

LMC Iron Mountain Box 81

PHASE I REMEDIAL INVESTIGATION REPORT

LOCKHEED MARTIN TACTICAL DEFENSE SYSTEMS DIVISION
(Former Unisys Corp. Site)

Great Neck, New York
NYSDEC Site No.130045

APPENDIX ^{H2}~~12~~

Prepared for:

New York State

Department of Environmental Conservation

On behalf of:

**Lockheed Martin Tactical Defense Systems Division of
Lockheed Martin Tactical Systems, Inc.**

DECEMBER 1996

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APPENDIX ^H~~12~~

VALIDATED SURFACE WATER AND SEDIMENT DATA
(DRAINAGE BASINS)
FEBRUARY 14, 1994

Phase I Remedial Investigation
Great Neck, NY Facility





Environmental Standards, Inc.

*Specialists in Environmental Risk Assessment,
Hydrogeology and Data Validation*

The Commons at Valley Forge, Unit 4, 1220 Valley Forge Rd.
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QUALITY ASSURANCE REVIEW OF THE SAMPLES COLLECTED NOVEMBER 24, 1993, FOR THE GREAT NECK RIFS PROJECT

February 14, 1994

Prepared for:

UNISYS CORPORATION
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Prepared by:

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Introduction

This quality assurance review is based upon a rigorous examination of all data generated from the 14 soil samples (including three QC samples) and two aqueous samples (field blank and trip blank) collected as part of the Great Neck RIFS on November 24, 1993. The samples that have undergone a rigorous quality assurance review are listed on Table 1.

This review has been performed with guidance from the "National Functional Guidelines for Organic Data Review" (U.S. EPA, 1990) and the "Functional Guidelines for Evaluating Inorganics Analyses" (U.S. EPA, 1988).

The reported analytical results are presented as a summary of the data in Section 2. Data were examined to determine the usability of the analytical results and also to determine compliance relative to requirements specified in the NYSDEC 12/91 ASP analytical methods. In addition, the deliverables specified under New York State Department of Environmental Conservation (NYSDEC) Category CLP-S were evaluated. Qualifier codes have been placed next to results so that the data user can quickly assess the qualitative and/or quantitative reliability of any result. Details of this quality assurance 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 chemical results. Rigorous quality assurance reviews of laboratory-generated data routinely identify various problems associated with analytical measurements, even from the most experienced and capable laboratories. The nature and extent of problems identified in this critical review should not be interpreted to mean that those results that do not have qualifier codes are less than valid.

TABLE 1

SAMPLES INCLUDED IN THIS QUALITY ASSURANCE REVIEW

Unisys Sample Number	Laboratory Sample Number	Sample Delivery Group	Date of Sample Collection	Fraction(s) Analyzed
EB-1	1325001	Z1325	11/24/93	V,S,PA,M,CN
EB-2	1325002	Z1325	11/24/93	V,S,PA,M,CN
EB-2DL (Dilution)	1325002DL	Z1325	11/24/93	PA
EB-3	1325003	Z1325	11/24/93	V,S,PA,M,CN
EB-3MS (Matrix Spike)	1325003MS	Z1325	11/24/93	V,S,PA,M,CN
EB-3MSD (Matrix Spike Duplicate)	1325003MSD	Z1325	11/24/93	V, S, PA
EB-3D (Laboratory Duplicate)	1325003D	Z1325	11/24/93	M,CN
EB-4	1325004	Z1325	11/24/93	V,S,PA,M,CN
CB-1	1325005	Z1325	11/24/93	V,S,PA,M,CN
CB-1DL	1325005DL	Z1325	11/24/93	PA
CB-2	1325006	Z1325	11/24/93	V,S,PA,M,CN
CB-2DL (Dilution)	1325006DL	Z1325	11/24/93	PA
CB-3	1325007	Z1325	11/24/93	V,S,PA,M,CN
CB-3DL (Dilution)	1325007DL	Z1325	11/24/93	PA
CB-4	1325008	Z1325	11/24/93	V,S,PA,M,CN
CB-4DL	1325008DL	Z1325	11/24/93	PA
WB-1	1325009	Z1325	11/24/93	V,S,PA,M,CN
WB-1DL (Dilution)	1325009DL	Z1325	11/24/93	PA
WB-2	1325010	Z1325	11/24/93	V,S,PA,M,CN
WB-2DL (Dilution)	1325010DL	Z1325	11/24/93	PA

TABLE 1 (Cont.)

