FC472 Date Analyzed: 03/24/97

Instrument ID: HP02861 Time Analyzed: 20:51

	EPA SAMPLE NO.	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	196425	22.45	166011	29.50	161252	35.37
	UPPER LIMIT	392850		332022		322504	
	LOWER LIMIT	98213		83006		80626	
01	F-7--	172417	22.52	156678	29.57	148134	35.53
02	F-15-	146033	22.33	135300	29.35	134144	35.12
03	F-16-	146717	22.35	146155	29.41	139564	35.26
04	F-17-	153476	22.43	148331	29.52	144981	35.50
05	FIEFF	182167	22.42	174759	29.52	175001	35.49
06	RB--6	130242	22.41	125800	29.50	125063	35.43
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC530 DFTPP Injection Date: 03/24/97

Instrument ID: HP03301 DFTPP Injection Time: 14:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	43.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.7
365	Greater than 1.00% of mass 198	1.91
441	Present, but less than mass 443	7.8
442	Greater than 40.0% of mass 198	53.4
443	17.0 - 23.0% of mass 442	10.3 (19.3)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
01	SSTD80	STD0837	>DC531	03/24/97	15:06
02	SSTD160	STD0837	>DC532	03/24/97	16:01
03	SSTD05	STD0837	>DC533	03/24/97	16:56
04	SSTD50	STD0837	>DC534	03/24/97	17:56
05	SSTD120	STD0837	>DC535	03/24/97	18:51
06	SBLKLC0804	SBLKLC080	>DC536	03/24/97	19:46
07	080LCLCS4	080LCLCS	>DC537	03/24/97	20:41
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SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

lame: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

strument ID: HP03301 Calibration Date(s): 03/24/97 03/24/97

___.

...n RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >DC533 RRF50 = >DC534
RRF80 = >DC531 RRF120= >DC535 RRF160= >DC532

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD	
Pyridine	1.519	1.740	1.677	1.619	1.607	1.632	5.1	AVG	
-Nitrosodimethylamine	.752	.998	1.008	1.012	.963	.947	11.7	AVG	
-Picoline	1.501	1.599	1.573	1.580	1.476	1.546	3.5	AVG	
rhenol	1.585	1.695	1.577	1.512	1.404	1.555	6.9	AVG	*
Aniline	1.894	2.045	1.952	1.939	1.780	1.922	5.0	AVG	
is(2-Chloroethyl)ether	1.327	1.397	1.311	1.257	1.194	1.297	5.9	AVG	
-Chlorophenol	1.359	1.408	1.308	1.240	1.183	1.300	6.9	AVG	
,3-Dichlorobenzene	1.573	1.597	1.520	1.380	1.355	1.485	7.5	AVG	
1,4-Dichlorobenzene	1.630	1.612	1.493	1.380	1.360	1.495	8.4	AVG	*
enzyl alcohol	.671	.821	.765	.788	.705	.750	8.1	AVG	
,2-Dichlorobenzene	1.533	1.494	1.367	1.270	1.250	1.383	9.2	AVG	
-Methylphenol	1.036	1.163	1.098	1.117	1.007	1.084	5.8	AVG	
2,2'-oxybis(1-Chloropropane)	3.291	3.477	3.344	3.264	3.062	3.288	4.6	AVG	
is(2-Chloroisopropyl)ether	3.291	3.477	3.344	3.264	3.062	3.288	4.6	AVG	
Methylphenol	1.077	1.195	1.097	1.083	.998	1.090	6.4	AVG	
d 4-Methylphenol	1.077	1.195	1.097	1.083	.998	1.090	6.4	AVG	
ophenone	3.372	3.182	2.764	2.652	2.457	2.885	13.2	AVG	
roso-di-n-propylamine	.941	1.048	.912	.843	.783	.905	11.1	AVG	#
oluidine	1.863	1.952	1.792	1.764	1.629	1.800	6.7	AVG	
Hexachloroethane	.567	.674	.637	.600	.579	.611	7.2	AVG	
Nitrobenzene	.400	.460	.452	.441	.437	.438	5.3	AVG	
ophorone	.718	.782	.747	.765	.727	.748	3.5	AVG	
Nitrophenol	.152	.221	.223	.225	.217	.207	15.0	AVG	*
2,4-Dimethylphenol	.396	.417	.401	.392	.383	.398	3.2	AVG	
Benzoic acid	.129	.239	.270	.321	.300	.252	29.9	1STDEG	
s(2-Chloroethoxy)methane	.472	.495	.472	.451	.448	.467	4.1	AVG	
4-Dichlorophenol	.299	.337	.319	.315	.306	.315	4.6	AVG	*
1,2,4-Trichlorobenzene	.400	.384	.361	.341	.343	.366	7.1	AVG	
Naphthalene	1.126	1.103	1.027	.966	.962	1.037	7.3	AVG	
Chloroaniline	.437	.471	.443	.445	.430	.445	3.5	AVG	
xachlorobutadiene	.218	.227	.221	.207	.211	.217	3.7	AVG	*
4-Chloro-3-methylphenol	.279	.344	.318	.332	.318	.318	7.8	AVG	*
2-Methylnaphthalene	.649	.658	.601	.585	.575	.614	6.2	AVG	
Methylnaphthalene	.645	.641	.586	.567	.557	.599	6.9	AVG	
xachlorocyclopentadiene	.267	.435	.476	.445	.446	.414	20.1	1STDEG	#
2,4,6-Trichlorophenol	.365	.458	.459	.463	.438	.437	9.4	AVG	*
2,4,5-Trichlorophenol	.392	.493	.492	.464	.464	.461	8.9	AVG	
Chloronaphthalene	1.286	1.308	1.263	1.174	1.176	1.242	5.1	AVG	

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Name: LANCASTER LABS Contract: _____.

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

strument ID: HP03301 Calibration Date(s): 03/24/97 03/24/97

___.

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID:
RRF80 = >DC531 RRF5 = >DC533 RRF120= >DC535 RRF50 = >DC534 RRF160= >DC532

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
2-Nitroaniline	.289	.496	.504	.532	.510	.466	21.4	1STDEG
imethylphthalate	1.393	1.457	1.417	1.387	1.375	1.406	2.3	AVG
,6-Dinitrotoluene	.169	.321	.324	.341	.330	.297	24.1	1STDEG
Acenaphthylene	1.864	2.013	1.930	1.822	1.792	1.884	4.7	AVG
3-Nitroaniline	.254	.379	.381	.406	.390	.362	17.0	1STDEG
cenaphthene *	1.310	1.287	1.218	1.124	1.147	1.217	6.7	AVG *
,4-Dinitrophenol #	.094	.140	.163	.201	.183	.156	26.5	AVG #
4-Nitrophenol #	.127	.171	.179	.198	.189	.173	16.0	1STDEG #
Dibenzofuran	1.744	1.751	1.686	1.591	1.589	1.672	4.7	AVG
,4-Dinitrotoluene	.307	.434	.452	.465	.459	.423	15.5	1STDEG
-Naphthylamine	.995	1.026	1.026	1.022	1.002	1.014	1.4	AVG
2-Naphthylamine	1.113	1.108	1.125	1.123	1.098	1.113	1.0	AVG
Diethylphthalate	1.415	1.407	1.397	1.313	1.324	1.371	3.6	AVG
-Chlorophenyl-phenylether	.657	.648	.619	.567	.576	.613	6.7	AVG
-ene	1.334	1.249	1.161	1.063	1.074	1.176	9.8	AVG
.roaniline	.255	.326	.335	.378	.354	.330	13.9	AVG
Dinitro-2-methylphenol	.063	.125	.137	.154	.147	.125	29.1	1STDEG
Nitrosodiphenylamine (1) *	.521	.563	.532	.510	.516	.529	3.9	AVG *
2-Diphenylhydrazine	.940	1.049	.977	.920	.932	.963	5.4	AVG
4-Bromophenyl-phenylether	.213	.244	.238	.226	.226	.229	5.2	AVG
Hexachlorobenzene	.268	.279	.269	.258	.257	.266	3.4	AVG
ntachlorophenol *	.111	.148	.161	.170	.166	.151	15.8	1STDEG *
enanthrene	1.140	1.146	1.082	1.022	1.019	1.082	5.7	AVG
Anthracene	1.084	1.150	1.092	1.012	1.038	1.075	4.9	AVG
arbazole	.930	.993	.956	.943	.931	.951	2.7	AVG
-n-butylphthalate	1.182	1.358	1.356	1.228	1.269	1.279	6.1	AVG
uoranthene *	1.010	1.068	1.058	.978	.988	1.021	4.0	AVG *
Benzidine	1.022	.872	.784	.749	.694	.824	15.6	AVG
rene	1.698	1.776	1.643	1.688	1.479	1.657	6.7	AVG
tylbenzylphthalate	.672	.833	.828	.841	.773	.790	9.0	AVG
,3'-Dichlorobenzidine	.404	.517	.509	.512	.527	.494	10.2	AVG
Benzo(a)anthracene	1.326	1.391	1.351	1.385	1.344	1.359	2.0	AVG
is(2-Ethylhexyl)phthalate	.983	1.151	1.132	1.050	1.009	1.065	7.0	AVG
rysene	1.210	1.264	1.230	1.233	1.213	1.230	1.8	AVG
-n-octylphthalate *	1.497	2.051	2.134	1.905	1.890	1.895	12.9	AVG *
7,12-Dimethylbenz[a]anthrace	.494	.596	.602	.554	.580	.565	7.8	AVG
nzo(b)fluoranthene	1.321	1.389	1.372	1.319	1.347	1.350	2.3	AVG
nzo(k)fluoranthene	1.207	1.314	1.309	1.219	1.254	1.261	3.9	AVG

(1) Cannot be separated from Diphenylamine

J = DURATED USED DUE TO POOR CURVE_FIT 4/m 3/31/97

6C Cont.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ame: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____.SAS No.: _____. SDG No.: _____.

strument ID: HP03301 Calibration Date(s): 03/24/97 03/24/97

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

AB FILE ID: RRF5 = >DC533 RRF50 = >DC534
RRF80 = >DC531 RRF120= >DC535 RRF160= >DC532

COMPOUND	RRF5	RRF50	RRF80	RRF120	RRF160	RRF	% RSD	CAL. METHOD
Benzo(a)pyrene	* 1.034	1.217	1.209	1.213	1.217	1.178	6.8	AVG *
ndeno(1,2,3-cd)pyrene	.857	1.068	1.052	1.182	1.013	1.034	11.3	AVG
ibenz(a,h)anthracene	.780	1.041	1.039	1.118	.981	.992	12.9	AVG
Benzo(g,h,i)perylene	.838	1.081	1.061	1.181	.992	1.031	12.4	AVG
-Fluorophenol	1.270	1.350	1.296	1.228	1.186	1.266	5.0	AVG
enol-d5	1.555	1.701	1.618	1.586	1.464	1.585	5.5	AVG
Phenol-d6	1.555	1.701	1.618	1.586	1.464	1.585	5.5	AVG
Nitrobenzene-d5	.352	.439	.442	.441	.426	.420	9.2	AVG
-Fluorobiphenyl	1.459	1.437	1.396	1.280	1.290	1.372	6.1	AVG
,4,6-Tribromophenol	.144	.205	.216	.222	.215	.200	16.0	1STDEG
Terphenyl-d14	1.048	1.100	1.036	1.062	.946	1.039	5.5	AVG

,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/uL in the 5 standard.
2,4-Dinitrophenol and 2 or 4-Chloronitrobenzene levels are 40 and 100 ng/uL respectively in the 5 standard.
Benzoic acid and Pentachlorophenol are at 20 ng/uL in the 5 standard.
Benzidine levels in the 5,50,80,120,160 standards are 95,200,320,480 and 640 ng/uL respectively.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC531 Date Analyzed: 03/24/97

Instrument ID: HP03301 Time Analyzed: 15:06

	EPA SAMPLE NO.	IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	48098	12.03	146015	15.44	68115	20.32
	UPPER LIMIT	96196		292030		136230	
	LOWER LIMIT	24049		73008		34058	
01	SBLKLC0804	47611	12.02	156719	15.42	80766	20.32
02	080LCLCS4	47555	12.02	155117	15.42	72709	20.31
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC531 Date Analyzed: 03/24/97

Instrument ID: HP03301 Time Analyzed: 15:06

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	110732	24.50	72948	31.43	63803	36.99
	UPPER LIMIT	221464		145896		127606	
	LOWER LIMIT	55366		36474		31902	
	EPA SAMPLE NO.						
01	SBLKLC0804	132796	24.50	91435	31.42	77673	36.98
02	080LCLCS4	110338	24.48	71773	31.41	62216	36.97
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC550 DFTPP Injection Date: 03/25/97

Instrument ID: HP03301 DFTPP Injection Time: 02:09

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	59.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	44.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.2
365	Greater than 1.00% of mass 198	1.93
441	Present, but less than mass 443	7.5
442	Greater than 40.0% of mass 198	50.3
443	17.0 - 23.0% of mass 442	9.7 (19.2)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
01	SSTD80	STD0837	>DC551	03/25/97	02:43
02	SB-01	2680801	>DC556	03/25/97	03:47
03	SB-02	2680802	>DC557	03/25/97	04:42
04	SB-03	2680803	>DC558	03/25/97	05:36
05	SB-04	2680804	>DC559	03/25/97	06:31
06	SB05A	2680806	>DC561	03/25/97	08:21
07	SB-29	2680808	>DC562	03/25/97	09:16
08	SB-06	2680809	>DC563	03/25/97	10:11
09	SB-07	2680810	>DC564	03/25/97	11:07
10	SB-05	2680805	>DC566	03/25/97	12:21
11	SB-29DL	2680808DL	>DC567	03/25/97	13:17
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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 02:43

Lab File ID: >DC551 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

	COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
	Pyridine	1.632	1.641	80.42	80.0	-.5
	N-Nitrosodimethylamine	.947	.990	83.67	80.0	-4.6
	2-Picoline	1.546	1.549	80.15	80.0	-.2
*	Phenol	1.555	1.575	81.03	80.0	-1.3*
	Aniline	1.922	1.939	80.68	80.0	-.9
	bis(2-Chloroethyl)ether	1.297	1.332	82.17	80.0	-2.7
	2-Chlorophenol	1.300	1.320	81.28	80.0	-1.6
	1,3-Dichlorobenzene	1.485	1.457	78.50	80.0	1.9
*	1,4-Dichlorobenzene	1.495	1.471	78.71	80.0	1.6*
	Benzyl alcohol	.750	.776	82.80	80.0	-3.5
	1,2-Dichlorobenzene	1.383	1.368	79.13	80.0	1.1
	2-Methylphenol	1.084	1.101	81.25	80.0	-1.6
	2,2'-oxybis(1-Chloropropane)	3.288	3.466	84.34	80.0	-5.4
	bis(2-Chloroisopropyl)ether	3.288	3.466	84.34	80.0	-5.4
	4-Methylphenol	1.090	1.098	80.55	80.0	-.7
	3- and 4-Methylphenol	1.090	1.098	80.55	80.0	-.7
	Acetophenone	2.885	2.767	76.72	80.0	4.1
#	N-Nitroso-di-n-propylamine	.905	.908	80.21	80.0	-.3#
	o-Toluidine	1.800	1.801	80.05	80.0	-.1
	Hexachloroethane	.611	.645	84.41	80.0	-5.5
	Nitrobenzene	.438	.452	82.58	80.0	-3.2
	Isophorone	.748	.739	79.08	80.0	1.1
*	2-Nitrophenol	.207	.228	87.91	80.0	-9.9*
	2,4-Dimethylphenol	.398	.396	79.65	80.0	.4
	Benzoic acid	.252	.271	77.48	80.0	3.1
	bis(2-Chloroethoxy)methane	.467	.473	80.91	80.0	-1.1
*	2,4-Dichlorophenol	.315	.317	80.49	80.0	-.6*
	1,2,4-Trichlorobenzene	.366	.357	78.04	80.0	2.5
	Naphthalene	1.037	1.007	77.75	80.0	2.8
	4-Chloroaniline	.445	.440	79.13	80.0	1.1
*	Hexachlorobutadiene	.217	.225	83.12	80.0	-3.9*
*	4-Chloro-3-methylphenol	.318	.318	79.96	80.0	.0*
	2-Methylnaphthalene	.614	.598	78.02	80.0	2.5
	1-Methylnaphthalene	.599	.577	77.03	80.0	3.7
#	Hexachlorocyclopentadiene	.414	.512	91.44	80.0	-14.3#
*	2,4,6-Trichlorophenol	.437	.461	84.50	80.0	-5.6*
	2,4,5-Trichlorophenol	.461	.487	84.46	80.0	-5.6
	2-Chloronaphthalene	1.242	1.267	81.65	80.0	-2.1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 02:43

Lab File ID: >DC551 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline	.466	.502	78.67	80.0	1.7
Dimethylphthalate	1.406	1.370	77.95	80.0	2.6
2,6-Dinitrotoluene	.297	.318	77.56	80.0	3.0
Acenaphthylene	1.884	1.903	80.80	80.0	-1.0
3-Nitroaniline	.362	.357	73.49	80.0	8.1
Acenaphthene *	1.217	1.211	79.59	80.0	.5*
2,4-Dinitrophenol #	.156	.159	81.23	80.0	-1.5#
4-Nitrophenol #	.173	.167	72.45	80.0	9.4#
Dibenzofuran	1.672	1.655	79.17	80.0	1.0
2,4-Dinitrotoluene	.423	.422	74.56	80.0	6.8
1-Naphthylamine	1.014	.973	76.71	80.0	4.1
2-Naphthylamine	1.113	1.050	75.47	80.0	5.7
Diethylphthalate	1.371	1.312	76.57	80.0	4.3
4-Chlorophenyl-phenylether	.613	.611	79.70	80.0	.4
Fluorene	1.176	1.132	76.96	80.0	3.8
4-Nitroaniline	.330	.305	74.07	80.0	7.4
4,6-Dinitro-2-methylphenol	.125	.142	80.28	80.0	-.3
N-Nitrosodiphenylamine (1) *	.529	.561	84.90	80.0	-6.1*
1,2-Diphenylhydrazine	.963	1.042	86.49	80.0	-8.1
4-Bromophenyl-phenylether	.229	.254	88.70	80.0	-10.9
Hexachlorobenzene	.266	.295	88.58	80.0	-10.7
Pentachlorophenol *	.151	.171	84.51	80.0	-5.6*
Phenanthrene	1.082	1.090	80.61	80.0	-.8
Anthracene	1.075	1.100	81.88	80.0	-2.3
Carbazole	.951	.946	79.59	80.0	.5
Di-n-butylphthalate	1.279	1.290	80.72	80.0	-.9
Fluoranthene *	1.021	1.056	82.79	80.0	-3.5*
Benzidine	.824	.749	290.90	320.0	9.1
Pyrene	1.657	1.565	75.58	80.0	5.5
Butylbenzylphthalate	.790	.759	76.87	80.0	3.9
3,3'-Dichlorobenzidine	.494	.505	81.78	80.0	-2.2
Benzo(a)anthracene	1.359	1.313	77.26	80.0	3.4
bis(2-Ethylhexyl)phthalate	1.065	1.027	77.17	80.0	3.5
Chrysene	1.230	1.184	77.00	80.0	3.7
Di-n-octylphthalate *	1.895	1.937	81.76	80.0	-2.2*
7,12-Dimethylbenz[a]anthrace	.565	.602	85.17	80.0	-6.5
Benzo(b)fluoranthene	1.350	1.367	81.05	80.0	-1.3
Benzo(k)fluoranthene	1.261	1.299	82.42	80.0	-3.0

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 02:43

Lab File ID: >DC551 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene *	1.178	1.195	81.14	80.0	-1.4*
Indeno(1,2,3-cd)pyrene	1.034	1.067	82.57	80.0	-3.2
Dibenz(a,h)anthracene	.992	1.044	84.16	80.0	-5.2
Benzo(g,h,i)perylene	1.031	1.068	82.93	80.0	-3.7
2-Fluorophenol	1.266	1.301	82.21	80.0	-2.8
Phenol-d5	1.585	1.609	81.24	80.0	-1.6
Phenol-d6	1.585	1.609	81.24	80.0	-1.6
Nitrobenzene-d5	.420	.442	84.22	80.0	-5.3
2-Fluorobiphenyl	1.372	1.408	82.06	80.0	-2.6
2,4,6-Tribromophenol	.200	.218	81.11	80.0	-1.4
Terphenyl-d14	1.039	.996	76.74	80.0	4.1

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

✓

1277

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID (Standard): >DC551 Date Analyzed: 03/25/97

Instrument ID: HP03301 Time Analyzed: 02:43

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	51973	12.01	160895	15.42	74103	20.31
	UPPER LIMIT	103946		321790		148206	
	LOWER LIMIT	25987		80448		37052	
	EPA SAMPLE NO.						
01	SB-01	42955	12.01	141873	15.42	68642	20.30
02	SB-02	35842	12.01	118244	15.42	64460	20.30
03	SB-03	45625	12.01	140708	15.42	69700	20.30
04	SB-04	52452	12.02	180260	15.43	95201	20.31
05	SB05A	38751	12.03	113234	15.42	55348	20.32
06	SB-29	52177	12.03	120648	15.47	87054	20.35
07	SB-06	56117	12.03	111532	15.46	92659	20.34
08	SB-07	62193	12.03	155275	15.46	83778	20.35
09	SB-05	50772	12.04	135314	15.47	77327	20.34
10	SB-29DL	49182	12.04	168055	15.45	83768	20.33
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

L Name: LANCASTER LABS Contract: _____.

) Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID (Standard): >DC551 Date Analyzed: 03/25/97

I strument ID: HP03301 Time Analyzed: 02:43

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	109503	24.48	75669	31.41	66547	36.97
	UPPER LIMIT	219006		151338		133094	
	LOWER LIMIT	54752		37835		33274	
	EPA SAMPLE NO.						
01	SB-01	104733	24.48	71064	31.40	61005	36.96
02	SB-02	117752	24.48	91596	31.40	69404	36.96
03	SB-03	111189	24.48	72605	31.40	63424	36.96
04	SB-04	153223	24.49	90063	31.41	69272	36.96
05	SB05A	92088	24.49	60936	31.40	51715	36.98
06	SB-29	109950	24.55	62013	31.45	52320	37.01
07	SB-06	120532	24.53	80921	31.46	83315	37.02
08	SB-07	89903	24.55	60908	31.47	61476	37.04
09	SB-05	112083	24.53	74116	31.46	65442	37.03
10	SB-29DL	129246	24.51	76990	31.42	63545	37.00
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC570 DFTPP Injection Date: 03/25/97

Instrument ID: HP03301 DFTPP Injection Time: 14:54

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	52.7
70	Less than 2.0% of mass 69	.3 (.5)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	1.83
441	Present, but less than mass 443	6.5
442	Greater than 40.0% of mass 198	44.9
443	17.0 - 23.0% of mass 442	8.4 (18.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD80	STD0837	>DC571	03/25/97	15:22
02	SB-29DL2	2680808DL2	>DC576	03/25/97	17:07
03	SB-06DL	2680809DL	>DC577	03/25/97	18:01
04	SB-06DL2	2680809DL2	>DC580	03/25/97	20:44
05	SB-05DL	2680805DL	>DC581	03/25/97	21:38
06	SB-07DL	2680810DL	>DC582	03/25/97	22:32
07	SBLKLC0784	SBLKLC078	>DC583	03/25/97	23:26
08	078LCLCS4	078LCLCS	>DC584	03/26/97	00:20
09	06--6	2679080	>DC585	03/26/97	01:15
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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 15:22

Lab File ID: >DC571 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine	1.632	1.534	75.15	80.0	6.1
N-Nitrosodimethylamine	.947	.948	80.10	80.0	-.1
2-Picoline	1.546	1.517	78.52	80.0	1.9
Phenol *	1.555	1.551	79.81	80.0	.2*
Aniline	1.922	1.961	81.63	80.0	-2.0
bis(2-Chloroethyl)ether	1.297	1.299	80.11	80.0	-.1
2-Chlorophenol	1.300	1.290	79.41	80.0	.7
1,3-Dichlorobenzene	1.485	1.411	76.02	80.0	5.0
1,4-Dichlorobenzene *	1.495	1.425	76.26	80.0	4.7*
Benzyl alcohol	.750	.825	88.01	80.0	-10.0
1,2-Dichlorobenzene	1.383	1.323	76.56	80.0	4.3
2-Methylphenol	1.084	1.158	85.43	80.0	-6.8
2,2'-oxybis(1-Chloropropane)	3.288	3.554	86.48	80.0	-8.1
bis(2-Chloroisopropyl)ether	3.288	3.554	86.48	80.0	-8.1
4-Methylphenol	1.090	1.140	83.66	80.0	-4.6
3- and 4-Methylphenol	1.090	1.140	83.66	80.0	-4.6
Acetophenone	2.885	2.861	79.32	80.0	.9
N-Nitroso-di-n-propylamine #	.905	.942	83.26	80.0	-4.1#
o-Toluidine	1.800	1.881	83.60	80.0	-4.5
Hexachloroethane	.611	.616	80.63	80.0	-.8
Nitrobenzene	.438	.436	79.67	80.0	.4
Isophorone	.748	.768	82.15	80.0	-2.7
2-Nitrophenol *	.207	.218	84.01	80.0	-5.0*
2,4-Dimethylphenol	.398	.394	79.14	80.0	1.1
Benzoic acid	.252	.307	85.93	80.0	-7.4
bis(2-Chloroethoxy)methane	.467	.462	79.18	80.0	1.0
2,4-Dichlorophenol *	.315	.322	81.79	80.0	-2.2*
1,2,4-Trichlorobenzene	.366	.354	77.29	80.0	3.4
Naphthalene	1.037	.982	75.79	80.0	5.3
4-Chloroaniline	.445	.449	80.67	80.0	-.8
Hexachlorobutadiene *	.217	.219	80.72	80.0	-.9*
4-Chloro-3-methylphenol *	.318	.337	84.64	80.0	-5.8*
2-Methylnaphthalene	.614	.607	79.13	80.0	1.1
1-Methylnaphthalene	.599	.585	78.19	80.0	2.3
Hexachlorocyclopentadiene #	.414	.468	83.53	80.0	-4.4#
2,4,6-Trichlorophenol *	.437	.461	84.53	80.0	-5.7*
2,4,5-Trichlorophenol	.461	.489	84.88	80.0	-6.1
2-Chloronaphthalene	1.242	1.219	78.56	80.0	1.8

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Name: LANCASTER LABS Contract: _____.

Code: LANCAS . Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 15:22

Lab File ID: >DC571 Init. Calib. Date(s): 03/24/97 03/24/97

RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.466	.482	75.73	80.0	5.3
Dimethylphthalate		1.406	1.317	74.97	80.0	6.3
2,6-Dinitrotoluene		.297	.305	74.57	80.0	6.8
Acenaphthylene		1.884	1.827	77.56	80.0	3.1
3-Nitroaniline		.362	.339	69.81	80.0	12.7
Acenaphthene	*	1.217	1.154	75.85	80.0	5.2*
2,4-Dinitrophenol	#	.156	.156	79.89	80.0	.1#
4-Nitrophenol	#	.173	.153	66.84	80.0	16.4#
Dibenzofuran		1.672	1.576	75.40	80.0	5.8
2,4-Dinitrotoluene		.423	.383	67.94	80.0	15.1
1-Naphthylamine		1.014	.892	70.33	80.0	12.1
2-Naphthylamine		1.113	.968	69.53	80.0	13.1
Diethylphthalate		1.371	1.169	68.20	80.0	14.7
4-Chlorophenyl-phenylether		.613	.566	73.77	80.0	7.8
Fluorene		1.176	1.020	69.39	80.0	13.3
4-Nitroaniline		.330	.259	62.88	80.0	21.4
4,6-Dinitro-2-methylphenol		.125	.140	79.35	80.0	.8
N-Nitrosodiphenylamine (1)	*	.529	.555	83.95	80.0	-4.9*
1,2-Diphenylhydrazine		.963	1.025	85.08	80.0	-6.3
4-Bromophenyl-phenylether		.229	.260	90.77	80.0	-13.5
Hexachlorobenzene		.266	.292	87.72	80.0	-9.7
Pentachlorophenol	*	.151	.167	83.01	80.0	-3.8*
Phenanthrene		1.082	1.050	77.61	80.0	3.0
Anthracene		1.075	1.047	77.89	80.0	2.6
Carbazole		.951	.860	72.35	80.0	9.6
Di-n-butylphthalate		1.279	1.160	72.55	80.0	9.3
Fluoranthene	*	1.021	.930	72.89	80.0	8.9*
Benzidine		.824	.724	281.13	320.0	12.1
Pyrene		1.657	1.577	76.18	80.0	4.8
Butylbenzylphthalate		.790	.739	74.89	80.0	6.4
3,3'-Dichlorobenzidine		.494	.523	84.78	80.0	-6.0
Benzo(a)anthracene		1.359	1.336	78.61	80.0	1.7
bis(2-Ethylhexyl)phthalate		1.065	.988	74.20	80.0	7.2
Chrysene		1.230	1.219	79.28	80.0	.9
Di-n-octylphthalate	*	1.895	1.925	81.26	80.0	-1.6*
7,12-Dimethylbenz[a]anthrace		.565	.616	87.24	80.0	-9.0
Benzo(b)fluoranthene		1.350	1.391	82.43	80.0	-3.0
Benzo(k)fluoranthene		1.261	1.320	83.77	80.0	-4.7

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/25/97 Time: 15:22

Lab File ID: >DC571 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	*	1.178	1.203	81.69	80.0	-2.1*
Indeno(1,2,3-cd)pyrene		1.034	.984	76.12	80.0	4.8
Dibenz(a,h)anthracene		.992	.957	77.22	80.0	3.5
Benzo(g,h,i)perylene		1.031	.959	74.46	80.0	6.9
2-Fluorophenol		1.266	1.218	76.99	80.0	3.8
Phenol-d5		1.585	1.612	81.36	80.0	-1.7
Phenol-d6		1.585	1.612	81.36	80.0	-1.7
Nitrobenzene-d5		.420	.424	80.71	80.0	-.9
2-Fluorobiphenyl		1.372	1.345	78.40	80.0	2.0
2,4,6-Tribromophenol		.200	.212	79.05	80.0	1.2
Terphenyl-d14		1.039	1.002	77.17	80.0	3.5

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC571 Date Analyzed: 03/25/97

Instrument ID: HP03301 Time Analyzed: 15:22

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	59886	11.94	205966	15.35	104557	20.22
	UPPER LIMIT	119772		411932		209114	
	LOWER LIMIT	29943		102983		52279	
	EPA SAMPLE NO.						
01	SB-29DL2	51330	11.93	178000	15.34	97088	20.22
02	SB-06DL	47747	11.93	150749	15.35	70275	20.23
03	SB-06DL2	42829	11.94	138163	15.35	67002	20.23
04	SB-05DL	67450	11.96	186590	15.36	108949	20.25
05	SB-07DL	52450	11.96	184138	15.37	94344	20.26
06	SBLKLC0784	48676	11.95	172071	15.36	84358	20.25
07	078LCLCS4	47528	11.96	147245	15.36	70757	20.24
08	06--6	47609	11.95	147555	15.35	70543	20.24
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC571 Date Analyzed: 03/25/97

Instrument ID: HP03301 Time Analyzed: 15:22

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	143177	24.40	86335	31.32	75217	36.80
	UPPER LIMIT	286354		172670		150434	
	LOWER LIMIT	71589		43168		37609	
	EPA SAMPLE NO.						
01	SB-29DL2	161930	24.40	89500	31.32	61074	36.80
02	SB-06DL	104043	24.40	63411	31.33	54282	36.81
03	SB-06DL2	103929	24.41	60697	31.32	50941	36.82
04	SB-05DL	161360	24.42	89304	31.33	66691	36.83
05	SB-07DL	140802	24.43	64108	31.35	53776	36.84
06	SBLKLC0784	125614	24.42	69398	31.34	54840	36.85
07	078LCLCS4	114422	24.42	65896	31.34	56620	36.85
08	06--6	109163	24.41	66768	31.33	51460	36.84
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC61A DFTPP Injection Date: 03/26/97

Instrument ID: HP03301 DFTPP Injection Time: 17:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	40.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	25.1
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	9.0
442	Greater than 40.0% of mass 198	59.8
443	17.0 - 23.0% of mass 442	11.6 (19.3)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
01	SSTD80	STD0837	>DC61Y	03/26/97	18:03
02	06--6MS	2679081	>DC616	03/26/97	19:03
03	06--6MSD	2679082	>DC617	03/26/97	19:57
04	01--8	2679073	>DC618	03/26/97	20:51
05	01-44	2679074	>DC619	03/26/97	21:45
06	02--9	2679075	>DC620	03/26/97	22:40
07	03-20	2679076	>DC621	03/26/97	23:34
08	04-20	2679077	>DC622	03/27/97	00:28
09	04-29	2679078	>DC623	03/27/97	01:22
10	05-10	2679079	>DC624	03/27/97	02:16
11	07-14	2679083	>DC625	03/27/97	03:09
12	06-36	2679084	>DC626	03/27/97	04:03
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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/26/97 Time: 18:03

Lab File ID: >DC61Y Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

	COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
	Pyridine	1.632	1.610	78.92	80.0	1.4
	N-Nitrosodimethylamine	.947	.943	79.67	80.0	.4
	2-Picoline	1.546	1.530	79.18	80.0	1.0
*	Phenol	1.555	1.605	82.61	80.0	-3.3*
	Aniline	1.922	2.010	83.64	80.0	-4.6
	bis(2-Chloroethyl)ether	1.297	1.332	82.12	80.0	-2.6
	2-Chlorophenol	1.300	1.335	82.19	80.0	-2.7
	1,3-Dichlorobenzene	1.485	1.491	80.36	80.0	-.4
*	1,4-Dichlorobenzene	1.495	1.521	81.42	80.0	-1.8*
	Benzyl alcohol	.750	.837	89.29	80.0	-11.6
	1,2-Dichlorobenzene	1.383	1.403	81.19	80.0	-1.5
	2-Methylphenol	1.084	1.159	85.56	80.0	-7.0
	2,2'-oxybis(1-Chloropropane)	3.288	3.643	88.65	80.0	-10.8
	bis(2-Chloroisopropyl)ether	3.288	3.643	88.65	80.0	-10.8
	4-Methylphenol	1.090	1.177	86.40	80.0	-8.0
	3- and 4-Methylphenol	1.090	1.177	86.40	80.0	-8.0
	Acetophenone	2.885	2.964	82.18	80.0	-2.7
#	N-Nitroso-di-n-propylamine	.905	.970	85.67	80.0	-7.1#
	o-Toluidine	1.800	1.933	85.93	80.0	-7.4
	Hexachloroethane	.611	.647	84.61	80.0	-5.8
	Nitrobenzene	.438	.446	81.54	80.0	-1.9
	Isophorone	.748	.761	81.37	80.0	-1.7
*	2-Nitrophenol	.207	.217	83.59	80.0	-4.5*
	2,4-Dimethylphenol	.398	.396	79.55	80.0	.6
	Benzoic acid	.252	.256	73.92	80.0	7.6
	bis(2-Chloroethoxy)methane	.467	.470	80.51	80.0	-.6
*	2,4-Dichlorophenol	.315	.323	81.89	80.0	-2.4*
	1,2,4-Trichlorobenzene	.366	.362	79.18	80.0	1.0
	Naphthalene	1.037	1.026	79.14	80.0	1.1
	4-Chloroaniline	.445	.460	82.66	80.0	-3.3
*	Hexachlorobutadiene	.217	.227	83.90	80.0	-4.9*
*	4-Chloro-3-methylphenol	.318	.344	86.50	80.0	-8.1*
	2-Methylnaphthalene	.614	.626	81.63	80.0	-2.0
	1-Methylnaphthalene	.599	.612	81.70	80.0	-2.1
#	Hexachlorocyclopentadiene	.414	.455	81.31	80.0	-1.6#
*	2,4,6-Trichlorophenol	.437	.449	82.26	80.0	-2.8*
	2,4,5-Trichlorophenol	.461	.482	83.63	80.0	-4.5
	2-Chloronaphthalene	1.242	1.212	78.13	80.0	2.3

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

) Name: LANCASTER LABS Contract: _____.

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

nstrument ID: HP03301 Calibration Date: 03/26/97 Time: 18:03

Lab File ID: >DC61Y Init. Calib. Date(s): 03/24/97 03/24/97

in RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
2-Nitroaniline		.466	.507	79.43	80.0	.7
Dimethylphthalate		1.406	1.392	79.21	80.0	1.0
2,6-Dinitrotoluene		.297	.323	78.71	80.0	1.6
Acenaphthylene		1.884	1.855	78.75	80.0	1.6
3-Nitroaniline		.362	.380	78.15	80.0	2.3
Acenaphthene	*	1.217	1.190	78.22	80.0	2.2*
2,4-Dinitrophenol	#	.156	.176	89.85	80.0	-12.3#
4-Nitrophenol	#	.173	.188	80.85	80.0	-1.1#
Dibenzofuran		1.672	1.634	78.15	80.0	2.3
2,4-Dinitrotoluene		.423	.458	80.79	80.0	-1.0
1-Naphthylamine		1.014	.963	75.95	80.0	5.1
2-Naphthylamine		1.113	1.048	75.28	80.0	5.9
Diethylphthalate		1.371	1.359	79.28	80.0	.9
4-Chlorophenyl-phenylether		.613	.600	78.28	80.0	2.1
Fluorene		1.176	1.111	75.54	80.0	5.6
4-Nitroaniline		.330	.349	84.61	80.0	-5.8
4,6-Dinitro-2-methylphenol		.125	.144	80.99	80.0	-1.2
N-Nitrosodiphenylamine (1)	*	.529	.518	78.43	80.0	2.0*
1,2-Diphenylhydrazine		.963	.918	76.26	80.0	4.7
4-Bromophenyl-phenylether		.229	.246	85.88	80.0	-7.3
Hexachlorobenzene		.266	.288	86.53	80.0	-8.2
Pentachlorophenol	*	.151	.173	85.44	80.0	-6.8*
Phenanthrene		1.082	1.047	77.46	80.0	3.2
Anthracene		1.075	1.071	79.71	80.0	.4
Carbazole		.951	.945	79.53	80.0	.6
Di-n-butylphthalate		1.279	1.307	81.74	80.0	-2.2
Fluoranthene	*	1.021	1.083	84.92	80.0	-6.2*
Benzidine		.824	.697	270.61	320.0	15.4
Pyrene		1.657	1.451	70.07	80.0	12.4
Butylbenzylphthalate		.790	.737	74.68	80.0	6.7
3,3'-Dichlorobenzidine		.494	.543	87.99	80.0	-10.0
Benzo(a)anthracene		1.359	1.327	78.08	80.0	2.4
bis(2-Ethylhexyl)phthalate		1.065	1.060	79.66	80.0	.4
Chrysene		1.230	1.206	78.40	80.0	2.0
Di-n-octylphthalate	*	1.895	1.888	79.70	80.0	.4*
7,12-Dimethylbenz[a]anthrace		.565	.586	82.98	80.0	-3.7
Benzo(b)fluoranthene		1.350	1.354	80.25	80.0	-.3
Benzo(k)fluoranthene		1.261	1.255	79.64	80.0	.5

(1) Cannot be separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/26/97 Time: 18:03

Lab File ID: >DC61Y Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene *	1.178	1.185	80.51	80.0	-.6*
Indeno(1,2,3-cd)pyrene	1.034	1.007	77.87	80.0	2.7
Dibenz(a,h)anthracene	.992	.984	79.34	80.0	.8
Benzo(g,h,i)perylene	1.031	1.004	77.91	80.0	2.6
2-Fluorophenol	1.266	1.259	79.57	80.0	.5
Phenol-d5	1.585	1.657	83.66	80.0	-4.6
Phenol-d6	1.585	1.657	83.66	80.0	-4.6
Nitrobenzene-d5	.420	.426	81.18	80.0	-1.5
2-Fluorobiphenyl	1.372	1.332	77.65	80.0	2.9
2,4,6-Tribromophenol	.200	.248	92.01	80.0	-15.0
Terphenyl-d14	1.039	.959	73.87	80.0	7.7