Unisys Sample Number	Laboratory Sample Number	Sample Delivery Group	Date of Sample Collection	Fraction(s) Analyzed
SDG-2 DUP (Duplicate of WB-1)	1325011	Z1325	11/24/93	V,S,PA,M,CN
SDG-2 DUPDL (Dilution)	1325011DL	Z1325	11/24/93	PA
FB (FB112493, Field Blank)	1325012	Z1325		V,S,PA,M,CN
TB (TB112493, Trip Blank)	1325014	Z1325	11/24/93	V

Notes:

- V Target Compound List (TCL) Volatiles by NYSDEC 12/91 ASP, Method 91-1.
S TCL Semivolatiles by NYSDEC 12/91 ASP, Method 91-2.
PA TCL Pesticides/Aroclors by NYSDEC 12/91 ASP, Method 91-3.
M Target Analyte List (TAL) Metals by NYSDEC 12/91 ASP Analytical Methods for CLP Inorganics.
CN Total Cyanide by NYSDEC 12/91 ASP Method 335.2 CLP-M.

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February 14, 1993

Mr. Frank Fendler
Unisys Corporation
2476 Swedesford Road
Paoli, PA 19301

Dear Mr. Fendler:

Enclosed is the quality assurance review for the samples collected on November 24, 1993, as part of the Great Neck Remedial Investigation/Feasibility Study (RI/FS). Overall, the data quality is good. However, a small portion of the data was qualified due to blank contamination, matrix spike results, calibration issues, internal standard recoveries, dual column analyses, CRDL standard recoveries, Method of Standard Addition analysis, ICP serial dilution results, post-digestion spike recoveries, and high relative percent differences in the field duplicate set. In addition, the reported result for 4-nitroaniline in samples EB-4, BB-1, CB-2, CB-3, CB-4, WB-1, SDG-2 DUP, EB-2, WB-2 and FB 112493 is unusable due to a very low response factor in the associated initial calibration. The analysis for mercury in sample EB-4 is also unusable due to a very poor matrix spike recovery.

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

Sincerely,

Laurie A. Veneziale
Quality Assurance Chemist

LAV:cs
Enc.

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 13 soil samples (including two QC samples) and two aqueous samples (field blank and trip blank) collected as part of the Great Neck RIFS on November 24, 1993, were performed by Industrial and Environmental Analysts (IEA), located in Monroe, Connecticut. These samples were collectively analyzed for Target Compound List (TCL) volatile compounds, TCL semivolatile compounds and TCL pesticide/Aroclor compounds by New York State Department of Environmental Conservation September 1989 (12/91 Revision) Analytical Services Protocol (NYSDEC 12/91 ASP) as specified on Table 1. In addition, mass spectral library searches were performed on up to 30 extraneous chromatographic peaks for the volatile and semivolatile fractions combined.

The findings offered in this report are based upon a rigorous review of holding times, sample condition upon receipt at the laboratory, blank analysis results, surrogate and matrix spike recoveries, matrix spike blank recoveries, blind field duplicate results, analytical sequence, GC/MS tuning and system performance, instrument performance checks, GPC calibration performance, Florisil cleanup checks, performance evaluation and individual standard mix checks, target compound matching quality, calibrations, internal standard areas, the quantitation of positive results, reported quantitation limits, retention times, second column confirmation, Tentatively Identified Compounds (TICs) and overall system performance. The analytical results for the TCL compounds and the TICs are provided in Section 2.

Overall, the organic data quality is good. With respect to the contractual issues of the NYSDEC protocol, the following analytical criteria and reporting requirements were not met for the data packages received. The following items may not necessarily affect data usability. Usability is addressed in a subsequent section.

Correctable Deficiencies

1. The laboratory misreported the following ion abundance criteria on the Form V's in the volatile fraction (NYSDEC 12/91 ASP, pg. D-II-29). It should be noted that the required ion abundance criteria for all volatile organic instrument performance checks were met despite the discrepancy. The data reviewer has corrected the Form V's included in the Organic Data Support Documentation (Section 3).

<u>m/z</u>	<u>Reported Ion Abundance Criteria</u>	<u>Required Ion Abundance Criteria</u>
50	8.0 - 40.0% of mass 95	15.0 - 40.0% of mass 95

<u>m/z</u>	<u>Reported Ion Abundance Criteria</u>	<u>Required Ion Abundance Criteria</u>
75	30.0 - 66.0 % of mass 95	30.0 - 60.0 % of mass 95
175	4.0 - 9.0% of mass 174	5.0 - 9.0% of mass 174
176	93.0 - 101.0% of mass 174	95.0 - 101.0% of mass 174

- The laboratory misreported the following ion abundance criteria on the Form V's in the semivolatile fraction (NYSDEC 12/91 ASP, pg. D-III-68). It should be noted that the required ion abundance criteria for all semivolatile organic instrument performance checks were met despite the discrepancy. The data reviewer has corrected the Form V's included in the Organic Data Support Documentation (Section 3).

<u>m/z</u>	<u>Reported Ion Abundance Criteria</u>	<u>Required Ion Abundance Criteria</u>
51	30.0 - 80.0 % of mass 198	30.0 - 60.0 % of mass 198
127	25.0 - 75.0% of mass 198	40.0 - 60.0% of mass 198
365	Greater than 0.75 % of mass 198	Greater than 1.00 % of mass 198
443	15.0 - 24.0% of mass 442	17.0 - 23.0% of mass 442

- There is a peak in the volatile chromatograms of all samples that elutes in the first two minutes of the analytical run. This peak appears to be greater than 10% in height of the nearest internal standard. According to NYSDEC protocol (NYSDEC 12/91 ASP, pg. D-II-47), this peak, although probably due to an air peak (carbon dioxide) or a solvent front, should have been library searched. The peak in the volatile chromatograms is, in the data reviewer's opinion, not native to the project samples and would have been qualified as such.
- The laboratory did not report the concentrations of the volatile tentatively identified compounds (TICs) naphthalene in sample CB-3, and naphthalene and 1,2-dichlorobenzene in sample WB-2 with an "N" flag. The "N" flag is used to indicate presumptive evidence of a compound in a sample because the identification is based on a mass spectral library search only (NYSDEC 12/91 ASP, pg. B-81). The data reviewer-edited Form I VOA-TICs are included in the Analytical Results section (Section 2B).
- The laboratory incorrectly reported the response factors for the eight semivolatile compounds that only require a four-point calibration in the semivolatile initial calibrations (2,4-dinitrophenol, 2,4,5-trichlorophenol, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, 4,6-dinitro-2-methylphenol, and pentachlorophenol) performed on 12/03/93 and 12/16/93 on instrument HP5971I as "0.000" for the relative response

factors of the 20 ppb standard (RRF20). If a four-point calibration was performed for these compounds, the "RRF20" fields should be left blank per NYSDEC protocol (NYSDEC 12/92 ASP, pg. B-88). Therefore, the data reviewer crossed out these RRFs on the Form VI SVs included in the support documentation (Section 3). It should be noted that these RRFs are not used in calculating the average RRF and %RSD.

6. The laboratory utilized the same five peak retention times for the peaks used for quantitative and qualitative identification of the Aroclors 1016, 1232, 1221, and 1242 on both the DB-1701 and RTx-35 columns. The NYSDEC 12/91 ASP does not prohibit the use of the same peaks to identify Aroclors, but in the data reviewer's opinion, the use of the same five peak retention times for multiple Aroclors can lead to misidentification of an Aroclor. The laboratory should utilize as many unique peaks for each Aroclor as possible, so that a positive identification of each Aroclor is possible. The data reviewer agrees with the positive result for Aroclor 1242 in sample EB-1, but low concentrations of Aroclors 1016, 1221, and 1232 may be present and unaccounted for by the laboratory. The effect upon data usability is discussed in the Organic Data Qualifiers section.
7. The field blank and trip blank provided with this data package were not correctly labelled throughout the data package as specified on the Chains-of-Custody. The field blank is listed as "F.B." and the trip blank is listed as "T.B." on the Chains-of-Custody. However, the field blank was referred to throughout the data package as "FB112493" and the trip blank was referred to throughout the data package as "TB112493." For consistency, the field blank and trip blank are referred to throughout this report and on the data tables as "FB112493" and "TB112493," respectively.