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC61Y Date Analyzed: 03/26/97

Instrument ID: HP03301 Time Analyzed: 18:03

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	39700	11.76	135797	15.16	71860	20.04
	UPPER LIMIT	79400		271594		143720	
	LOWER LIMIT	19850		67899		35930	
	EPA SAMPLE NO.						
01	06--6MS	43197	11.77	150282	15.17	78557	20.05
02	06--6MSD	38263	11.77	133264	15.16	70418	20.04
03	01--8	38015	11.76	132581	15.16	70799	20.03
04	01-44	44203	11.76	142305	15.15	71928	20.04
05	02--9	34731	11.76	118276	15.17	64534	20.04
06	03-20	43462	11.77	142881	15.15	71552	20.03
07	04-20	35310	11.76	113901	15.18	64935	20.04
08	04-29	43581	11.77	135645	15.18	70788	20.04
09	05-10	36807	11.77	117277	15.18	61674	20.04
10	07-14	42023	11.77	130073	15.18	71298	20.04
11	06-36	38214	11.76	133248	15.16	73812	20.03
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC61Y Date Analyzed: 03/26/97

Instrument ID: HP03301 Time Analyzed: 18:03

	EPA SAMPLE NO.	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	119967	24.22	91356	31.11	86175	36.42
	UPPER LIMIT	239934		182712		172350	
	LOWER LIMIT	59984		45678		43088	
01	06--6MS	131270	24.21	98239	31.12	87514	36.42
02	06--6MSD	117677	24.21	88968	31.11	82522	36.41
03	01--8	115072	24.21	86156	31.10	82585	36.40
04	01-44	120627	24.20	92413	31.10	86060	36.40
05	02--9	107526	24.21	78896	31.12	75105	36.40
06	03-20	122368	24.20	98855	31.10	97220	36.40
07	04-20	105867	24.22	85955	31.12	86284	36.41
08	04-29	115888	24.22	89853	31.11	88628	36.41
09	05-10	100553	24.22	80560	31.12	80441	36.41
10	07-14	116890	24.22	95725	31.11	86812	36.40
11	06-36	131108	24.20	97390	31.10	83972	36.40
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

5B

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

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID: >DC630 DFTPP Injection Date: 03/27/97

Instrument ID: HP03301 DFTPP Injection Time: 08:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	43.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.00
441	Present, but less than mass 443	7.9
442	Greater than 40.0% of mass 198	53.6
443	17.0 - 23.0% of mass 442	10.0 (18.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD80	STD0837	>DC631	03/27/97	09:10
02	02--9DL	2679075DL	>DC636	03/27/97	10:10
03	04-20DL	2679077DL	>DC637	03/27/97	11:04
04	04-29DL	2679078DL	>DC638	03/27/97	11:58
05	05-10DL	2679079DL	>DC639	03/27/97	12:53
06	07-14DL	2679083DL	>DC640	03/27/97	13:47
07	04-20DL2	2679077DL2	>DC641	03/27/97	14:41
08	07-14DL2	2679083DL2	>DC643	03/27/97	16:29
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22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Instrument ID: HP03301 Calibration Date: 03/27/97 Time: 09:10

Lab File ID: >DC631 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND		RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Pyridine		1.632	1.481	72.59	80.0	9.3
N-Nitrosodimethylamine		.947	.899	75.96	80.0	5.0
2-Picoline		1.546	1.541	79.76	80.0	.3
Phenol	*	1.555	1.593	82.00	80.0	-2.5*
Aniline		1.922	1.997	83.11	80.0	-3.9
bis(2-Chloroethyl)ether		1.297	1.311	80.86	80.0	-1.1
2-Chlorophenol		1.300	1.323	81.42	80.0	-1.8
1,3-Dichlorobenzene		1.485	1.458	78.53	80.0	1.8
1,4-Dichlorobenzene	*	1.495	1.470	78.67	80.0	1.7*
Benzyl alcohol		.750	.828	88.37	80.0	-10.5
1,2-Dichlorobenzene		1.383	1.378	79.75	80.0	.3
2-Methylphenol		1.084	1.153	85.10	80.0	-6.4
2,2'-oxybis(1-Chloropropane)		3.288	3.609	87.82	80.0	-9.8
bis(2-Chloroisopropyl)ether		3.288	3.609	87.82	80.0	-9.8
4-Methylphenol		1.090	1.159	85.04	80.0	-6.3
3- and 4-Methylphenol		1.090	1.159	85.04	80.0	-6.3
Acetophenone		2.885	2.860	79.30	80.0	.9
N-Nitroso-di-n-propylamine	#	.905	.939	82.94	80.0	-3.7#
o-Toluidine		1.800	1.889	83.96	80.0	-5.0
Hexachloroethane		.611	.620	81.09	80.0	-1.4
Nitrobenzene		.438	.440	80.33	80.0	-.4
Isophorone		.748	.762	81.54	80.0	-1.9
2-Nitrophenol	*	.207	.221	85.18	80.0	-6.5*
2,4-Dimethylphenol		.398	.396	79.55	80.0	.6
Benzoic acid		.252	.308	86.34	80.0	-7.9
bis(2-Chloroethoxy)methane		.467	.457	78.20	80.0	2.3
2,4-Dichlorophenol	*	.315	.319	80.86	80.0	-1.1*
1,2,4-Trichlorobenzene		.366	.355	77.68	80.0	2.9
Naphthalene		1.037	.982	75.81	80.0	5.2
4-Chloroaniline		.445	.455	81.85	80.0	-2.3
Hexachlorobutadiene	*	.217	.221	81.77	80.0	-2.2*
4-Chloro-3-methylphenol	*	.318	.348	87.49	80.0	-9.4*
2-Methylnaphthalene		.614	.611	79.68	80.0	.4
1-Methylnaphthalene		.599	.595	79.44	80.0	.7
Hexachlorocyclopentadiene	#	.414	.454	81.21	80.0	-1.5#
2,4,6-Trichlorophenol	*	.437	.450	82.45	80.0	-3.1*
2,4,5-Trichlorophenol		.461	.489	84.89	80.0	-6.1
2-Chloronaphthalene		1.242	1.193	76.87	80.0	3.9

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

Instrument ID: HP03301 Calibration Date: 03/27/97 Time: 09:10

Lab File ID: >DC631 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT	
2-Nitroaniline	.466	.526	82.38	80.0	-3.0	
Dimethylphthalate	1.406	1.396	79.43	80.0	.7	
2,6-Dinitrotoluene	.297	.335	81.52	80.0	-1.9	
Acenaphthylene	1.884	1.855	78.75	80.0	1.6	
3-Nitroaniline	.362	.387	79.41	80.0	.7	
Acenaphthene *	1.217	1.166	76.62	80.0	4.2*	
2,4-Dinitrophenol #	.156	.196	100.42	80.0	-25.5#	JG, CJC
4-Nitrophenol #	.173	.195	83.77	80.0	-4.7#	
Dibenzofuran	1.672	1.626	77.79	80.0	2.8	
2,4-Dinitrotoluene	.423	.461	81.19	80.0	-1.5	
1-Naphthylamine	1.014	.989	78.00	80.0	2.5	
2-Naphthylamine	1.113	1.074	77.19	80.0	3.5	
Diethylphthalate	1.371	1.331	77.63	80.0	3.0	
4-Chlorophenyl-phenylether	.613	.576	75.14	80.0	6.1	
Fluorene	1.176	1.080	73.46	80.0	8.2	
4-Nitroaniline	.330	.353	85.76	80.0	-7.2	
4,6-Dinitro-2-methylphenol	.125	.152	85.19	80.0	-6.5	
N-Nitrosodiphenylamine (1) *	.529	.515	78.01	80.0	2.5*	
1,2-Diphenylhydrazine	.963	.920	76.36	80.0	4.6	
4-Bromophenyl-phenylether	.229	.242	84.53	80.0	-5.7	
Hexachlorobenzene	.266	.289	86.65	80.0	-8.3	
Pentachlorophenol *	.151	.177	87.22	80.0	-9.0*	
Phenanthrene	1.082	1.032	76.30	80.0	4.6	
Anthracene	1.075	1.037	77.15	80.0	3.6	
Carbazole	.951	.914	76.87	80.0	3.9	
Di-n-butylphthalate	1.279	1.195	74.75	80.0	6.6	
Fluoranthene *	1.021	1.000	78.42	80.0	2.0*	
Benzidine	.824	.705	273.90	320.0	14.4	
Pyrene	1.657	1.584	76.48	80.0	4.4	
Butylbenzylphthalate	.790	.726	73.59	80.0	8.0	
3,3'-Dichlorobenzidine	.494	.540	87.49	80.0	-9.4	
Benzo(a)anthracene	1.359	1.321	77.73	80.0	2.8	
bis(2-Ethylhexyl)phthalate	1.065	.994	74.70	80.0	6.6	
Chrysene	1.230	1.197	77.82	80.0	2.7	
Di-n-octylphthalate *	1.895	1.705	71.96	80.0	10.1*	
7,12-Dimethylbenz[a]anthrace	.565	.565	80.03	80.0	-.0	
Benzo(b)fluoranthene	1.350	1.286	76.22	80.0	4.7	
Benzo(k)fluoranthene	1.261	1.244	78.96	80.0	1.3	

(1) Cannot be separated from Diphenylamine

DW 4/29

130 5/2/97

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: LANCASTER LABS Contract: _____.

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

GC/MS Instrument ID: HP03301 Calibration Date: 03/27/97 Time: 09:10

Lab File ID: >DC631 Init. Calib. Date(s): 03/24/97 03/24/97

Min RRF50 for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20.0%

COMPOUND	RRF	RRF80	ACTUAL CONC	TRUE CONC	% DRIFT
Benzo(a)pyrene	* 1.178	1.179	80.07	80.0	-.1*
Indeno(1,2,3-cd)pyrene	1.034	1.098	84.93	80.0	-6.2
Dibenz(a,h)anthracene	.992	1.060	85.50	80.0	-6.9
Benzo(g,h,i)perylene	1.031	1.101	85.45	80.0	-6.8
2-Fluorophenol	1.266	1.253	79.20	80.0	1.0
Phenol-d5	1.585	1.648	83.21	80.0	-4.0
Phenol-d6	1.585	1.648	83.21	80.0	-4.0
Nitrobenzene-d5	.420	.433	82.45	80.0	-3.1
2-Fluorobiphenyl	1.372	1.303	75.96	80.0	5.0
2,4,6-Tribromophenol	.200	.257	95.39	80.0	-19.2
Terphenyl-d14	1.039	1.016	78.27	80.0	2.2

(1) Cannot be separated from Diphenylamine

FORM VII SV-2 1/87 Rev.

Benzidine level in the 50 standard is 200 ng/uL.

1308

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: LANCASTER LABS Contract: _____.

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

Lab File ID (Standard): >DC631 Date Analyzed: 03/27/97

Instrument ID: HP03301 Time Analyzed: 09:10

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	49399	11.74	169635	15.14	89470	20.01
	UPPER LIMIT	98798		339270		178940	
	LOWER LIMIT	24700		84818		44735	
	EPA SAMPLE NO.						
01	02--9DL	52599	11.74	182575	15.13	96697	20.01
02	04-20DL	53001	11.74	178918	15.14	90978	20.01
03	04-29DL	44732	11.73	156247	15.14	86516	20.01
04	05-10DL	39081	11.74	133311	15.13	72811	20.00
05	07-14DL	51126	11.75	191271	15.14	99676	20.02
06	04-20DL2	33310	11.74	117169	15.13	62028	20.00
07	07-14DL2	45448	11.75	158658	15.15	85669	20.02
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

I Name: LANCASTER LABS Contract: _____.

b Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.

Lab File ID (Standard): >DC631 Date Analyzed: 03/27/97

I strument ID: HP03301 Time Analyzed: 09:10

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	148599	24.17	95520	31.07	91861	36.32
	UPPER LIMIT	297198		191040		183722	
	LOWER LIMIT	74300		47760		45931	
	EPA SAMPLE NO.						
01	02--9DL	162545	24.17	109792	31.06	85790	36.31
02	04-20DL	149074	24.17	103346	31.06	83966	36.32
03	04-29DL	156428	24.17	112596	31.06	87612	36.31
04	05-10DL	132096	24.17	101269	31.06	84437	36.31
05	07-14DL	160863	24.19	103528	31.08	85517	36.32
06	04-20DL2	108912	24.17	78248	31.06	60694	36.32
07	07-14DL2	147215	24.18	92051	31.08	70375	36.33
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22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

Organic Extraction Batchlog

Prep Analysis # 00813 BNA Water Extraction

Prep Group # 603 TC8 Water Dept: 26

BATCH NO. 97078WAB026076WE 300 3/19

Verified:

Start Date: 3-19-97

Start Time: 09.15

Tech 1: Mini Pump (30)

Tech 2: J. F 572

QC	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANKE	PBLKXI	1000	~~SS97061A~~	1.0			1.0	✓	OZ H2O
LCSE	LCSSL	1000	~~SS97061A~~	↓	MS97073C		↓	✓	↓

	Sample #	Sample Code	Amt (ml)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2679085	RB-4-	1000	~~SS97051A~~	1.0	1.0	✓		4678 4679	4/1/97	N
2	2679086	RB-5-	1000	~~SS97051A~~	↓	↓	✓		4678 4679	4/1/97	N
3											
4											
5											
6											
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20											

Additional Comment:

DF = Dilution Factor FV = Final Volume

Spike Solutions:

~~SS97051A~~ (2.0) 3-19-97 BNA SURROGATE STD. 55976647

MS97073C LCS SPIKE (100)

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	B10759	Na2SO4	964905
NaOH	966778A		
H2SO4	K35643		
Internal Standar		Balance #	

I-Evap/bath	°C	S-Evap/bath	°C	N-Evap	°C

Organic Extraction Batchlog

Prep Analysis # 00381 BNA Soil Extraction
Prep Group # 702 TC8 - Soil/Solid Dept: 26

Verified:
Start Date: 3-19-97
Start Time: 16:50
Tech 1: S. Duncan
Tech 2: D. Turnley 277

BATCH NO. 97078SLC026 0712 KERR GPC

QC	Sample Code	Amt (g)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKXP	60.0	SS97051A	1.0			10.0	N/A	Na_2SO_4
LCS6	LCSSS	60.0	SS97051A		MS97073C	1.0			
2679081MS	06-6MS	30.0	SS97051A		MS97073C				
2679082MSD	06-6MSD	30.0	SS97051A		MS97073C				

SLD 3-19-97

	Sample #	Sample Code	Amt (g)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2679073	01-8	30.0	SS97051A	1.0	10.0	N/A		4688 4689	4/1/97	N
2	2679074	01-44		SS97051A					4688 4689	4/1/97	N
3	2679075	02-9		SS97051A					4688 4689	4/1/97	N
4	2679076	03-20		SS97051A					4688 4689	4/1/97	N
5	2679077	04-20		SS97051A					4688 4689	4/1/97	N
6	2679078	04-29		SS97051A					4688 4689	4/1/97	N
7	2679079	05-10		SS97051A					4688 4689	4/1/97	N
8	2679080 bkg	06-6		SS97051A					4688 4689	4/1/97	N
	2679083	07-14		SS97051A					4688 4689	4/1/97	N
	2679084	06-36		SS97051A					4688 4689	4/1/97	N
11									4688 4689	4/1/97	N
12											
13											
14											
15											
16											
17											
18											
19											
20											

SLD 3-19-97

Additional Comment:

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	B11754/03-1763		
Acetone	B11726		
Na_2SO_4	96-1805		
Surrogate Standar	LA6360.4	Balance #	
S-Sonic/bath	45 °C	S-Evap/bath	°C
N-Sonic/bath	°C	N-Evap	°C

DF = Dilution Factor FV = Final Volume

Spike Solutions:

~~SS97051A~~ SLD 3-19-97 BNA SURROGATE STD.
MS97073C LCS SPIKE (100)

Organic Extraction Batchlog

Prep Analysis # 00813 BNA Water Extraction

Prep Group # 603 TC8 Water Dept: 26

BATCH NO. 97080WAD026 712/796 3/21

Verified:

Start Date: 3/21/97

Start Time: 1100

Tech 1: [illegible] 1706

Tech 2: WO 1712

QC	Sample Code	Amt ( )	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANK6	PBLKYW	1000	SS97051A	1.0					
LCS6	LCSU3	1000	SS97051A	1.0	MS97073C	1.0	1.0		D=H2O
LCSD6	LCSDVH	1000	SS97051A	1.0	MS97073C	1.0			
MS		1000	SS97051A	1.0		1.0			TPR
MSD		1000	SS97051A	1.0		1.0			

	Sample #	Sample Code	Amt ( )	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2679854	F-6-1	1000	SS97051A	1.0	1.0			4678 4679	4/2/97	P
2	2679856	F-6-2	1000	SS97051A	1.0				4678 4679	4/2/97	P
3	2679858	F-7-	1000	SS97051A	1.0				4678 4679	4/2/97	P
4	2679860	F-15-	1000	SS97051A	1.0				4678 4679	4/2/97	P
5	2679862	F-16-	1000	SS97051A	1.0				4678 4679	4/2/97	P
6	2679864	F-17-	1000	SS97051A	1.0				4678 4679	4/2/97	P
7	2680612	FIEFF	1000	SS97051A	1.0				4678 4679	4/3/97	N
8	2680807	RB-6	1000	SS97051A	1.0				4678 4679	4/3/97	N
	BG		1000	SS97051A				TPR			
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

WO 712 3-21-97

Additional Comment:

Solvent Used	Lot No.	Solvent Used	Lot No.
methylene chloride	BN7594	NA_2SO_4	964805
Sodium hydroxide	9667787		
sulfuric acid	K35043		
Internal Standard		Balance #	3/20/97
S-Evap/bath	95 °C	S-Evap/bath	°C
N-Evap	°C		

DF = Dilution Factor FV = Final Volume

Spike Solutions:

SS97051A BNA SURROGATE STD.