Noncorrectable Deficiencies

1. NYSDEC protocol (NYSDEC 12/91 ASP, pg. D-III-53) allows for up to four semivolatile compounds to fail to meet the minimum RRF or maximum %RSD criteria combined for an initial calibration to be acceptable. Seven semivolatile compounds (phenol, *bis*[2-chloroethyl]ether, 4-methylphenol, naphthalene, acenaphthylene, acenaphthene, and pyrene) failed to meet the acceptable criteria for the initial calibration performed on 12/16/93 on instrument HP5971I. The laboratory should have reanalyzed the samples associated with this noncompliant initial calibration under a compliant initial calibration. It should be noted that data usability has not been impacted as a result.
2. The laboratory semivolatile method blanks SBLKMI, SBLKTI, and SBLKXI displayed TICs greater than 10% of the nearest internal standard. NYSDEC 12/91 ASP (pg. D-III-67) requires that these method blanks and all associated samples be reextracted and reanalyzed. The laboratory did not reextract and reanalyze these blanks and associated samples. The data usability impact is addressed in the Organic Data Qualifiers section.



3. The percent recovery of 96% for 4-nitrophenol in semivolatile matrix spike blank EB-3MSB was outside the QC limits of 10% - 80% specified by NYSDEC, and the matrix spike blank, matrix spike and matrix spike duplicate were not reextracted and reanalyzed. According to NYSDEC protocol, the matrix spike blank, matrix spike and matrix spike duplicate should be reextracted and reanalyzed if the percent recovery for any compound in the matrix spike blank is outside the QC limits (NYSDEC 12/91 ASP, pg. D-III-66). It should be noted that this is a contractual issue and does not affect usability of the data.
4. As stated in the case narrative, the pesticide/Aroclor analysis of sample CB-3DL performed on the RTx-35 column was performed more than 12 hours from the preceding instrument blank. NYSDEC 12/91 ASP (pgs. D-IV-44 and D-IV-45) requires that the sample injection must be less than 12 hours from the preceding instrument blank injection. The pesticide/Aroclor analysis of sample CB-3DL on the RTx-35 column should have been repeated within 12 hours of the preceding instrument blank. Additionally, the laboratory reported the results for 4,4'-DDT, *gamma*-chlordane, and Aroclor 1254 in sample CB-3DL from the DB-1701 column, when these results were greater than the results observed on the RTx-35 column. NYSDEC 12/91 ASP (pg. B-98) requires that the lower of the two concentrations for a compound be reported to eliminate any high biases which may occur as a result of matrix interferences which would increase the sample concentration. In the data reviewer's opinion, the laboratory reported the most valid results for the pesticide/Aroclor analysis of sample CB-3DL, because the results from the RTx-35 column were from a noncompliant sequence and the results from the DB-1701 column were from a compliant sequence. The results from the RTx-35 column confirm the qualitative presence of the positive results in sample CB-3DL. Also, the results from the RTx-35 column call into question the quantitation of the positive results for 4,4'-DDT, *gamma*-chlordane and Aroclor 1254 in sample CB-3DL because of the large difference between the results observed in both columns. The impact upon the data usability for the pesticide/Aroclor results of sample CB-3DL is addressed in the Organic Data Qualifier section.

Comments

1. The data reviewer could not exactly reproduce factors reported by the laboratory for *cis*-1,3-dichloropropene and *trans*-1,3-dichloropropene in all volatile initial and continuing calibrations performed for all instruments based on the given concentrations of these compounds. However, the data reviewer back-calculated the concentrations of the isomers at an 53% (*cis*):47% (*trans*) ratio of the reported standard concentrations. These compounds are often supplied in an unequal mixture by the manufacturer. Most likely, the laboratory is mathematically correcting the response factors to reflect the isomer inequalities. The laboratory should note such discrepancies in the case narrative (NYSDEC 12/91 ASP, pg. B-12).

2. The laboratory evaluated the GPC column calibration check standard by comparing the observed concentrations of the GPC calibration check standard before and after the standard was passed through the GPC column. It appears that the laboratory evaluated the Florisil cartridge check standard in a manner similar to that by which it evaluated the GPC column calibration. The GPC and Florisil calibration check methods specified by NYSDEC protocol (NYSDEC 12/91 ASP, pgs. D-IV-28 and D-IV-32) involve analyzing the check mixtures only after elution and determining the recovered amounts in the same fashion as sample quantitation. It appears that the laboratory's methodology is an attempt to prevent calibration drift from misrepresenting the GPC calibration check and Florisil cartridge check standard recoveries. The data reviewer believes the analytical method used by the laboratory is sound. However, the laboratory should have included a description of its methodologies in the case narrative since it is somewhat different from NYSDEC protocol.
3. In the pesticide matrix spike/matrix spike duplicate (MS/MSD) analysis of sample EB-3, aldrin and endrin displayed percent recoveries which were above the QC limits specified by NYSDEC protocol (NYSDEC 12/91 ASP, pg. D-IV-69). However, upon examination of the raw data, the retention times for aldrin and endrin are very close to the retention time of the multipeak Aroclors 1242 and 1254, respectively; therefore, the peaks for the single-component pesticides aldrin and endrin may be masked by an Aroclor peak, resulting in an inaccurate percent recovery for aldrin and endrin. Since Aroclor 1254 was reported for sample EB-3 and the percent recoveries displayed for endrin and aldrin in the MS/MSD analysis of sample EB-3 may not be accurate, sample EB-3 was not qualified as a result. It should be noted that the percent recoveries for endrin and aldrin in the matrix spike blank analysis were within the QC limits specified by NYSDEC (NYSDEC 12/91 ASP, pg. D-IV-66). In addition, in the analysis of all soil samples in this SDG, the laboratory correctly did not report positive results for endrin and aldrin, but instead attributed these peaks to one of the multicomponent Aroclor peaks.
4. The sample identified on the Chain-of-Custody as SDG-2 DUP is the field duplicate of sample WB-1 for the organic fraction.

Data Evaluation

With regard to data usability, principal areas of concern include blank contamination, initial and continuing calibrations, internal standard areas, matrix spike recoveries, surrogate recoveries and chromatographic interferences. Based upon a rigorous review of the data provided, the following organic data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualifications address problems associated with the sample matrix. Similarly, the validation guidelines routinely specify areas of the data that require qualification for which

the analytical methods applied 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

- Due to the trace-level presence of acetone, methylene chloride, 2-butanone, diethylphthalate, di-*n*-butylphthalate, *bis*(2-ethylhexyl)phthalate, and di-*n*-octylphthalate in the laboratory method blanks, the positive results for these compounds in the associated samples should be considered "not-detected" and 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.

<u>Compound</u>	<u>Applicable Sample(s)</u>
methylene chloride	CB-3, CB-4, WB-2, EB-1, CB-1, SDG-2 DUP, and WB-1
acetone	EB-2, EB-3, EB-4, CB-2, CB-3, CB-4, WB-2, EB-1, CB-1, SDG-2 DUP, and WB-1
2-butanone	CB-1, EB-2, EB-4, WB-2, and SDG-2 DUP
diethylphthalate	EB-3
di- <i>n</i> -butylphthalate	EB-1, EB-3, EB-3RE, CB-1, CB-2, CB-3, and CB-4
<i>bis</i> (2-ethylhexyl)phthalate	EB-3, EB-3RE, EB-4, CB-1, CB-2, CB-3, and CB-4
di- <i>n</i> -octylphthalate	EB-3

- Although there is no direct reason to qualitatively question the reported presence of di-*n*-butylphthalate in sample EB-4 and *bis*(2-ethylhexyl)phthalate in samples EB-1, EB-2, WB-1, SDG-2 DUP and WB-2, these results should be used with caution. Phthalate esters are extremely common laboratory and field contaminants. Di-*n*-butylphthalate and *bis*(2-ethylhexyl)phthalate were present in the associated method blanks, but not at levels high enough to call into question the presence of those phthalates in the listed samples.
- The analysis for 4-nitroaniline in samples EB-4, CB-1, CB-2, CB-3, CB-4, WB-1, SDG-2 DUP, EB-2, WB-2 and FB112493 is unusable, and the "not-detected" results have been flagged "R" on the data tables. A very low relative response factor (<0.050) was obtained for 4-nitroaniline in the initial calibration associated with these samples.