MS97073C LCS SPIKE (100)

Organic Extraction Batchlog

Prep Analysis # 00381 BNA Soil Extraction
Prep Group # 702 TC8 - Soil/Solid Dept: 26

Verified:
Start Date: ~~09:40~~ DT 11:09 3/21/97
Start Time: 09:40
Tech 1: D Trumbull 277
Tech 2:

BATCH NO. 97080SLC026078SC KERR GPC

QC	Sample Code	Amt (g)	SS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	Comments
BLANKC	PBLKYP	60	SS97051A	1.0			10		
LCSC	LCSTS	60	SS97051A	1.0	MS97073C	1.0	10		NA_2SO_4

DT 277 3/21/97

	Sample #	Sample Code	Amt (g)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
1	2680801	SB-01	30.0	SS97051A	1.0	10			4688 4689	4/3/97	N
2	2680802	SB-02	30.0	SS97051A					4688 4689	4/3/97	N
3	2680803	SB-03	30.0	SS97051A					4688 4689	4/3/97	N
4	2680804	SB-04	30.0	SS97051A					4688 4689	4/3/97	N
5	2680805	SB-05	30.0	SS97051A					4688 4689	4/3/97	N
6	2680806	SB05A	30.0	SS97051A					4688 4689	4/3/97	N
7	2680808	SB-29	30.0	SS97051A					4688 4689	4/3/97	N
8	2680809	SB-06	30.0	SS97051A					4688 4689	4/3/97	N
9	2680810	SB-07	30.0	SS97051A					4688 4689	4/3/97	N
10											
13											
14											
15											
16											
17											
18											
19											
20											

D.T. 277 3/21/97

Additional Comment:

Solvent Used	Lot No.	Solvent Used	Lot No.
MeCl2	BN 759		
Acetone	BN 726		
NA_2SO_4	964305		
rnal Standar	LA63604	Balance #5340	
ap/bath	97 °C	S-Evap/bath	°C
N-Evap	°C		

DF = Dilution Factor FV = Final Volume

Spike Solutions: ~~SS97064A~~ DT 3/21/97 (3)
~~SS97051A~~ BNA SURROGATE STD.
MS97073C LCS SPIKE (100)

2425 New Holland Pike • Lancaster, PA 17601-5994

GPC Runlog

Date: 3-19-97

ID: 5108

Technician: S Defuse

Calibration Date: 3-18-97

Technician:

Tube #	LL Number	Comments
1	Blank	GPC cleanup
2	↓	↓
3	MB	078 SLE
4	MB	078 SLD
5	MB	078 SLC
6	LCS	078 SLE
7	LCS	078 SLC
8	MS	078 SLE
9	MSD	078 SLE
10	BG	078 SLE
11	MS 2678729	
12	MSD 2678729	
13	BG 2678729	
14	MS 2679081	
15	MSD 2679082	
16	BG 2679080	
17	2679073	
18	2679074	
19	2679075	
20	2679076	
21	2679077	
22	2679078	
23	2679079	

Tube Column ID: 12

Oven Tube Column ID: 11

Lancaster Laboratories
3425 New Holland Pike • Lancaster, PA 17601-5994

GPC Runlog

Date: 3-14-97

.. ID: 5108 Technician: S. Dixon

Calibration Date: 3-8-97 Technician:

Tube #	LL Number	Comments
24	2679083	
25	2679084	
26	Blank	GPC Cleanup
27	↓	↓

Odd Tube Column ID: 12

Even Tube Column ID: 11

GPC Runlog

Date: 3/21/97

Inst. ID: 5108 Technician: D. Trimby 277

Calibration Date: 2-18-97 Technician:

Tube #	LL Number	Comments
1=Blank		GPC Cleanup
2=Blank		↓
3	MB	0805LC
4	LCS	0805LC
5	2680801	
6	2680802	
7	2680803	
8	2680804	
9	2680806	
10	2680805	
11	2680808	
12	2680809	
13	2680816	
14	Blank	GPC Cleanup
15	Blank	↓

Odd Tube Column ID: 12

Even Tube Column ID: 11

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP02550 **HP #03**

** Shift #1 Analyst:_____ *** Shift #2 Analyst: D. Brown *

Comment Code:

R = Reinjection necessary		X =	Sample sent to be reextracted
S = Surrogate problem		I =	Internal Standard problem
NU = Not used		F =	Further dilution required
MR = Meets requirements		IUO =	Internal use only
Cz = Confirms z, (z = I or X)		T =	Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>CC360	DFTPP	50 NG/UL	03/21/97	19:03			OK
1	>CC361	SSTD80	STD0737	03/21/97	19:31			
6	>CC366	SBLKWB0783	SBLKWB078	03/21/97	20:32	97078WA8076WE		
7	>CC367	078WBLCS3	078WBLCS	03/21/97	21:25	97078WA8076WE		
8	>CC368	RB-4-	2679085	03/21/97	22:17	97078WA8076WE		
9	>CC369	RB-5-	2679086	03/21/97	23:09	97078WA8076WE		
10	>CC370	SBLKWB0803	SBLKWB080	03/22/97	00:02	97080WAB		
11	>CC371	080WBLCS3	080WBLCS	03/22/97	00:55	97080WAB		
12	>CC372	080WBLCSD	080WBLCSD	03/22/97	01:47	97080WAB		
13	>CC373	NVSQR	2679553	03/22/97	02:39	97080WAB		
14	>CC374	NVSQRMS	2679553MS	03/22/97	03:32	97080WAB		
15	>CC375	NVSQRMSD	2679553MSD	03/22/97	04:24	97080WAB		
16	>CC376	79710	2677910	03/22/97	05:17	97080WAB		JP 6/11
1	>CC380	DFTPP	50 NG/UL	03/24/97	01:04			KP

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst NKC *** Shift #2 Analyst:

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

*

*

*

*

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC530	DFTPP	50 NG/UL	03/24/97	14:40			
1	>DC531	SSTD80	STD0837	03/24/97	15:06			
2	>DC532	SSTD160	STD0837	03/24/97	16:01			
3	>DC533	SSTD05	STD0837	03/24/97	16:56			
4	>DC534	SSTD50	STD0837	03/24/97	17:56			
5	>DC535	SSTD120	STD0837	03/24/97	18:51			
6	>DC536	SBLKLC0804	SBLKLC080	03/24/97	19:46	97080SLC078SC		
7	>DC537	080LCLCS4	080LCLCS	03/24/97	20:41	97080SLC078SC		
1	>DC550	DFTPP	50 NG/UL	03/25/97	02:09			

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst DKC *** Shift #2 Analyst:

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC550	DFTPP	50 NG/UL	03/25/97	02:09			MR
1	>DC551	SSTD80	STD0837	03/25/97	02:43			MR
6	>DC556	SB-01	2680801	03/25/97	03:47	97080SLC078SC		MR
7	>DC557	SB-02	2680802	03/25/97	04:42	97080SLC078SC		MR
8	>DC558	SB-03	2680803	03/25/97	05:36	97080SLC078SC		MR
9	>DC559	SB-04	2680804	03/25/97	06:31	97080SLC078SC		MR
10	>DC560	SB-05	2680805	03/25/97	07:26	97080SLC078SC		MR
11	>DC561	SB05A	2680806	03/25/97	08:21	97080SLC078SC		MR
12	>DC562	SB-29	2680808	03/25/97	09:16	97080SLC078SC		MR/F
13	>DC563	SB-06	2680809	03/25/97	10:11	97080SLC078SC		MR/F
14	>DC564	SB-07	2680810	03/25/97	11:07	97080SLC078SC		MR/F
1	>DC566	SB-05	2680805	03/25/97	12:21	97080SLC078SC	10	MR/F
1	>DC567	SB-29DL	2680808DL	03/25/97	13:17	97080SLC078SC	50	MR/F
1	>DC570	DFTPP	50 NG/UL	03/25/97	14:54			MR

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

* Shift #1 Analyst: AKC *** Shift #2 Analyst: AJE

Comment Code:

R = Reinjection necessary		X =	Sample sent to be reextracted
S = Surrogate problem		I =	Internal Standard problem
NU = Not used		F =	Further dilution required
MR = Meets requirements		IUO =	Internal use only
Cz = Confirms z, (z = I or X)		T =	Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC570	DFTPP	50 NG/UL	03/25/97	14:54			MR
1	>DC571	SSTD80	STD0837	03/25/97	15:22			MR
6	>DC576	SB-29DL2	26808080L2	03/25/97	17:07	97080SLC078SC	100	MR
7	>DC577	SB-06DL	26808090L	03/25/97	18:01	97080SLC078SC	50	MR/F
8	>DC578	SB-07DL	26808100L	03/25/97	18:55	97080SLC078SC	100	(NU)
9	>DC579	SB-05DL	26808050L	03/25/97	19:50	97080SLC078SC	50	(NU)
10	>DC580	~~SB-29DL2~~	~~SBLKLC078~~	03/25/97	20:44	~~97078SLC~~ 97080SLC078SC	100	MR
11	>DC581	~~SB-29DL~~	~~078LCLCS~~	03/25/97	21:38	~~97078SLC~~ 97080SLC078SC	100	MR
12	>DC582	~~06--6 2~~ 8)	~~679080~~	03/25/97	22:32	~~97078SLC~~ 97080SLC078SC	125	MR
16	>DC583	SBLKLC0784	SBLKLC078	03/25/97	23:26	97078SLC		MR
17	>DC584	078LCLCS4	078LCLCS	03/26/97	00:20	97078SLC		MR
18	>DC585	06--6 2	679080	03/26/97	01:15	97078SLC		MR
1	>DC590	DFTPP	50 NG/UL	03/26/97	02:37			MR

(3) (3) BKL/034
3/26/97

1450

Lancaster Laboratories, Inc.
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP03301 **HP #04**

*** Shift #1 Analyst AKG *** Shift #2 Analyst: DJE

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

ALS Btl #	Laboratory File ID	Client ID	Laboratory Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	>DC61A	DFTPP	50 NG/UL	03/26/97	17:28			MR
1	>DC61Y	SSTD80	STD0837	03/26/97	18:03			MR
6	>DC616	06--6MS	2679081	03/26/97	19:03	97078SLC		MR
7	>DC617	06--6MSD	2679082	03/26/97	19:57	97078SLC		MR
8	>DC618	01--8	2679073	03/26/97	20:51	97078SLC		MR
9	>DC619	01-44	2679074	03/26/97	21:45	97078SLC		MR
10	>DC620	02--9	2679075	03/26/97	22:40	97078SLC	5	MR/F
11	>DC621	03-20	2679076	03/26/97	23:34	97078SLC		MR
12	>DC622	04-20	2679077	03/27/97	00:28	97078SLC	5	MR/F
13	>DC623	04-29	2679078	03/27/97	01:22	97078SLC	5	MR/F
14	>DC624	05-10	2679079	03/27/97	02:16	97078SLC	20	MR/F
15	>DC625	07-14	2679083	03/27/97	03:09	97078SLC		MR/F
16	>DC626	06-36	2679084	03/27/97	04:03	97078SLC		MR
1	>DC630	DFTPP	50 NG/UL	03/27/97	08:43			MR

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Aq., S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units)	Qualification Limit	
						5x	10x
P	S	MB	PBW125	none			
P	Aq	EB	RB-Y	none			
P	Aq	EB	RB-S	none			

1 - V = Volatile; S = Semivolatile; P = Pesticide/PCB; O = Other: _____

Aq. = Aqueous; S = Solid

2 - MB = Method Blank; TB = Trip Blank; EB = Equipment Rinse Blank; FB = Field Blank
IB = Instrument Blank; SB = Storage Blank

* = Inferred from instrument printouts and/or supporting data; mass spectra not provided.

+ = Contaminant observed on one column only.

Notes: _____

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

GC Column(1): DB608 ID: 0.53 (mm) GC Column(2): DB1701 ID: 0.53 (mm)

	SAMPLE	SAMPLE CODE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	TOT OUT
01	BLANKA	PBLKZJ	71	74	80	77	0
02	2680805	SB-05	90	0 *	61	117	1
03	2682196	SRSD4	116	138 *	129 *	133 *	3
04	2682197 MS	SRSD4MS	109	127 *	111	114	1
05	2682198 MSD	SRSD4MSD	109	127 *	117	115	1

only conf. column out - no qualification

~~J~~ ~~UJ~~ RJ 5/20/11

J UJ
J UJ
J UJ
non project sample

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION	
TCX = Tetrachloro-m-xylene	(50-120)	134	ug/Kg
DCB = Decachlorbiphenyl	(50-120)	134	ug/Kg

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Matrix Spike - Sample Code No.: SRSD4

Compound	Spike Added (ug/Kg)	Sample Concen (ug/Kg)	MS Concen (ug/Kg)	MSD Concen (ug/Kg)	MS % REC#	MSD % REC#	MS-MSD % REC Limits	% RPD #	% RPD LIM
alpha-BHC	92.3	0	106	107	115	116	(65-127)	1	50
gamma-BHC (Lindan	92.3	0	101	102	109	111	(73-120)	1	50
beta-BHC	92.4	0	104	104	113	113	(50-137)	0	50
Heptachlor	92.2	0	92.7	94.0	101	102	(69-120)	1	50
delta-BHC	92.2	0	98.9	100	107	108	(67-120)	1	50
Aldrin	92.3	0	104	104	113	113	(67-120)	0	50
Heptachlor epoxid	92.3	0	98.3	100	107	108	(60-120)	2	50
gamma-Chlordane	92.3	0	92.9	93.4	101	101	(75-125)	1	50
alpha-Chlordane	92.3	0	99.6	101	108	109	(75-125)	1	50
Endosulfan I	92.3	0	78.4	78.3	85	85	(60-120)	0	50
4,4'-DDE	92.3	0	94.4	95.7	102	104	(72-120)	1	50
Dieldrin	92.3	0	95.0	95.3	103	103	(79-120)	0	50
Endrin	92.2	0	111	110	120	119	(68-126)	1	50
4,4'-DDD	92.2	0	102	103	111	112	(72-123)	1	50
Endosulfan II	92.4	0	86.5	85.3	94	92	(62-120)	1	50
4,4'-DDT	92.3	0	102	102	111	111	(61-121)	0	50
Endrin aldehyde	92.3	0	95.5	93.1	103	101	(57-123)	3	50
Endosulfan sulfat	92.3	2.25	101	99.4	107	105	(62-120)	2	50
Methoxychlor	92.3	0	67.1	69.3	73	75	(57-141)	3	50
Endrin ketone	92.4	0	94.3	94.6	102	102	(75-125)	0	50

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

* Values outside of QC limits

RPD: 0 out of 20 outside limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

Sample No.: 2682196 Batch: 970830003A

FORM III PEST -2

4C

PESTICIDE METHOD BLANK SUMMARY

SAMPLE CODE NO. PBLKZJ

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: BLANKA Lab File ID:

Matrix: (soil/water) SOIL Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 03/24/97

Date Analyzed (1): 03/29/97 Date Analyzed (2): 03/29/97

Time Analyzed (1): 8:07 Time Analyzed (2): 8:07

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

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

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBLKZJ	BLANKA	03/29/97	03/29/97
02	SB-05	2680805	03/29/97	03/29/97
03	SRSD4	2682196	03/29/97	03/29/97
04	SRSD4MS	2682197	03/29/97	03/29/97
05	SRSD4MSD	2682198	03/29/97	03/29/97

COMMENTS: _____

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO. PBLKZJ

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

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

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

% Moisture: Date Received:

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/97

Concentrated Extract Volume 10000 (uL) Date Analyzed: 03/29/97

Injection Volume: 1 (uL) Dilution Factor: 1

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND (UG/L or UG/KG) UG/KG	Q	
319-84-6	alpha-BHC	0.42	U
58-89-9	gamma-BHC (Lindane)	0.55	U
319-85-7	beta-BHC	1.1	U
76-44-8	Heptachlor	1.0	U
319-86-8	delta-BHC	0.61	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	0.59	U
5103-74-2	gamma-Chlordane	0.23	U
5103-71-9	alpha-Chlordane	1.0	U
959-98-8	Endosulfan I	1.2	U
72-55-9	4,4'-DDE	0.68	U
60-57-1	Dieldrin	0.42	U
72-20-8	Endrin	0.40	U
72-54-8	4,4'-DDD	0.20	U
33213-65-9	Endosulfan II	0.79	U
50-29-3	4,4'-DDT	0.60	U
7421-93-4	Endrin aldehyde	1.1	U
1031-07-8	Endosulfan sulfate	0.65	U
72-43-5	Methoxychlor	1.6	U
53494-70-5	Endrin ketone	1.0	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	26	U
53469-21-9	Aroclor-1242	13	U
12674-11-2	Aroclor-1016	34	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	28	U
11096-82-5	Aroclor-1260	32	U
8001-35-2	Toxaphene	19	U

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
alpha-BHC	6.69	6.69	6.69	6.69	6.69	6.69	6.64	6.75
gamma-BHC (Lindane)	7.98	7.98	7.98	7.98	7.98	7.98	7.93	8.04
beta-BHC	8.22	8.22	8.21	8.22	8.21	8.21	8.16	8.27
Heptachlor	9.15	9.15	9.15	9.15	9.15	9.15	9.10	9.21
delta-BHC	9.50	9.50	9.50	9.50	9.50	9.50	9.44	9.55
Aldrin	10.34	10.34	10.34	10.34	10.34	10.34	10.29	10.40
Heptachlor epoxide	12.39	12.39	12.39	12.39	12.39	12.39	12.31	12.46
gamma-Chlordane	13.01	13.01	13.01	13.01	13.01	13.01	12.93	13.08
alpha-Chlordane	13.63	13.63	13.62	13.62	13.62	13.62	13.55	13.70
Endosulfan I	13.72	13.72	13.72	13.72	13.72	13.72	13.65	13.79
4,4'-DDE	14.62	14.61	14.61	14.61	14.61	14.61	14.54	14.68
Dieldrin	14.89	14.89	14.89	14.89	14.89	14.89	14.81	14.96
Endrin	16.28	16.28	16.27	16.28	16.27	16.27	16.20	16.35
4,4'-DDD	16.75	16.75	16.75	16.75	16.75	16.75	16.67	16.82
Endosulfan II	16.97	16.97	16.97	16.97	16.97	16.97	16.89	17.04
4,4'-DDT	17.91	17.91	17.90	17.91	17.90	17.90	17.83	17.98
Endrin aldehyde	18.23	18.23	18.22	18.23	18.23	18.22	18.15	18.30
Endosulfan sulfate	18.72	18.72	18.71	18.72	18.71	18.71	18.64	18.79
Methoxychlor	21.59	21.59	21.58	21.58	21.58	21.58	21.51	21.66
Endrin ketone	22.08	22.08	22.08	22.08	22.07	22.08	22.00	22.15
Tetrachloro-m-xylene	4.74	4.74	4.74	4.73	4.73	4.74	4.68	4.79
Decachlorbiphenyl	30.37	30.37	30.36	30.36	30.36	30.36	30.25	30.47

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MIDLEVEL RT	RT WINDOW FROM	TO
Endosulfan I			13.72			13.72	13.65	13.79
4,4'-DDE			14.61			14.61	14.54	14.68
Methoxychlor			21.59			21.58	21.51	21.66
4,4'-DDD			16.75			16.75	16.67	16.82
Endrin ketone			22.08			22.08	22.00	22.15
Endrin aldehyde			18.23			18.22	18.15	18.30
Endrin			16.28			16.27	16.20	16.35
alpha-Chlordane			13.62			13.62	13.55	13.70
Heptachlor			9.15			9.15	9.10	9.21
Dieldrin			14.88			14.89	14.81	14.96
gamma-Chlordane			13.01			13.01	12.93	13.08
4,4'-DDT			17.90			17.90	17.83	17.98
Endosulfan II			16.97			16.97	16.89	17.04
delta-BHC			9.50			9.50	9.44	9.55
beta-BHC			8.21			8.21	8.16	8.27
Aldrin			10.34			10.34	10.29	10.40
Endosulfan sulfate			18.71			18.71	18.64	18.79
Heptachlor epoxide			12.39			12.39	12.31	12.46
alpha-BHC			6.69			6.69	6.64	6.75
gamma-BHC (Lindane)			7.98			7.98	7.93	8.04
Decachlorbiphenyl			30.35			30.36	30.25	30.47
Tetrachloro-m-xylene			4.73			4.74	4.68	4.79

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
Endosulfan II	14.79	14.79	14.78	14.78	14.78	14.78	14.71	14.86
alpha-BHC	5.54	5.54	5.54	5.54	5.53	5.54	5.48	5.59
gamma-BHC (Lindane)	6.66	6.65	6.65	6.64	6.64	6.65	6.59	6.70
Heptachlor	7.37	7.37	7.37	7.37	7.37	7.37	7.31	7.42
Aldrin	8.26	8.26	8.26	8.26	8.25	8.26	8.20	8.31
beta-BHC	8.82	8.82	8.80	8.79	8.77	8.80	8.75	8.86
delta-BHC	9.64	9.64	9.63	9.62	9.60	9.63	9.57	9.68
Heptachlor epoxide	10.31	10.31	10.31	10.31	10.30	10.31	10.25	10.36
Endosulfan I	11.31	11.31	11.30	11.30	11.30	11.30	11.23	11.38
gamma-Chlordane	11.40	11.40	11.39	11.39	11.39	11.39	11.32	11.47
alpha-Chlordane	11.61	11.61	11.61	11.61	11.60	11.61	11.53	11.68
4,4'-DDE	12.12	12.11	12.11	12.10	12.09	12.11	12.03	12.18
Dieldrin	12.49	12.49	12.49	12.49	12.49	12.49	12.41	12.56
Endrin	13.20	13.20	13.20	13.20	13.20	13.20	13.13	13.28
4,4'-DDD	14.79	14.79	14.78	14.78	14.78	14.78	14.71	14.86
4,4'-DDT	15.36	15.36	15.35	15.35	15.34	15.35	15.28	15.43
Endrin aldehyde	16.18	16.18	16.17	16.17	16.16	16.17	16.09	16.24
Endosulfan sulfate	17.23	17.23	17.22	17.22	17.21	17.22	17.14	17.29
Methoxychlor	17.54	17.53	17.52	17.51	17.50	17.52	17.44	17.59
Endrin ketone	18.67	18.67	18.67	18.67	18.66	18.67	18.59	18.74
Tetrachloro-m-xylene	3.69	3.69	3.68	3.67	3.67	3.68	3.63	3.74
Decachlorbiphenyl	22.62	22.62	22.61	22.62	22.61	22.61	22.50	22.72

endosulfan II and ddd coelute mn 4/11/97

FORM VI PEST-1

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.59R Time Analyzed: 2:48

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.52	5.48	5.59	9.23	10.00	-7.7
gamma-BHC (Lindane)	6.63	6.59	6.70	8.50	10.00	-15.0
beta-BHC	8.78	8.75	8.86	9.52	10.00	-4.8
4,4'-DDE	12.11	12.03	12.18	0.18		
Endrin	13.19	13.13	13.28	48.99	50.10	-2.2
4,4'-DDT	15.33	15.28	15.43	99.68	100.40	-0.7
Endrin aldehyde	16.18	16.09	16.24	3.19		
Methoxychlor	17.50	17.44	17.59	220.00	250.70	-12.2
Endrin ketone	18.66	18.59	18.74	1.72		
Tetrachloro-m-xylene	3.66	3.61	3.76	21.13	20.10	5.1
Decachlorbiphenyl	22.61	22.50	22.72	15.94	20.10	-20.7

4,4'-DDT % breakdown: 2.6 cmd 4/11/97 Endrin % breakdown: 7.5 Combined % breakdown: 7.8

~~DDD~~ 14.80 cmd 4/11/97

endosulfan II / DDD coelute on this column.

add

rt	rt window	calc amount
14.80	14.71 - 14.86	1.1534

FORM VII PEST-1

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.79R Time Analyzed: 14:37

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.52	5.48	5.59	9.50	10.00	-5.0
gamma-BHC (Lindane)	6.63	6.59	6.70	8.72	10.00	-12.8
beta-BHC	8.77	8.75	8.86	10.12	10.00	1.2
4,4'-DDE	12.10	12.03	12.18	0.23		
Endrin	13.19	13.13	13.28	51.60	50.10	3.0
4,4'-DDT	15.33	15.28	15.43	104.34	100.40	3.9
Endrin aldehyde	16.18	16.09	16.24	3.21		
Methoxychlor	17.49	17.44	17.59	231.85	250.70	-7.5
Endrin ketone	18.66	18.59	18.74	1.87		
Tetrachloro-m-xylene	3.65	3.61	3.76	23.10	20.10	14.9
Decachlorbiphenyl	22.60	22.50	22.72	16.70	20.10	-16.9

1,4'-DDT % breakdown: ~~5~~ Endrin % breakdown: 7.5 Combined % breakdown: 7.8

2.6 ddt breakdown cmk 4/11/97

endosulfan II and 4,4'-ddd coelute on this column cmk 4/11/97.

	rt	rt window	calc. amount
DDD	14.79	14.71 - 14.86	1.12

FORM VII PEST-1

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.58R Time Analyzed: 2:13

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	6.69	6.64	6.75	8.10	8.00	1.2
gamma-BHC (Lindane)	7.98	7.93	8.04	8.11	8.00	1.4
beta-BHC	8.21	8.16	8.27	8.41	8.00	5.1
Heptachlor	9.15	9.10	9.21	8.01	8.00	0.2
delta-BHC	9.50	9.44	9.55	7.88	8.00	-1.5
Aldrin	10.34	10.29	10.40	8.06	8.00	0.8
Heptachlor epoxide	12.39	12.31	12.46	8.12	8.00	1.6
gamma-Chlordane	13.01	12.93	13.08	7.97	8.00	-0.4
alpha-Chlordane	13.62	13.55	13.70	8.17	8.00	2.1
Endosulfan I	13.72	13.65	13.79	8.11	8.00	1.3
4,4'-DDE	14.61	14.54	14.68	15.72	16.00	-1.7
Dieldrin	14.88	14.81	14.96	15.58	16.00	-2.6
Endrin	16.28	16.20	16.35	14.80	16.00	-7.5
4,4'-DDD	16.75	16.67	16.82	15.36	16.00	-4.0
Endosulfan II	16.97	16.89	17.04	15.78	16.00	-1.4
4,4'-DDT	17.90	17.83	17.98	15.77	16.00	-1.4
Endrin aldehyde	18.23	18.15	18.30	13.75	16.00	-14.0
Endosulfan sulfate	18.71	18.64	18.79	15.61	16.00	-2.4
Methoxychlor	21.59	21.51	21.66	82.09	80.00	2.6
Endrin ketone	22.08	22.00	22.15	15.38	16.00	-3.9
Tetrachloro-m-xylene	4.73	4.68	4.79	17.08	16.00	6.7
Decachlorbiphenyl	30.35	30.25	30.47	34.44	32.00	7.6

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.60R Time Analyzed: 3:24

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	6.59	6.53	6.67	207.23	200.48	3.4
	7.92	7.86	8.00			
	9.23	9.17	9.31			
	11.50	11.44	11.58			
	13.00	12.93	13.07			
	13.25	13.18	13.32			
Aroclor-1260	15.19	15.13	15.27	196.55	200.80	-2.1
	15.88	15.82	15.96			
	16.23	16.16	16.30			
	19.40	19.34	19.48			
	19.97	19.90	20.04			
	22.13	22.07	22.21			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A

Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.78R Time Analyzed: 14:02

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	6.68	6.64	6.75	8.49	8.00	6.1
gamma-BHC (Lindane)	7.97	7.93	8.04	8.50	8.00	6.3
beta-BHC	8.21	8.16	8.27	8.85	8.00	10.6
Heptachlor	9.14	9.10	9.21	8.20	8.00	2.5
delta-BHC	9.49	9.44	9.55	8.47	8.00	5.9
Aldrin	10.33	10.29	10.40	8.33	8.00	4.1
Heptachlor epoxide	12.38	12.31	12.46	8.40	8.00	5.0
gamma-Chlordane	13.00	12.93	13.08	8.20	8.00	2.5
alpha-Chlordane	13.61	13.55	13.70	8.20	8.00	2.5
Endosulfan I	13.71	13.65	13.79	8.15	8.00	1.9
4,4'-DDE	14.60	14.54	14.68	16.73	16.00	4.6
Dieldrin	14.88	14.81	14.96	16.19	16.00	1.2
Endrin	16.27	16.20	16.35	15.52	16.00	-3.0
4,4'-DDD	16.74	16.67	16.82	16.24	16.00	1.5
Endosulfan II	16.96	16.89	17.04	16.35	16.00	2.2
4,4'-DDT	17.90	17.83	17.98	16.35	16.00	2.2
Endrin aldehyde	18.22	18.15	18.30	14.01	16.00	-12.5
Endosulfan sulfate	18.70	18.64	18.79	16.12	16.00	0.8
Methoxychlor	21.58	21.51	21.66	84.74	80.00	5.9
Endrin ketone	22.07	22.00	22.15	16.22	16.00	1.4
Tetrachloro-m-xylene	4.73	4.68	4.79	18.26	16.00	14.1
Decachlorbiphenyl	30.33	30.25	30.47	35.59	32.00	11.2

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.80R Time Analyzed: 15:13

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	6.58	6.53	6.67	219.74	200.48	9.6
	7.91	7.86	8.00			
	9.22	9.17	9.31			
	11.49	11.44	11.58			
	12.99	12.93	13.07			
	13.24	13.18	13.32			
Aroclor-1260	15.19	15.13	15.27	203.55	200.80	1.4
	15.87	15.82	15.96			
	16.22	16.16	16.30			
	19.39	19.34	19.48			
	19.96	19.90	20.04			
	22.12	22.07	22.21			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.58R Time Analyzed: 2:13

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.53	5.48	5.59	7.84	8.00	-2.0
gamma-BHC (Lindane)	6.63	6.59	6.70	7.04	8.00	-12.0
Heptachlor	7.37	7.31	7.42	6.53	8.00	-18.3
Aldrin	8.25	8.20	8.31	7.73	8.00	-3.3
beta-BHC	8.78	8.75	8.86	8.36	8.00	4.5
delta-BHC	9.60	9.57	9.68	7.61	8.00	-4.9
Heptachlor epoxide	10.30	10.25	10.36	7.75	8.00	-3.1
Endosulfan I	11.30	11.23	11.38	7.48	8.00	-6.5
gamma-Chlordane	11.39	11.32	11.47	7.56	8.00	-5.5
alpha-Chlordane	11.60	11.53	11.68	7.56	8.00	-5.5
4,4'-DDE	12.09	12.03	12.18	13.76	16.00	-14.0
Dieldrin	12.49	12.41	12.56	14.68	16.00	-8.3
Endrin	13.20	13.13	13.28	13.94	16.00	-12.8
Endosulfan II / DDD	14.78	14.71	14.86	14.59	16.00	-8.8
4,4'-DDT	15.35	15.28	15.43	15.31	16.00	-4.3
Endrin aldehyde	16.17	16.09	16.24	14.03	16.00	-12.3
Endosulfan sulfate	17.21	17.14	17.29	14.58	16.00	-8.9
Methoxychlor	17.51	17.44	17.59	70.21	80.00	-12.2
Endrin ketone	18.66	18.59	18.74	15.16	16.00	-5.3
Tetrachloro-m-xylene	3.67	3.61	3.76	18.00	16.00	12.5
Decachlorbiphenyl	22.62	22.50	22.72	33.46	32.00	4.6

x DLL 558 4/11/97 (coelution)

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.60R Time Analyzed: 3:24

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.94	4.92	5.06	219.39	200.48	9.4
	5.85	5.80	5.94			
	7.33	7.32	7.46			
	8.98	8.94	9.08			
	9.34	9.30	9.44			
	10.21	10.16	10.30			
Aroclor-1260	12.88	12.83	12.97	195.05	200.80	-2.9
	13.74	13.68	13.82			
	15.05	14.99	15.13			
	16.11	16.05	16.19			
	17.16	17.10	17.24			
	18.38	18.33	18.47			

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.78R Time Analyzed: 14:02

Lab Standard ID: MIXA3

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	5.52	5.48	5.59	8.18	8.00	2.2
gamma-BHC (Lindane)	6.63	6.59	6.70	7.42	8.00	-7.2
Heptachlor	7.36	7.31	7.42	7.49	8.00	-6.3
Aldrin	8.25	8.20	8.31	8.16	8.00	2.0
beta-BHC	8.77	8.75	8.86	9.05	8.00	13.2
delta-BHC	9.60	9.57	9.68	7.91	8.00	-1.2
Heptachlor epoxide	10.30	10.25	10.36	8.20	8.00	2.5
Endosulfan I	11.29	11.23	11.38	7.99	8.00	-0.1
gamma-Chlordane	11.38	11.32	11.47	7.96	8.00	-0.5
alpha-Chlordane	11.60	11.53	11.68	8.10	8.00	1.3
4,4'-DDE	12.08	12.03	12.18	15.00	16.00	-6.3
Dieldrin	12.48	12.41	12.56	15.73	16.00	-1.7
Endrin	13.19	13.13	13.28	15.39	16.00	-3.8
Endosulfan II / DDD	14.77	14.71	14.86	15.35	16.00	-4.1
4,4'-DDT	15.34	15.28	15.43	16.62	16.00	3.8
Endrin aldehyde	16.16	16.09	16.24	14.83	16.00	-7.3
Endosulfan sulfate	17.20	17.14	17.29	15.09	16.00	-5.7
Methoxychlor	17.50	17.44	17.59	77.53	80.00	-3.1
Endrin ketone	18.65	18.59	18.74	15.82	16.00	-1.1
Tetrachloro-m-xylene	3.65	3.61	3.76	19.96	16.00	24.7
Decachlorbiphenyl	22.60	22.50	22.72	35.44	32.00	10.7

x DW558 4/11/97 (coelution)

FORM VII PEST-2

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080B.80R Time Analyzed: 15:13

Lab Standard ID: AR163

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
Aroclor-1016	4.93	4.92	5.06	226.30	200.48	12.9
	5.84	5.80	5.94			
	7.32	7.32	7.46			
	8.97	8.94	9.08			
	9.32	9.30	9.44			
	10.20	10.16	10.30			
Aroclor-1260	12.88	12.83	12.97	203.49	200.80	1.3
	13.73	13.68	13.82			
	15.04	14.99	15.13			
	16.10	16.05	16.19			
	17.15	17.10	17.24			
	18.37	18.33	18.47			

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: SRSD4

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: 2682196 Date(s) Analyzed: 03/29/97 03/29/97

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endosulfan sulfate	1	18.79	18.64	18.79	2.2	
	2	17.16	17.14	17.29	2.6	18.2

FORM X PEST-1

6D

PESTICIDE INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	RT OF STANDARDS					MIDLEVEL	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
4,4'-DDE			12.09			12.11	12.03	12.18
Endrin ketone			18.66			18.67	18.59	18.74
gamma-BHC (Lindane)			6.63			6.65	6.59	6.70
Dieldrin			12.49			12.49	12.41	12.56
Endrin			13.20			13.20	13.13	13.28
Methoxychlor			17.51			17.52	17.44	17.59
Endrin aldehyde			16.17			16.17	16.09	16.24
gamma-Chlordane			11.39			11.39	11.32	11.47
Aldrin			8.25			8.26	8.20	8.31
Heptachlor			7.37			7.37	7.31	7.42
alpha-Chlordane			11.60			11.61	11.53	11.68
4,4'-DDT			15.35			15.35	15.28	15.43
Endosulfan II VVV OMM 4/11/97			14.78			14.78	14.71	14.86
delta-BHC			9.60			9.63	9.57	9.68
alpha-BHC			5.53			5.54	5.48	5.59
Endosulfan sulfate			17.21			17.22	17.14	17.29
Heptachlor epoxide			10.30			10.31	10.25	10.36
Endosulfan I			11.30			11.30	11.23	11.38
beta-BHC			8.78			8.80	8.75	8.86
Decachlorbiphenyl			22.62			22.61	22.50	22.72
Tetrachloro-m-xylene			3.67			3.68	3.61	3.76

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	3.67E+03	3.70E+03	3.86E+03	4.02E+03	4.25E+03	3.90E+03	6.1
gamma-BHC (Lindane)	3.50E+03	3.53E+03	3.59E+03	3.68E+03	3.76E+03	3.61E+03	2.9
beta-BHC	2.04E+03	2.04E+03	2.03E+03	1.91E+03	1.83E+03	1.97E+03	4.8
Heptachlor	3.29E+03	3.13E+03	3.10E+03	2.85E+03	2.81E+03	3.03E+03	6.6
delta-BHC	2.69E+03	2.72E+03	2.92E+03	3.03E+03	3.25E+03	2.92E+03	7.9
Aldrin	2.78E+03	2.68E+03	2.76E+03	2.66E+03	2.70E+03	2.72E+03	1.9
Heptachlor epoxide	2.96E+03	2.84E+03	2.87E+03	2.69E+03	2.62E+03	2.80E+03	5.0
gamma-Chlordane	2.99E+03	2.89E+03	2.89E+03	2.65E+03	2.64E+03	2.81E+03	5.6
alpha-Chlordane	2.85E+03	2.77E+03	2.81E+03	2.64E+03	2.54E+03	2.72E+03	4.7
Endosulfan I	2.78E+03	2.68E+03	2.65E+03	2.48E+03	2.44E+03	2.61E+03	5.4
4,4'-DDE	2.26E+03	2.24E+03	2.35E+03	2.32E+03	2.33E+03	2.30E+03	2.1
Dieldrin	2.41E+03	2.36E+03	2.41E+03	2.34E+03	2.40E+03	2.38E+03	1.4
Endrin	1.89E+03	1.84E+03	1.95E+03	1.87E+03	1.86E+03	1.88E+03	2.1
4,4'-DDD	1.71E+03	1.71E+03	1.73E+03	1.69E+03	1.73E+03	1.71E+03	0.9
Endosulfan II	2.32E+03	2.31E+03	2.30E+03	2.21E+03	2.19E+03	2.27E+03	2.7
4,4'-DDT	1.75E+03	1.80E+03	1.82E+03	1.73E+03	1.72E+03	1.76E+03	2.6
Endrin aldehyde	1.72E+03	1.66E+03	1.61E+03	1.51E+03	1.42E+03	1.58E+03	7.6
Endosulfan sulfate	2.24E+03	2.09E+03	2.08E+03	1.97E+03	1.87E+03	2.05E+03	6.8
Methoxychlor	8.16E+02	7.53E+02	7.30E+02	6.56E+02	6.10E+02	7.13E+02	11.4
Endrin ketone	2.02E+03	2.02E+03	2.12E+03	1.99E+03	1.95E+03	2.02E+03	3.1
Tetrachloro-m-xylene	3.87E+03	3.66E+03	3.60E+03	3.30E+03	3.07E+03	3.50E+03	9.1
Decachlorbiphenyl	1.52E+03	1.38E+03	1.30E+03	1.11E+03	9.69E+02	1.26E+03	17.4

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	3.67E+03	3.70E+03	3.86E+03	4.02E+03	4.25E+03	3.90E+03	6.1
gamma-BHC (Lindane)	3.50E+03	3.53E+03	3.59E+03	3.68E+03	3.76E+03	3.61E+03	2.9
beta-BHC	2.04E+03	2.04E+03	2.03E+03	1.91E+03	1.83E+03	1.97E+03	4.8
Heptachlor	3.29E+03	3.13E+03	3.10E+03	2.85E+03	2.81E+03	3.03E+03	6.6
delta-BHC	2.69E+03	2.72E+03	2.92E+03	3.03E+03	3.25E+03	2.92E+03	7.9
Aldrin	2.78E+03	2.68E+03	2.76E+03	2.66E+03	2.70E+03	2.72E+03	1.9
Heptachlor epoxide	2.96E+03	2.84E+03	2.87E+03	2.69E+03	2.62E+03	2.80E+03	5.0
gamma-Chlordane	2.99E+03	2.89E+03	2.89E+03	2.65E+03	2.64E+03	2.81E+03	5.6
alpha-Chlordane	2.85E+03	2.77E+03	2.81E+03	2.64E+03	2.54E+03	2.72E+03	4.7
Endosulfan I	2.78E+03	2.68E+03	2.65E+03	2.48E+03	2.44E+03	2.61E+03	5.4
4,4'-DDE	2.26E+03	2.24E+03	2.35E+03	2.32E+03	2.33E+03	2.30E+03	2.1
Dieldrin	2.41E+03	2.36E+03	2.41E+03	2.34E+03	2.40E+03	2.38E+03	1.4
Endrin	1.89E+03	1.84E+03	1.95E+03	1.87E+03	1.86E+03	1.88E+03	2.1
4,4'-DDD	1.71E+03	1.71E+03	1.73E+03	1.69E+03	1.73E+03	1.71E+03	0.9
Endosulfan II	2.32E+03	2.31E+03	2.30E+03	2.21E+03	2.19E+03	2.27E+03	2.7
4,4'-DDT	1.75E+03	1.80E+03	1.82E+03	1.73E+03	1.72E+03	1.76E+03	2.6
Endrin aldehyde	1.72E+03	1.66E+03	1.61E+03	1.51E+03	1.42E+03	1.58E+03	7.6
Endosulfan sulfate	2.24E+03	2.09E+03	2.08E+03	1.97E+03	1.87E+03	2.05E+03	6.8
Methoxychlor	8.16E+02	7.53E+02	7.30E+02	6.56E+02	6.10E+02	7.13E+02	11.4
Endrin ketone	2.02E+03	2.02E+03	2.12E+03	1.99E+03	1.95E+03	2.02E+03	3.1
Tetrachloro-m-xylene	3.87E+03	3.66E+03	3.60E+03	3.30E+03	3.07E+03	3.50E+03	9.1
Decachlorbiphenyl	1.52E+03	1.38E+03	1.30E+03	1.11E+03	9.69E+02	1.26E+03	17.4

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	2.15E+03	2.21E+03	2.38E+03	2.65E+03	2.98E+03	2.48E+03	13.9
gamma-BHC (Lindane)	1.87E+03	1.94E+03	2.10E+03	2.27E+03	2.55E+03	2.14E+03	12.7
Heptachlor	1.29E+03	1.27E+03	1.29E+03	1.22E+03	1.23E+03	1.26E+03	2.6
Aldrin	2.73E+03	2.72E+03	2.86E+03	2.88E+03	2.99E+03	2.84E+03	4.0
beta-BHC	9.34E+02	1.03E+03	1.11E+03	1.13E+03	1.19E+03	1.08E+03	9.1
delta-BHC	1.09E+03	1.16E+03	1.30E+03	1.48E+03	1.76E+03	1.36E+03	19.8
Heptachlor epoxide	2.75E+03	2.67E+03	2.73E+03	2.58E+03	2.62E+03	2.67E+03	2.8
Endosulfan I	2.46E+03	2.37E+03	2.38E+03	2.28E+03	2.32E+03	2.36E+03	2.7
gamma-Chlordane	3.11E+03	3.00E+03	3.06E+03	2.89E+03	2.87E+03	2.99E+03	3.5
alpha-Chlordane	2.82E+03	2.72E+03	2.77E+03	2.62E+03	2.61E+03	2.71E+03	3.4
4,4'-DDE	1.57E+03	1.64E+03	1.84E+03	1.92E+03	2.07E+03	1.81E+03	11.4
Dieldrin	2.18E+03	2.24E+03	2.38E+03	2.40E+03	2.46E+03	2.33E+03	5.0
Endrin	1.47E+03	1.48E+03	1.58E+03	1.61E+03	1.63E+03	1.55E+03	4.7
4,4'-DDD	2.82E+03	2.77E+03	2.92E+03	2.74E+03	2.64E+03	2.78E+03	3.7
Endosulfan II	2.82E+03	2.77E+03	2.92E+03	2.74E+03	2.64E+03	2.78E+03	3.7
4,4'-DDT	1.24E+03	1.18E+03	1.38E+03	1.41E+03	1.47E+03	1.34E+03	8.9
Endrin aldehyde	9.17E+02	8.38E+02	8.88E+02	8.50E+02	8.22E+02	8.63E+02	4.5
Endosulfan sulfate	1.29E+03	1.28E+03	1.42E+03	1.41E+03	1.43E+03	1.37E+03	5.4
Methoxychlor	3.73E+02	3.77E+02	4.13E+02	4.08E+02	4.11E+02	3.96E+02	5.0
Endrin ketone	1.82E+03	1.90E+03	2.08E+03	2.10E+03	2.09E+03	2.00E+03	6.4
Tetrachloro-m-xylene	2.56E+03	2.56E+03	2.64E+03	2.59E+03	2.54E+03	2.58E+03	1.5
Decachlorbiphenyl	1.90E+03	1.79E+03	1.74E+03	1.48E+03	1.33E+03	1.65E+03	14.5

6E

PESTICIDE INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	CALIBRATION FACTORS						% RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
alpha-BHC	2.15E+03	2.21E+03	2.38E+03	2.65E+03	2.98E+03	2.48E+03	13.9
gamma-BHC (Lindane)	1.87E+03	1.94E+03	2.10E+03	2.27E+03	2.55E+03	2.14E+03	12.7
Heptachlor	1.29E+03	1.27E+03	1.29E+03	1.22E+03	1.23E+03	1.26E+03	2.6
Aldrin	2.73E+03	2.72E+03	2.86E+03	2.88E+03	2.99E+03	2.84E+03	4.0
beta-BHC	9.34E+02	1.03E+03	1.11E+03	1.13E+03	1.19E+03	1.08E+03	9.1
delta-BHC	1.09E+03	1.16E+03	1.30E+03	1.48E+03	1.76E+03	1.36E+03	19.8
Heptachlor epoxide	2.75E+03	2.67E+03	2.73E+03	2.58E+03	2.62E+03	2.67E+03	2.8
Endosulfan I	2.46E+03	2.37E+03	2.38E+03	2.28E+03	2.32E+03	2.36E+03	2.7
gamma-Chlordane	3.11E+03	3.00E+03	3.06E+03	2.89E+03	2.87E+03	2.99E+03	3.5
alpha-Chlordane	2.82E+03	2.72E+03	2.77E+03	2.62E+03	2.61E+03	2.71E+03	3.4
4,4'-DDE	1.57E+03	1.64E+03	1.84E+03	1.92E+03	2.07E+03	1.81E+03	11.4
Dieldrin	2.18E+03	2.24E+03	2.38E+03	2.40E+03	2.46E+03	2.33E+03	5.0
Endrin	1.47E+03	1.48E+03	1.58E+03	1.61E+03	1.63E+03	1.55E+03	4.7
4,4'-DDD	2.82E+03	2.77E+03	2.92E+03	2.74E+03	2.64E+03	2.78E+03	3.7
Endosulfan II	2.82E+03	2.77E+03	2.92E+03	2.74E+03	2.64E+03	2.78E+03	3.7
4,4'-DDT	1.24E+03	1.18E+03	1.38E+03	1.41E+03	1.47E+03	1.34E+03	8.9
Endrin aldehyde	9.17E+02	8.38E+02	8.88E+02	8.50E+02	8.22E+02	8.63E+02	4.5
Endosulfan sulfate	1.29E+03	1.28E+03	1.42E+03	1.41E+03	1.43E+03	1.37E+03	5.4
Methoxychlor	3.73E+02	3.77E+02	4.13E+02	4.08E+02	4.11E+02	3.96E+02	5.0
Endrin ketone	1.82E+03	1.90E+03	2.08E+03	2.10E+03	2.09E+03	2.00E+03	6.4
Tetrachloro-m-xylene	2.56E+03	2.56E+03	2.64E+03	2.59E+03	2.54E+03	2.58E+03	1.5
Decachlorbiphenyl	1.90E+03	1.79E+03	1.74E+03	1.48E+03	1.33E+03	1.65E+03	14.5

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	15.20	15.13	15.27	87	1	50.20000	5295	16.5
						2	100.4000	9630	
						3	200.8000	18066	
						4	502	37978	
						5	1004	70752	
	2	15.89	15.82	15.96	144	1	50.20000	9123	20.0
						2	100.4000	16081	
						3	200.8000	29335	
						4	502	60414	
						5	1004	111933	
	3	16.23	16.16	16.30	163	1	50.20000	10155	19.0
						2	100.4000	18222	
						3	200.8000	33384	
						4	502	68669	
						5	1004	128385	
	4	19.41	19.34	19.48	116	1	50.20000	6844	14.4
						2	100.4000	12554	
						3	200.8000	23887	
						4	502	51312	
						5	1004	96157	
	5	19.97	19.90	20.04	252	1	50.20000	14904	13.2
						2	100.4000	27240	
						3	200.8000	50823	
						4	502	111600	
						5	1004	218921	
	6	22.14	22.07	22.21	90	1	50.20000	5238	12.2
						2	100.4000	9664	
						3	200.8000	18476	
						4	502	40074	
						5	1004	78679	
Aroclor-1254	1	13.00	12.93	13.07	154	1	100	15383	
	2	13.25	13.18	13.32	155	1	100	15511	
	3	14.80	14.73	14.87	99	1	100	9934	
	4	15.22	15.15	15.29	194	1	100	19421	
	5	15.70	15.63	15.77	91	1	100	9075	
	6	17.89	17.82	17.96	140	1	100	13994	
Aroclor-1221	1	5.83	5.76	5.90	22	1	251.25	5547	
	2	6.39	6.32	6.46	24	1	251.25	5952	
	3	6.60	6.53	6.67	57	1	251.25	14284	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	6.59	6.52	6.66	55	1	250.75	13727	
	2	7.92	7.85	7.99	53	1	250.75	13350	
	3	9.23	9.16	9.30	56	1	250.75	14058	
	4	9.79	9.72	9.86	29	1	250.75	7343	
	5	10.31	10.24	10.38	37	1	250.75	9190	
	6	13.79	13.72	13.86	28	1	250.75	6907	
Aroclor-1248	1	9.23	9.16	9.30	75	1	100.39	7528	
	2	10.32	10.25	10.39	106	1	100.39	10653	
	3	11.51	11.44	11.58	105	1	100.39	10535	
	4	12.51	12.44	12.58	89	1	100.39	8969	
	5	12.74	12.67	12.81	81	1	100.39	8152	
	6	13.79	13.72	13.86	88	1	100.39	8853	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	6.60	6.53	6.67	52	1	50.12	3013	12.1
						2	100.24	5661	
						3	200.48	10632	
						4	501.2000	23904	
						5	1002.400	44702	
	2	7.93	7.86	8.00	119	1	50.12	7395	19.2
						2	100.24	13298	
						3	200.48	23956	
						4	501.2000	51115	
						5	1002.400	91351	
	3	9.24	9.17	9.31	125	1	50.12	7517	14.0
						2	100.24	13406	
						3	200.48	24952	
						4	501.2000	55760	
						5	1002.400	106964	
	4	11.51	11.44	11.58	65	1	50.12	3876	16.6
						2	100.24	7232	
						3	200.48	13150	
						4	501.2000	28338	
						5	1002.400	51486	
	5	13.00	12.93	13.07	53	1	50.12	3268	17.3
						2	100.24	5921	
						3	200.48	10908	
						4	501.2000	23168	
						5	1002.400	42548	
	6	13.25	13.18	13.32	51	1	50.12	3131	18.3
						2	100.24	5576	
						3	200.48	10448	
						4	501.2000	21477	
						5	1002.400	40052	
Aroclor-1242	1	6.60	6.53	6.67	37	1	251	9321	
	2	7.92	7.85	7.99	89	1	251	22397	
	3	9.23	9.16	9.30	91	1	251	22739	
	4	9.79	9.72	9.86	42	1	251	10593	
	5	10.31	10.24	10.38	59	1	251	14883	
	6	11.51	11.44	11.58	50	1	251	12533	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 1C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/22/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	16.44	16.37	16.51	21	1	500	10597	
	2	16.69	16.62	16.76	28	1	500	14168	
	3	17.07	17.00	17.14	37	1	500	18512	
	4	17.95	17.88	18.02	24	1	500	12090	
	5	20.27	20.20	20.34	34	1	500	16921	
	6	20.54	20.47	20.61	18	1	500	9053	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	15.20	15.13	15.27	87	1	50.20000	5295	16.5
						2	100.4000	9630	
						3	200.8000	18066	
						4	502	37978	
						5	1004	70752	
	2	15.89	15.82	15.96	144	1	50.20000	9123	20.0
						2	100.4000	16081	
						3	200.8000	29335	
						4	502	60414	
						5	1004	111933	
	3	16.23	16.16	16.30	163	1	50.20000	10155	19.0
						2	100.4000	18222	
						3	200.8000	33384	
						4	502	68669	
						5	1004	128385	
	4	19.41	19.34	19.48	116	1	50.20000	6844	14.4
						2	100.4000	12554	
						3	200.8000	23887	
						4	502	51312	
						5	1004	96157	
	5	19.97	19.90	20.04	252	1	50.20000	14904	13.2
						2	100.4000	27240	
						3	200.8000	50823	
						4	502	111600	
						5	1004	218921	
	6	22.14	22.07	22.21	90	1	50.20000	5238	12.2
						2	100.4000	9664	
						3	200.8000	18476	
						4	502	40074	
						5	1004	78679	
Aroclor-1254	1	13.00	12.93	13.07	154	1	100	15383	
	2	13.25	13.18	13.32	155	1	100	15511	
	3	14.80	14.73	14.87	99	1	100	9934	
	4	15.22	15.15	15.29	194	1	100	19421	
	5	15.70	15.63	15.77	91	1	100	9075	
	6	17.89	17.82	17.96	140	1	100	13994	
Aroclor-1221	1	5.83	5.76	5.90	22	1	251.25	5547	
	2	6.39	6.32	6.46	24	1	251.25	5952	
	3	6.60	6.53	6.67	57	1	251.25	14284	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	6.59	6.52	6.66	55	1	250.75	13727	
	2	7.92	7.85	7.99	53	1	250.75	13350	
	3	9.23	9.16	9.30	56	1	250.75	14058	
	4	9.79	9.72	9.86	29	1	250.75	7343	
	5	10.31	10.24	10.38	37	1	250.75	9190	
	6	13.79	13.72	13.86	28	1	250.75	6907	
Aroclor-1248	1	9.23	9.16	9.30	75	1	100.39	7528	
	2	10.32	10.25	10.39	106	1	100.39	10653	
	3	11.51	11.44	11.58	105	1	100.39	10535	
	4	12.51	12.44	12.58	89	1	100.39	8969	
	5	12.74	12.67	12.81	81	1	100.39	8152	
	6	13.79	13.72	13.86	88	1	100.39	8853	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	6.60	6.53	6.67	52	1	50.12	3013	12.1
						2	100.24	5661	
						3	200.48	10632	
						4	501.2000	23904	
						5	1002.400	44702	
	2	7.93	7.86	8.00	119	1	50.12	7395	19.2
						2	100.24	13298	
						3	200.48	23956	
						4	501.2000	51115	
						5	1002.400	91351	
	3	9.24	9.17	9.31	125	1	50.12	7517	14.0
						2	100.24	13406	
						3	200.48	24952	
						4	501.2000	55760	
						5	1002.400	106964	
	4	11.51	11.44	11.58	65	1	50.12	3876	16.6
						2	100.24	7232	
						3	200.48	13150	
						4	501.2000	28338	
						5	1002.400	51486	
	5	13.00	12.93	13.07	53	1	50.12	3268	17.3
						2	100.24	5921	
						3	200.48	10908	
						4	501.2000	23168	
						5	1002.400	42548	
	6	13.25	13.18	13.32	51	1	50.12	3131	18.3
						2	100.24	5576	
						3	200.48	10448	
						4	501.2000	21477	
						5	1002.400	40052	
Aroclor-1242	1	6.60	6.53	6.67	37	1	251	9321	
	2	7.92	7.85	7.99	89	1	251	22397	
	3	9.23	9.16	9.30	91	1	251	22739	
	4	9.79	9.72	9.86	42	1	251	10593	
	5	10.31	10.24	10.38	59	1	251	14883	
	6	11.51	11.44	11.58	50	1	251	12533	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Calibration File: 2C7080

GC Column(1): DB608 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	16.44	16.37	16.51	21	1	500	10597	
	2	16.69	16.62	16.76	28	1	500	14168	
	3	17.07	17.00	17.14	37	1	500	18512	
	4	17.95	17.88	18.02	24	1	500	12090	
	5	20.27	20.20	20.34	34	1	500	16921	
	6	20.54	20.47	20.61	18	1	500	9053	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	12.90	12.83	12.97	124	1	50.20000	7501	15.6
						2	100.4000	13451	
						3	200.8000	25539	
						4	502	54383	
						5	1004	102146	
	2	13.75	13.68	13.82	128	1	50.20000	7355	11.7
						2	100.4000	13789	
						3	200.8000	26470	
						4	502	57647	
						5	1004	111699	
	3	15.06	14.99	15.13	129	1	50.20000	7864	17.1
						2	100.4000	14186	
						3	200.8000	26747	
						4	502	55846	
						5	1004	103024	
	4	16.12	16.05	16.19	116	1	50.20000	6542	10.1
						2	100.4000	12281	
						3	200.8000	23527	
						4	502	52693	
						5	1004	103201	
	5	17.17	17.10	17.24	219	1	50.20000	12160	8.2
						2	100.4000	22929	
						3	200.8000	44874	
						4	502	101718	
						5	1004	200535	
	6	18.40	18.33	18.47	161	1	50.20000	8583	4.9
						2	100.4000	16439	
						3	200.8000	32950	
						4	502	76408	
						5	1004	154517	
Aroclor-1254	1	10.23	10.16	10.30	96	1	100	9625	
	2	10.93	10.86	11.00	106	1	100	10571	
	3	11.07	11.00	11.14	81	1	100	8142	
	4	12.08	12.01	12.15	79	1	100	7893	
	5	12.46	12.39	12.53	139	1	100	13886	
	6	14.96	14.89	15.03	133	1	100	13321	
Aroclor-1221	1	4.45	4.38	4.52	22	1	251.25	5489	
	2	4.68	4.61	4.75	11	1	251.25	2777	
	3	4.97	4.90	5.04	52	1	251.25	12947	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: .1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.97	4.90	5.04	48	1	250.75	12148	
	2	5.87	5.80	5.94	40	1	250.75	9986	
	3	7.41	7.34	7.48	47	1	250.75	11907	
	4	9.01	8.94	9.08	26	1	250.75	6498	
	5	9.37	9.30	9.44	20	1	250.75	4901	
	6	10.59	10.52	10.66	20	1	250.75	4931	
Aroclor-1248	1	7.44	7.37	7.51	67	1	100.39	6756	
	2	9.01	8.94	9.08	86	1	100.39	8631	
	3	9.38	9.31	9.45	65	1	100.39	6501	
	4	10.23	10.16	10.30	54	1	100.39	5387	
	5	11.33	11.26	11.40	48	1	100.39	4771	
	6	12.48	12.41	12.55	45	1	100.39	4471	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	4.99	4.92	5.06	39	1	50.12	2100	4.7
						2	100.24	4033	
						3	200.48	7946	
						4	501.2000	19027	
						5	1002.400	37356	
	2	5.87	5.80	5.94	94	1	50.12	5450	11.9
						2	100.24	10141	
						3	200.48	18902	
						4	501.2000	42968	
						5	1002.400	81274	
	3	7.39	7.32	7.46	109	1	50.12	5929	6.2
						2	100.24	11343	
						3	200.48	21632	
						4	501.2000	51391	
						5	1002.400	103458	
	4	9.01	8.94	9.08	58	1	50.12	3233	7.6
						2	100.24	6087	
						3	200.48	11747	
						4	501.2000	27600	
						5	1002.400	53549	
	5	9.37	9.30	9.44	46	1	50.12	2476	5.5
						2	100.24	4680	
						3	200.48	9182	
						4	501.2000	22026	
						5	1002.400	43061	
	6	10.23	10.16	10.30	39	1	50.12	2206	10.4
						2	100.24	4152	
						3	200.48	8202	
						4	501.2000	18362	
						5	1002.400	33827	
Aroclor-1242	1	4.99	4.92	5.06	28	1	251	6969	
	2	5.87	5.80	5.94	69	1	251	17373	
	3	7.40	7.33	7.47	79	1	251	19864	
	4	7.73	7.66	7.80	29	1	251	7280	
	5	9.01	8.94	9.08	45	1	251	11303	
	6	9.37	9.30	9.45	35	1	251	8884	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 1C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/21/97 03/21/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	12.70	12.63	12.77	15	1	500	7612	
	2	14.62	14.55	14.69	19	1	500	9713	
	3	14.90	14.83	14.97	22	1	500	11104	
	4	15.64	15.57	15.71	21	1	500	10522	
	5	15.92	15.85	15.99	26	1	500	12904	
	6	17.24	17.17	17.31	33	1	500	16508	

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PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1260	1	12.90	12.83	12.97	124	1	50.20000	7501	15.6
						2	100.4000	13451	
						3	200.8000	25539	
						4	502	54383	
						5	1004	102146	
	2	13.75	13.68	13.82	128	1	50.20000	7355	11.7
						2	100.4000	13789	
						3	200.8000	26470	
						4	502	57647	
						5	1004	111699	
	3	15.06	14.99	15.13	129	1	50.20000	7864	17.1
						2	100.4000	14186	
						3	200.8000	26747	
						4	502	55846	
						5	1004	103024	
	4	16.12	16.05	16.19	116	1	50.20000	6542	10.1
						2	100.4000	12281	
						3	200.8000	23527	
						4	502	52693	
						5	1004	103201	
	5	17.17	17.10	17.24	219	1	50.20000	12160	8.2
						2	100.4000	22929	
						3	200.8000	44874	
						4	502	101718	
						5	1004	200535	
	6	18.40	18.33	18.47	161	1	50.20000	8583	4.9
						2	100.4000	16439	
						3	200.8000	32950	
						4	502	76408	
						5	1004	154517	
Aroclor-1254	1	10.23	10.16	10.30	96	1	100	9625	
	2	10.93	10.86	11.00	106	1	100	10571	
	3	11.07	11.00	11.14	81	1	100	8142	
	4	12.08	12.01	12.15	79	1	100	7893	
	5	12.46	12.39	12.53	139	1	100	13886	
	6	14.96	14.89	15.03	133	1	100	13321	
Aroclor-1221	1	4.45	4.38	4.52	22	1	251.25	5489	
	2	4.68	4.61	4.75	11	1	251.25	2777	
	3	4.97	4.90	5.04	52	1	251.25	12947	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1232	1	4.97	4.90	5.04	48	1	250.75	12148	
	2	5.87	5.80	5.94	40	1	250.75	9986	
	3	7.41	7.34	7.48	47	1	250.75	11907	
	4	9.01	8.94	9.08	26	1	250.75	6498	
	5	9.37	9.30	9.44	20	1	250.75	4901	
	6	10.59	10.52	10.66	20	1	250.75	4931	
Aroclor-1248	1	7.44	7.37	7.51	67	1	100.39	6756	
	2	9.01	8.94	9.08	86	1	100.39	8631	
	3	9.38	9.31	9.45	65	1	100.39	6501	
	4	10.23	10.16	10.30	54	1	100.39	5387	
	5	11.33	11.26	11.40	48	1	100.39	4771	
	6	12.48	12.41	12.55	45	1	100.39	4471	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Aroclor-1016	1	4.99	4.92	5.06	39	1	50.12	2100	4.7
						2	100.24	4033	
						3	200.48	7946	
						4	501.2000	19027	
						5	1002.400	37356	
	2	5.87	5.80	5.94	94	1	50.12	5450	11.9
						2	100.24	10141	
						3	200.48	18902	
						4	501.2000	42968	
						5	1002.400	81274	
	3	7.39	7.32	7.46	109	1	50.12	5929	6.2
						2	100.24	11343	
						3	200.48	21632	
						4	501.2000	51391	
						5	1002.400	103458	
	4	9.01	8.94	9.08	58	1	50.12	3233	7.6
						2	100.24	6087	
						3	200.48	11747	
						4	501.2000	27600	
						5	1002.400	53549	
	5	9.37	9.30	9.44	46	1	50.12	2476	5.5
						2	100.24	4680	
						3	200.48	9182	
						4	501.2000	22026	
						5	1002.400	43061	
	6	10.23	10.16	10.30	39	1	50.12	2206	10.4
						2	100.24	4152	
						3	200.48	8202	
						4	501.2000	18362	
						5	1002.400	33827	
Aroclor-1242	1	4.99	4.92	5.06	28	1	251	6969	
	2	5.87	5.80	5.94	69	1	251	17373	
	3	7.40	7.33	7.47	79	1	251	19864	
	4	7.73	7.66	7.80	29	1	251	7280	
	5	9.01	8.94	9.08	45	1	251	11303	
	6	9.37	9.30	9.45	35	1	251	8884	

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Calibration File: 2C7080B

GC Column(1): DB1701 ID: 0.53 (mm) Date(s) Analyzed: 03/29/97 03/29/97

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK HEIGHT	% RSD
Toxaphene	1	12.70	12.63	12.77	15	1	500	7612	
	2	14.62	14.55	14.69	19	1	500	9713	
	3	14.90	14.83	14.97	22	1	500	11104	
	4	15.64	15.57	15.71	21	1	500	10522	
	5	15.92	15.85	15.99	26	1	500	12904	
	6	17.24	17.17	17.31	33	1	500	16508	

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/21/97 03/22/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/21/97

Lab File ID: 1C7080.02R Time Analyzed: 17:11

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	6.69	6.64	6.75	9.57	10.00	-4.3
gamma-BHC (Lindane)	7.98	7.93	8.04	9.48	10.00	-5.2
beta-BHC	8.22	8.16	8.27	9.08	10.00	-9.2
4,4'-DDE	14.61	14.54	14.68	0.22		
Endrin	16.28	16.20	16.35	52.37	50.10	4.5
4,4'-DDD	16.76	16.67	16.82	1.81		
4,4'-DDT	17.91	17.83	17.98	98.34	100.40	-2.1
Endrin aldehyde	18.23	18.15	18.30	1.51		
Methoxychlor	21.59	21.51	21.66	259.90	250.70	3.7
Endrin ketone	22.08	22.00	22.15	1.32		
Tetrachloro-m-xylene	4.74	4.68	4.79	18.86	20.10	-6.2
Decachlorbiphenyl	30.37	30.25	30.47	18.81	20.10	-6.4

4,4'-DDT % breakdown: 2.0 Endrin % breakdown: 5.2 Combined % breakdown: 7.3

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.59R Time Analyzed: 2:48

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	6.69	6.64	6.75	9.56	10.00	-4.4
gamma-BHC (Lindane)	7.98	7.93	8.04	9.59	10.00	-4.1
beta-BHC	8.21	8.16	8.27	9.48	10.00	-5.2
4,4'-DDE	14.61	14.54	14.68	0.28		
Endrin	16.27	16.20	16.35	48.82	50.10	-2.5
4,4'-DDD	16.75	16.67	16.82	2.19		
4,4'-DDT	17.90	17.83	17.98	94.31	100.40	-6.1
Endrin aldehyde	18.23	18.15	18.30	2.12		
Methoxychlor	21.58	21.51	21.66	247.66	250.70	-1.2
Endrin ketone	22.07	22.00	22.15	1.78		
Tetrachloro-m-xylene	4.73	4.68	4.79	19.88	20.10	-1.1
Decachlorbiphenyl	30.35	30.25	30.47	16.27	20.10	-19.0

4,4'-DDT % breakdown: 2.6 Endrin % breakdown: 7.0 Combined % breakdown: 9.6

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088A Init. Calib. Date(s): 03/29/97 03/29/97

GC Column(1): DB608 ID: 0.53 (mm) Date Analyzed: 03/29/97

Lab File ID: 2C7080.79R Time Analyzed: 14:37

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
alpha-BHC	6.69	6.64	6.75	10.12	10.00	1.2
gamma-BHC (Lindane)	7.97	7.93	8.04	10.13	10.00	1.3
beta-BHC	8.21	8.16	8.27	10.10	10.00	1.0
4,4'-DDE	14.61	14.54	14.68	0.31		
Endrin	16.27	16.20	16.35	49.95	50.10	-0.3
4,4'-DDD	16.74	16.67	16.82	2.49		
4,4'-DDT	17.90	17.83	17.98	97.31	100.40	-3.1
Endrin aldehyde	18.22	18.15	18.30	2.69		
Methoxychlor	21.57	21.51	21.66	249.88	250.70	-0.3
Endrin ketone	22.06	22.00	22.15	2.03		
Tetrachloro-m-xylene	4.73	4.68	4.79	21.22	20.10	5.6
Decachlorbiphenyl	30.32	30.25	30.47	17.11	20.10	-14.9

4,4'-DDT % breakdown: 2.8 Endrin % breakdown: 8.2 Combined % breakdown: 11.0

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Instrument: H5088B Init. Calib. Date(s): 03/21/97 03/22/97

GC Column(1): DB1701 ID: 0.53 (mm) Date Analyzed: 03/21/97

Lab File ID: 1C7080B.02R Time Analyzed: 17:11

Lab Standard ID: EVALX

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D	
alpha-BHC	5.54	5.48	5.59	9.77	10.00	-2.3	
gamma-BHC (Lindane)	6.65	6.59	6.70	9.86	10.00	-1.4	
beta-BHC	8.80	8.75	8.86	10.35	10.00	3.5	
4,4'-DDE	12.12	12.03	12.18	2.34			
Endrin	13.20	13.13	13.28	64.24	50.10	28.2	J, D
4,4'-DDD	14.82	14.71	14.86	1.05			
4,4'-DDT	15.34	15.28	15.43	1574.78	100.40	1468.5	R
Endrin aldehyde	16.17	16.09	16.24	3.26			
Methoxychlor	17.51	17.44	17.59	361.60	250.70	44.2	J, D
Endrin ketone	18.67	18.59	18.74	1.73			
Tetrachloro-m-xylene	3.68	3.63	3.74	20.79	20.10	3.5	
Decachlorbiphenyl	22.62	22.50	22.72	19.47	20.10	-3.1	

4,4'-DDT % breakdown: 2.2 Endrin % breakdown: 6.4 Combined % breakdown: 8.6

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.
SRSD4MS

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: 2682197 Date(s) Analyzed: 03/29/97 03/29/97

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.69	6.64	6.75	110	
	2	5.52	5.48	5.59	110	0.0
gamma-BHC (Lindane)	1	7.97	7.93	8.04	110	
	2	6.63	6.59	6.70	100	10.0
beta-BHC	1	8.21	8.16	8.27	100	
	2	6.75	6.75	6.86	120	20.0
Heptachlor	1	9.15	9.10	9.21	99	
	2	7.36	7.31	7.42	93	6.5
delta-BHC	1	9.49	9.44	9.55	110	
	2	9.59	9.57	9.68	99	11.1
Aldrin	1	10.34	10.29	10.40	100	
	2	8.25	8.20	8.31	100	0.0
Heptachlor epoxide	1	12.38	12.31	12.46	98	
	2	10.30	10.25	10.36	99	1.0
gamma-Chlordane	1	13.00	12.93	13.08	94	
	2	11.38	11.32	11.47	93	1.1
alpha-Chlordane	1	13.62	13.55	13.70	100	
	2	11.60	11.53	11.68	100	0.0
Endosulfan I	1	13.71	13.65	13.79	80	
	2	11.29	11.23	11.38	78	2.6
4,4'-DDE	1	14.61	14.54	14.68	100	
	2	12.08	12.03	12.18	94	6.4
Dieldrin	1	14.88	14.81	14.96	97	
	2	12.48	12.41	12.56	95	2.1
Endrin	1	16.27	16.20	16.35	110	
	2	13.19	13.13	13.28	110	0.0
Endosulfan II	1	16.96	16.89	17.04	86	
	2	14.77	14.71	14.86	82	4.7
4,4'-DDT	1	17.90	17.83	17.98	100	
	2	15.34	15.28	15.43	100	0.0
Endrin aldehyde	1	18.22	18.15	18.30	96	
	2	16.16	16.09	16.24	100	4.2
Endosulfan sulfate	1	18.71	18.64	18.79	100	
	2	17.21	17.14	17.29	100	0.0
Methoxychlor	1	21.58	21.51	21.66	67	
	2	17.51	17.44	17.59	110	64.2
Endrin ketone	1	22.07	22.00	22.15	94	
	2	18.65	18.59	18.74	95	1.1

J

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: SRSD4MSD

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: 2682198 Date(s) Analyzed: 03/29/97 03/29/97

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.69	6.64	6.75	110	
	2	5.52	5.48	5.59	110	0.0
gamma-BHC (Lindane)	1	7.98	7.93	8.04	110	
	2	6.63	6.59	6.70	100	10.0
beta-BHC	1	8.21	8.16	8.27	100	
	2	8.75	8.75	8.86	120	20.0
Heptachlor	1	9.15	9.10	9.21	100	
	2	7.36	7.31	7.42	94	6.4
delta-BHC	1	9.49	9.44	9.55	110	
	2	9.59	9.57	9.68	100	10.0
Aldrin	1	10.34	10.29	10.40	100	
	2	8.25	8.20	8.31	110	10.0
Heptachlor epoxide	1	12.38	12.31	12.46	100	
	2	10.30	10.25	10.36	100	0.0
gamma-Chlordane	1	13.00	12.93	13.08	96	
	2	11.38	11.32	11.47	93	3.2
alpha-Chlordane	1	13.61	13.55	13.70	100	
	2	11.60	11.53	11.68	100	0.0
Endosulfan I	1	13.71	13.65	13.79	81	
	2	11.29	11.23	11.38	78	3.8
4,4'-DDE	1	14.61	14.54	14.68	110	
	2	12.08	12.03	12.18	96	14.6
Dieldrin	1	14.88	14.81	14.96	98	
	2	12.48	12.41	12.56	95	3.2
Endrin	1	16.26	16.20	16.35	110	
	2	13.19	13.13	13.28	110	0.0
Endosulfan II	1	16.96	16.89	17.04	85	
	2	14.77	14.71	14.86	83	2.4
4,4'-DDT	1	17.90	17.83	17.98	100	
	2	15.34	15.28	15.43	100	0.0
Endrin aldehyde	1	18.22	18.15	18.30	93	
	2	16.16	16.09	16.24	99	6.5
Endosulfan sulfate	1	18.71	18.64	18.79	100	
	2	17.20	17.14	17.29	99	1.0
Methoxychlor	1	21.58	21.51	21.66	69	
	2	17.51	17.44	17.59	100	44.9
Endrin ketone	1	22.07	22.00	22.15	95	
	2	18.65	18.59	18.74	97	2.1

J

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY

SAMPLE CODE NO.: SB-05

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: 2680805 Date(s) Analyzed: 03/29/97 03/29/97

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Heptachlor	1	9.20	9.10	9.21	17	
	2	7.37	7.31	7.42	17	0.0
Endosulfan I	1	13.72	13.65	13.79	5.0	
	2	11.25	11.23	11.38	5.1	2.0

FORM X PEST-1

10B

SAMPLE CODE NO.

SRSD4

PESTICIDE IDENTIFICATION SUMMARY FOR MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: HMS04

Lab Sample ID: 2682196 Date(s) Analyzed: 03/29/97 03/29/97

Instrument ID (1): H5088A Instrument ID (2): H5088B

GC Column (1): DB608 ID: 0.53 (mm) GC Column (2): DB1701 ID: 0.53 (mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1254							
COLUMN 1	1	12.99	12.93	13.07	137		
	2	13.24	13.18	13.32	134		
	3	14.79	14.73	14.87	120		
	4	15.21	15.15	15.29	152		
	5	15.68	15.63	15.77	183		
	6	17.88	17.82	17.96	128	140	
COLUMN 2	1	10.20	10.16	10.30	123		
	2	10.89	10.86	11.00	154		
	3	11.03	11.00	11.14	132		
	4	12.04	12.01	12.15	157		
	5	12.40	12.39	12.53	160		
	6	14.92	14.89	15.03	132	140	0.0

Organic Extraction Batchlog

Prep Analysis # 00819 Solid Sample Pesticide Extract

Prep Group # 103 8081 Pesticides - soils Dept: 24

Verified:
Start Date: 3-24-97
Start Time: 19:15
Tech 1: TIC 238
Tech 2:

BATCH NO. 970830003A | 238 3/24

QC	Sample Code	Amt (g)	SS Sol.	Amt (mL)	MS Sol.	Amt. (mL)	FV (mL)	pH	Comments
BLANKA	PBLKZJ	30.0	SS97064B	1.0			N/A	N/A	
LCSA	LCSUO	30.0	SS97064B	1.0	MS97064C	1.0			
2682197MS	SRSD4MS	30.0	SS97064B	1.0	MS97064C	1.0			
2682198MSD	SRSD4MSD	30.0	SS97064B	1.0	MS97064C	1.0			Samples are wet Sand

TIC 238 3/24/97

	Sample #	Sample Code	Amt (g)	SS Sol.	Amt (mL)	FV (mL)	pH	Comments	Analyses	Due Date	Pri
	2680805	SB-05	30.0	SS97064B	1.0	10mL	N/A	Sample is wet Soil Strong odor	1225	4/3/97	N
2	2681895	RSD01	30.0	SS97064B	1.0			Sample is very wet soil	1225	4/8/97	P
	2682010	TEST1		SS97064B	1	N/A		Samples on Hold	1224	3/31/97	S
	2682011	TEST3		SS97064B	1	N/A			1224	3/31/97	S
5	2682194	SRSD2	30.0	SS97064B	1.0			Sample is very wet sand	1225	4/9/97	P
	2682195	SRSD3	30.0	SS97064B	1.0				1225	4/9/97	P
	2682196 bkg	SRSD4	30.0	SS97064B	1.0				1225	4/9/97	P
	2682200 to 4/4/97	SRD4D	30.0	SS97064B	1.0				1225	4/9/97	P
10											
11											
2											
13											
14											
15											
16											
17											
18											
19											
20											

TIC 238 3/24/97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Spike Solutions:

SS97064B SW846 SOIL
MS97064C SW846 SOIL

Solvent Used	Lot No.	Solvent Used	Lot No.
Methanol	KA1659		
Acetone	KA1891		
Internal Standar		Balance #	3782

N-Evap/bath	96.7 °C	S-Evap/bath	°C	N-Evap	32.4 °C

1712

Prep-Process Worksheet

GPC

Prep Analysis # 00819 Solid Sample Pesticide Extract

Prep Group # 103 8081 Pesticides - soils

Verified: _____

Start Date: 3-24-97 / 3/26/97

Start Time: 10:00

Tech 1: GR

Tech 2: _____

BATCH NO. 970830003A

	Sample #	Vol.(ml) on	Final Conc. Volume (ml)	Column ID		D.F. Aliq.	D.F. F.V.	Comments	Analyses
1	BLANKA (AB)	5.0	5.0	1	2	NA	NA		
2	LCSA (AB)	5.0		1	2				
3	2682197MS (AB)	5.0		1	2				1225
4	2682198MSD (AB)	5.0		1	2				1225
5	2680805 (AB)	5.0		1	2				1225
6	2681895 (AB)	5.0		1	2				1225
7	2682194 (AB)	5.0		1	2				1225
8	2682195 (AB)	5.0		1	2				1225
9	2682196 (AB)	5.0		1	2				1225
10	2682200 (AB)	5.0		1	2				1225
				1	2				
				1	2				
				1	2				

TIC 238 3/24/97

Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
gold	BN1759		
Hexane	BN1699		
Florisil			

S-Evap/bath	99 °C	S-Evap/bath	°C	N-Evap	°C

Instrument #: 4590

Column ID #1: A5

Column ID #2: _____

1713

Prep-Process Worksheet

Florisil

Prep Analysis # 00819 Solid Sample Pesticide Extract

Prep Group # 103 8081 Pesticides - soils

Verified:

Start Date: 3/26/97

Start Time: 2:15

Tech 1: GR 871

Tech 2:

BATCH NO. 970830003A

	Sample #	Aliquot (ml)	Final Volume (ml)	D.F. Aliq.	D.F. F.V.	Comments	Analyses
1	BLANKA	2.00	25.00	NA	NA		
2	LCSA	↓	↓	↓	↓		
3	2682197MS						1225
4	2682198MSD						1225
5	2680805						1225
6	2681895						1225
7	2682010	NA	NA				1224
8	2682011	↓	↓				1224
9	2682194	2.0	25.00				1225
10	2682195	↓	↓				1225
11	2682196						1225
12	2682200	↓	↓	↓	↓		1225

GR 871
3/26/97

Additional Comment:

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
Hexane	963813		
Acetone	B0203		
Florisil cartridges	1602FC		
S-Evap/bath	1 °C	S-Evap/bath	°C
N-Evap 1	35°C		

ple Information | Duplicate Analysis

Matrix: SOIL

Sample Number	Sample Code	Parameter	Method	Analysis Date	1st Dup Desig.	1st Dup Result	LOQ	2nd Dup Desig.	2nd Dup Result	Units	RPD (%)	Control Limit % </=
679073	01--8	Moisture	OD	03/19/97	2679080	15.7	0.5	2679082	16.1	%	3	18.9
679074	01-44											
2679075	02--9											
579076	03-20											
579077	04-20											
2679078	04-29											
2679079	05-10											
579080	06--6											
2679081	06--6											
2679082	06--6											
579083	07-14											
579084	06-36											
2680801	SB-01											
580802	SB-02											
580803	SB-03											
2680804	SB-04											
2680805	SB-05											
580806	SB05A											
708	SB-29											
809	SB-06											
810	SB-07											

mments: If the background and/or the duplicate esult are < the limit of quantitation, the RPD is not required.

mple results are rounded to be consistent with the limit of quantitation.

ABBREVIATION KEY

CO = Colorimetric	ND = Not Detected
DI = Distillation	J = Estimated Value < LOQ
G = Gravimetric	< = Less Than
IR = Infrared Spectrophotometry	LOQ = Limit of Quantitation
M = Meter	NA = Not Applicable
OD = Oven Dried	ME = Method
TI = Titration	* = Out of Specification

Sample Information | Laboratory Control Standards

Matrix: SOIL

Sample Number	Sample Code	Parameter	Analysis Date	True LCS/D Value	LCS Result	LCSD Result	LOQ	Units	LCS/D Acceptance Range	% RPD Result	% RPD Acceptance < / =
2679073	01--8	Moisture	03/19/97	89.5	89.4	89.4	0.5	%	89.07 - 90.33	0	20
2679074	01-44		03/21/97	89.5	89.4	89.4	0.5	%	89.07 - 90.33	0	20
2679075	02--9										
2679076	03-20										
2679077	04-20										
2679078	04-29										
2679079	05-10										
2679080	06--6										
2679081	06--6										
2679082	06--6										
2679083	07-14										
2679084	06-36										
2680801	SB-01										
2680802	SB-02										
2680803	SB-03										
2680804	SB-04										
2480805	SB-05										
0806	SB05A										
80808	SB-29										
2680809	SB-06										
2680810	SB-07										

Comments: LCS/LCSD results are rounded to be consistent with the limit of quantitation.

SECTION 4

PROJECT CASE NARRATIVES

AND CHAIN-OF-CUSTODY RECORDS

Analysis Request / Environmental Services Chain of Custody

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 7802 Sample # 2679073-87

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: Michael Pisani & Assoc. Acct. #:
Project Name/#: Gulf States Execution PWSID #:
Project Manager: David Upthegrove P.O.#
Sampler: David Upthegrove Quote #:
Name of state where samples were collected: Mississippi

(2) (3) (4) (5)

Sample Identification	Date Collected	Time Collected	Matrix: Soil	Matrix: Water	Matrix: Other	Matrix: Air	# of containers	TCL VOCs (624)	TCL SVOCs (625)	Analyses Requested	Remarks
CPT/SB-01/8-10	3-15-97	0940	X	X			2	1	1		
CPT/SB-01/44-46	3-15-97	1040	X	X			2	1	1		
CPT/SB-02/9-11	3-15-97	1140	X	X			2	1	1		
CPT/SB-03/20-22	3-15-97	1250	X	X			2	1	1		
CPT/SB-04/20-22	3-15-97	1320	X	X			2	1	1		
CPT/SB-04/29-31	3-15-97	1340	X	X			2	1	1		
CPT/SB-05/10.5-12.5	3-15-97	1502	X	X			2	1	1	MS MSD	
RB-4	3-15-97	1535	X	X			5	3	2		
CPT/SB-06/6-10	3-17-97	1050	X	X			2	1	1		
CPT/SB-06/6-10-MS/MSD	3-17-97	1050	X	X			2	1	1		

ORIGINAL IN THIS CONDITION WHEN SCANNED

For lab use only
FSC:
SCR # 109794

(7) **Turnaround Time Requested** (TAT) (please circle) Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	9-17-97	1500		3-17-97	1515
Relinquished by:	Date	Time	Received by:	Date	Time
	3-17-97	1700	Fed Ex	3-15-97	1700
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				3-18-97	0930

Analysis Req... Environmental Services Chain... Custo...

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # _____ Sample # _____

2 of 2

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Michael Pisci & Assoc. Acct. #:
Project Name/#: Gulf States Creosote PWSID #:
Project Manager: David Upthegrove P.O.#
Sampler: David Upthegrove Quote #:
Name of state where samples were collected: Mississippi

(2) Sample Identification | Date Collected | Time Collected | (3) Matrix | (4) # of Containers | (5) Analyses Requested: TCL VOCs (6240) | TCL SVOCs (6270) | Remarks

Sample Identification	Date Collected	Time Collected	Matrix	# of Containers	TCL VOCs (6240)	TCL SVOCs (6270)	Remarks
CPT/SB-07/14-16	3-17-97	1230	X	2	1	1	
CPT/SB-06/36-38	3-17-97	1705	X	2	1	1	
FB-1	3-15-97	1606	X	2	2		Also collected RB-6 (5-40ml vials) 3/17/97 @ 1300

ORIGINAL IN THIS CONDITION WHEN SCANNED

(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: _____
Rush results requested by (please circle): Phone Fax
Phone #: _____ Fax #: _____

(8) **Data Package Options** (please circle if requested)
QC Summary | Type VI (Raw Data) | SDG Complete? Yes No
Type I (Tier I) | GLP
Type II (Tier II) | Other
Type III (NJ Red. Del.)
Type IV (CLP)
Site-specific QC required? (Yes) No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	3-17-97	1500			
	3-17-97	0700	Fed Ex	3-15-97	1700
	3-15-97	1700			
	Date	Time	Received by:	Date	Time
	Date	Time	Received by:	Date	Time
	Date	Time	Received by:	Date	Time
	Date	Time	Received by:	3-18-97	0830

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 7502 Sample # 726801-(

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Michael Pisani & Associates Acct. #:
Project Name/#: Gulf States Creosoting PWSID #:
Project Manager: David Uplinger P.O.#:
Sampler: David Uplinger Quote #:
Name of state where samples were collected: Mississippi

For lab use only
FSC:
SCR#: 109542b

(2) Sample Identification	Date Collected	Time Collected	(3) # of Containers	Matrix (4) Soil	Matrix Liquids	Matrix Other	Total # of Containers	(5) Analyses Requested: TCL VOCs (+TICs)	TCL SVOCs (+TICs)	TCL Pest/PCBs	Remarks
GEO/SB-01/10-12	3-16-97	1035	X	X			2	1	1		
GEO/SB-02/10-12	3-16-97	1420	X	X			2	1	1		
GEO/SB-03/6-8	3-16-97	1330	X	X			2	1	1		
GEO/SB-04/10-12	3-16-97	1505	X	X			2	1	1		
GEO/SB-05/4-6	3-16-97	1550	X	X			2	1	1		ORIGINAL IN THIS CONDITION WHEN SCANNED
GEO/SB-05A/17-19	3-16-97	1645	X	X			2	1	1		
RB-1	3-16-97	1750	X		X		4	2	2		
GEO/SB-24/6-8	3-16-97	0845	X	X			2	1	1		
GEO/SB-06/10-12	3-17-97	0755	X	X			2	1	1		
GEO/SB-07/5-7	3-17-97	0950	X	X			2	1	1		

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary | Type VI (Raw Data)
Type I (Tier I) | GLP
Type II (Tier II) | Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
S. Mackle	3.17.97	1435		3-17-97	1030
	3.17.97	1900	Fed Ex		
				3-20-97	0900

Analysis Request Environmental Science Chain of Custody Record

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 7802 Sample # 76802614-16

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Michael Pisani & Associates Acct. #:
Project Name/#: Gulf States (recertify) PWSID #:
Project Manager: David Upthegrove P.O.#
Sampler: David Upthegrove Quote #:
Name of state where samples were collected: Mississippi

(4) Matrix

(2) Sample Identification	Date	Time	(3) # of containers	Soil	Water	Other	Total # of containers
FB-2	3-14-97	1100	X		X		2
	3-14-97						

(5) Analyses Requested: TCL VOCs (8240)

For lab use only
FSC:
SCR #: 107947

Remarks

ORIGINAL IN THIS CONDITION WHEN SCANNED

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary
Type I (Tier I)
Type II (Tier II)
Type III (NJ Red. Del.)
Type IV (CLP)
Type VI (Raw Data)
GLP
Other

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3-17-97	1435	[signature]	3-14-97	1030
[signature]	3-14-97	1900	Fed Ex		
			[signature]	3-20-97	0840

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601-5994

Sample Administration
Receipt Documentation Log

Client/Project: Kerr - McGee

COC Seal: Present / Not Present on cooler

Date of Receipt: 3-18-97

Broken / Intact

Time of Receipt: 0930

Package: Chilled / Not Chilled

Source Code: 50-1

Unpacker Emp. No.: 920

Temperature of Samples	
#1	**#2**
Thermometer ID: 10103	Thermometer ID: 10103
Corrected Temp.: 2.9°	Corrected Temp.: 2.5°
(Temp. Bottle) / Surface Temp. 1	(Temp. Bottle) / Surface Temp. 2 plus vials
(Wet Ice) / Dry Ice / Ice Packs	(Wet Ice) / Dry Ice / Ice Packs
Ice Present? (Y) / N	Ice Present? (Y) / N
#3	**#4**
Thermometer ID:	Thermometer ID:
Corrected Temp.:	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems: Received extra samples
See - RB-5

Sample Administration Chain of Custody

Name	Date	Time	Reason for Transfer
K. Dietz	3-18-97	10:15	Unpacking
D Neslund	3/18/97	1100	(Place in Storage) or Entry
D Neslund	3/18/97	1530	Remove from Storage (Entry)
			Place in Storage or Entry
			Entry

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601-5994

Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee

COC Seal: (Present) / Not Present on cooler

Date of Receipt: 3-20-97

Broken / (Intact)

Time of Receipt: 0940

Package: (Chilled) / Not Chilled

Source Code: 50-1

Unpacker Emp. No.: 920

Temperature of Samples	
#1	**#2**
Thermometer ID: 10103	Thermometer ID:
Corrected Temp.: 2.4°	Corrected Temp.:
(Temp. Bottle) / Surface Temp.	Temp. Bottle / Surface Temp.
(Wet Ice) / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? (Y) N	Ice Present? Y / N
#3	**#4**
Thermometer ID:	Thermometer ID:
Corrected Temp.:	Corrected Temp.:
Temp. Bottle / Surface Temp.	Temp. Bottle / Surface Temp.
Wet Ice / Dry Ice / Ice Packs	Wet Ice / Dry Ice / Ice Packs
Ice Present? Y / N	Ice Present? Y / N

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Chain of Custody			
Name	**Date**	**Time**	**Reason for Transfer**
K. Yuta	3-20-97	11:35	Unpacking
K. Yuta	3-20-97	1215	(Place in Storage) or Entry
[signature]	3-20-97	1445	Remove from Storage (Entry)
			Place in Storage or Entry
			Entry

CLIENT: KERR-MCGEE
SDG: HMS04

LANCASTER LABORATORIES

VOLATILES by GC/MS

LL NUMBERS:	SAMPLE CODE:	MATRIX SOIL	MATRIX WATER	COMMENTS
2679073	01--8	X		
2679074	01-44	X		
2679074	01-44DL	X		5X DILUTION
2679075	02--9	X		
2679076	03-20	X		
2679077	04-20	X		5X DILUTION
2679078	04-29	X		5X DILUTION
2679079	05-10	X		5X DILUTION
2679080	06--6	X		UNSPIKED
2679081	06--6MS	X		MATRIX SPIKE
2679082	06--6MSD	X		MATRIX SPIKE DUP
2679083	07-14	X		
2679084	06-36	X		
2679084	06-36DL	X		5X DILUTION
2679085	RB-4-		X	CLIENT BLANK
2679086	RB-5-		X	CLIENT BLANK
2679087	FB-1-		X	CLIENT BLANK
2680801	SB-01	X		
2680802	SB-02	X		
2680803	SB-03	X		
2680804	SB-04	X		
2680805	SB-05	X		5X DILUTION
2680806	SB05A	X		
2680807	RB--6		X	CLIENT BLANK
2680808	SB-29	X		5X DILUTION
2680809	SB-06	X		5X DILUTION
2680810	SB-07	X		5X DILUTION
2680811	FB--2		X	CLIENT BLANK

LABORATORY SUBMITTED QC:

VBLKG15	VBLKG15	X		METHOD BLANK
VBLKG16	VBLKG16	X		METHOD BLANK
VBLKK43	VBLKK43		X	METHOD BLANK
VBLKK45	VBLKK45		X	METHOD BLANK

SAMPLE PREPARATION:

No problems were encountered during the sample preparation for the VOA fraction.

ANALYSIS:

The method used for analysis was EPA SW846 Method 8240B.

ANALYSIS (cont.):

The quantitation limits for samples 04-20, 04-29, 05-10, SB-05, SB-29, SB-06, and SB-07 were raised due to the high level of non-target compounds.

No other problems were encountered during the analysis of these samples.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Only client requested compounds are addressed in this narrative.

Statistical windows are included in the QC summary section of this data package.

All QC was within specifications.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

John F. Morton Date 4/10/97
John F. Morton, M.S, GC/MS Volatiles

CASE NARRATIVE

Client: Kerr-McGee Corporation
SDG #: HMS04

LANCASTER LABORATORIES
SEMIVOLATILES BY GC/MS

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2679073	01–8	X		
2679074	01-44	X		
2679075	02–9	X		5X Dilution
2679075DL	02–9DL	X		50X Dilution
2679076	03-20	X		
2679077	04-20	X		5X Dilution
2679077DL	04-20DL	X		50X Dilution
2679077DL2	04-20DL2	X		100X Dilution
2679078	04-29	X		5X Dilution
2679078DL	04-29DL	X		50X Dilution
2679079	05-10	X		20X Dilution
2679079DL	05-10DL	X		200X Dilution
2679080	06–6	X		Unspiked
2679081	06–6MS	X		Matrix Spike
2679082	06-6MSD	X		Matrix Spike Dup
2679083	07-14	X		
2679083DL	07-14DL	X		5X Dilution
2679083DL2	07-14DL2	X		10X Dilution
2679084	06-36	X		
2679085	RB-4-		X	Client Blank
2679086	RB-5-		X	Client Blank
2680801	SB-01	X		
2680802	SB-02	X		
2680803	SB-03	X		
2680804	SB-04	X		
2680805	SB-05	X		10X Dilution
2680805DL	SB-05DL	X		100X Dilution
2680806	SB05A	X		
2680807	RB-8- ~~6~~ RB--6		X	Client Blank
2680808	SB-29	X		5X Dilution

CASE NARRATIVE

Client: Kerr-McGee Corporation
SDG #: HMS04

LANCASTER LABORATORIES
SEMIVOLATILES BY GC/MS

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2679073	01–8	X		
2679074	01-44	X		
2679075	02–9	X		5X Dilution
2679075DL	02–9DL	X		50X Dilution
2679076	03-20	X		
2679077	04-20	X		5X Dilution
2679077DL	04-20DL	X		50X Dilution
2679077DL2	04-20DL2	X		100X Dilution
2679078	04-29	X		5X Dilution
2679078DL	04-29DL	X		50X Dilution
2679079	05-10	X		20X Dilution
2679079DL	05-10DL	X		200X Dilution
2679080	06–6	X		Unspiked
2679081	06–6MS	X		Matrix Spike
2679082	06-6MSD	X		Matrix Spike Dup
2679083	07-14	X		
2679083DL	07-14DL	X		5X Dilution
2679083DL2	07-14DL2	X		10X Dilution
2679084	06-36	X		
2679085	RB-4-		X	Client Blank
2679086	RB-5-		X	Client Blank
2680801	SB-01	X		
2680802	SB-02	X		
2680803	SB-03	X		
2680804	SB-04	X		
2680805	SB-05	X		10X Dilution
2680805DL	SB-05DL	X		100X Dilution
2680806	SB05A	X		
2680807	RB–6		X	Client Blank
2680808	SB-29	X		5X Dilution

Case Narrative
SDG #: HMS04 continued

SAMPLE NUMBER(S) :

LLI #'s	Sample Code	Matrix Soil	Matrix Water	Comments
2680808DL	SB-29DL	X		50X Dilution
2680808DL2	SB-29DL2	X		100X Dilution
2680809	SB-06	X		5X Dilution
2680809DL	SB-06DL	X		50X Dilution
2680809DL2	SB-06DL2	X		100X Dilution
2680810	SB-07	X		5X Dilution
2680810DL	SB-07DL	X		125X Dilution
LABORATORY SUBMITTED QC:				
SBLKLC078	SBLKLC0784	X		Method Blank
SBLKWB078	SBLKWB0783		X	Method Blank
SBLKLC080	SBLKLC0804	X		Method Blank
SBLKWD080	SBLKWD0806		X	Method Blank
078LCLCS	078LCLCS4	X		Lab Control Sample
078WBLCS	078WBLCS3		X	Lab Control Sample
080LCLCS	080LCLCS4	X		Lab Control Sample
080WDLCS	080WDLCS6		X	Lab Control Sample

SAMPLE PREPARATION:

No problems were encountered during the extraction of these samples.

ANALYSIS:

The method used for analysis was EPA SW-846 Method 8270B. All samples were analyzed for the CLP OLM1.8 target compound list.

Case Narrative
SDG#: HMS04 continued

The following samples were analyzed at initial dilutions due to high concentrations of target compounds:

Sample	Dilution
02--9	5X
04-20	5X
04-29	5X
05-10	20X
SB-05	10X
SB-29	5X
SB-06	5X
SB-07	5X

Due to concentrations above calibration range, the following samples were analyzed at further dilutions:

Sample	Dilution
02--9	50X
04-20	50X
04-20DL	100X
04-29	50X
05-10	200X
07-14	5X
07-14DL	10X
SB-05	100X
SB-29	50X
SB-29DL	100X
SB-06	50X
SB-06DL	100X
SB-07	125X

No other problems were encountered during the analysis of these samples.

Case Narrative
SDG#: HMS04 continued

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Statistical windows are included in the QC summary section of this data package.

All QC was within specifications.

DATA INTERPRETATION:

Only non-conformances for client requested compounds are addressed in this case narrative.

Due to poor curve fit, a number of compounds were calculated using an average response factor. Refer to the calibration reports for more information

No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Christine M. Ratcliff Date: 4/7/97

Christine M. Ratcliff,
Group Leader, GC/MS Semivolatiles

CLIENT: Kerr - McGee Corporation
SDG: HMS04

LANCASTER LABORATORIES

MISCELLANEOUS WET CHEMISTRY

SAMPLE NUMBERS:

Sample #	Sample Code	Matrix Soil	Matrix Water	Comments
2679073	01--8		X	
2679074	01-44		X	
2679075	02--9		X	
2679076	03-20		X	
2679077	04-20		X	
2679078	04-29		X	
2679079	05-10		X	
2679080	06--6		X	Background
2679081	06--6		X	
2679082	06--6		X	Duplicate
2679083	07-14		X	
2679084	06-36		X	
2680801	SB-01		X	
2680802	SB-02		X	
2680803	SB-03		X	
2680804	SB-04		X	
2680805	SB-05		X	
2680806	SB05A		X	
2680808	SB-29		X	
2680809	SB-06		X	
2680810	SB-07		X	

SAMPLE PREPARATION:
Samples were homogenized prior to analysis.

ANALYSIS:
No problems were encountered during analysis.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:
QC was within specifications.

DATA INTERPRETATION:
No further interpretation is necessary for the data submitted.

Case Narrative Reviewed and Approved by:

Denise M. Lentz Date: 4/3/91
Denise M. Lentz
Senior Administrator/Coordinator

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A subsidiary of Thermo TerraTech Inc., a Thermo Electron company

CLIENT: Kerr-McGee Corporation
PROJECT: Hattiesburg, MS
SDG: HMS04

LANCASTER LABORATORIES

PESTICIDES/PCB's

LL SAMPLE #	SAMPLE CODE	MATRIX SOLID	MATRIX WATER	COMMENTS
2680805	SB-05	X		
Lab submitted QC:				
1225BLK3/24	PBLKZJ	X		Method Blank
2682196	SRSD4	X		Unspiked
2682197MS	SRSD4MS	X		Matrix Spike
2682197MSD	SRSD4MSD	X		Matrix Spike Duplicate

A. Sample Preparation:

Florisil and GPC cleanup were used to minimize interferences. No other problems were encountered with the preparation of the samples.

B. Analysis:

The analysis was performed using the following runs:

- 1-2C7080 (DB608 column) and 1-2C7080B (DB1701 column) from 03/21/97 through 03/29/97. No problems were encountered. All continuing calibration data are within specifications since any target analytes which have RPD values outside the 15% criteria on one column are within the 15% criteria on the second column.

C. Quality Control:

All surrogates meet the method criteria that at least one of the two compounds is within the acceptance limits.

The MS/MSD data are within the QC limits. 4,4' DDD is not listed on the form 1D's or 10a's for the matrix spike and matrix spike duplicate due to coelution with endosulfan II. However, the form 3 matrix spike/matrix spike duplicate comparison shows the concentration and the % recovery for DDD in the spikes. The data is reported with reference to this notice.

D. Data Interpretation:

The method blank was evaluated to the MDL. Values between the MDL and the LOQ are reported on the QC Summary form with a "J" qualifier.

Due to the presence of interfering peaks, some quantitation limits were determined from a replotted chromatogram representing an increase in attenuation. The reported quantitation limits were raised accordingly.

The affected compounds are flagged on the data page with a qualifier. The samples, associated qualifiers, and degree of replot are listed below:

- Y = 5-fold replot: SB-05

No further interpretation is needed.

Narrative reviewed and approved by:

Jenifer E. Hess, Group Leader

9/6/92
Date