- The positive results of the semivolatile target compounds quantitated relative to the semivolatile internal standard perylene-d₁₂ in samples EB-3 and EB-3RE should be considered estimated and have been flagged "J" on the data tables. Similarly, the actual detection limits of all semivolatile target compounds quantitated relative to the semivolatile internal standard perylene-d₁₂ in samples EB-3 and EB-3RE may be biased low and the "not-detected" results have been flagged "UJ" on the data tables. Low internal standard areas (<50% of the internal standard area in associated continuing calibration) were obtained for perylene-d₁₂ in the analyses of the aforementioned samples.
- The positive results for acetone in samples FB112493 and TB112493 should be considered estimated and have been flagged "J" on the data tables. A high percent relative standard deviation (>30%) was obtained for acetone in the associated initial calibration.
- The actual detection limits for the following compounds in the associated samples may be higher than reported and the "not-detected" results have been flagged "UJ" on the data tables. Similarly, the positive results for acetone in samples FB112493 and TB112493, for carbazole in samples EB-3 and EB-3RE, and for indeno(1,2,3-cd)pyrene in sample CB-3 should be considered estimated, and the positive results for acetone in these two samples have been flagged "J" on the data tables. High percent differences (>25%) in the direction of a decrease in instrument sensitivity were obtained between the average relative response factors for these compounds in the initial calibrations and the relative response factors for these compounds in the associated continuing calibrations.

<u>Compound</u>	<u>Applicable Samples</u>
vinyl chloride	CB-3, CB-4, WB-2, and WB-1
pentachlorophenol	EB-1 and EB-3RE,
indeno(1,2,3-cd)pyrene	CB-4 and FB112493
benzo(g,h,i)perylene	CB-3, CB-4, and FB112493

- The "not-detected" results for the following compounds in the associated samples have been flagged "UJ" on the data tables. Similarly, the positive results for pyrene in samples EB-1, EB-3RE, CB-3, and CB-4 should be considered estimated and have been flagged "J" on the data tables. High percent differences (>25%) in the direction of an increase in instrument sensitivity were obtained between the average relative response factors of the initial calibrations and the relative response factors in the associated continuing calibrations. It should be noted that since the percent difference is in the direction of an increase in instrument sensitivity, the actual detection limits for these compounds may be acceptable as reported.

<u>Compound</u>	<u>Applicable Samples</u>
vinyl chloride, 2-butanone, 4-methyl-2-pentanone and 2-hexanone	FB112493 and TB112493
pyrene	FB112493
4-bromophenyl-phenylether	WB-1, SDG-2 DUP, EB-2, and WB-2

- The positive results for pyrene in samples EB-3 and EB-3RE should be considered estimated and the positive results have been flagged "J" on the data tables. A low percent recovery (<35%) was obtained in the matrix spike analysis, in addition to a high relative percent difference between the matrix spike and matrix spike duplicate analyses of sample EB-3.
- The positive results for the following pesticide/Aroclor compounds should be considered estimated, and the positive results have been flagged "J" on the data tables. A high percent difference (>25%) was observed between the results calculated for the dual column GC analyses performed on these samples in the pesticide/Aroclor fraction.

<u>Compound</u>	<u>Applicable Samples</u>
4,4 ϕ -DDE	EB-1, EB-2, EB-2DL, EB-4, CB-1, CB-1DL, CB-2, CB-2DL, CB-3, CB-4, CB-4DL, WB-1, WB-2, SDG-2 DUP, SDG-2 DUPDL
4,4 ϕ -DDD	EB-1, EB-2, EB-2DL, CB-1, CB-1DL, CB-2DL, CB-3, WB-2DL, SDG-2 DUP

<u>Compound</u>	<u>Applicable Samples</u>
4,4'-DDT	EB-1, EB-3, CB-1, CB-1DL, CB-2, CB-2DL, CB-3, CB-3DL, CB-4, WB-1, WB-2, WB-2DL, SDG-2 DUP, and SDG-2 DUPDL
<i>gamma</i> -chlordane	EB-1, EB-2, EB-2DL, EB-3, CB-1, CB-1DL, CB-2, CB-3, CB-3DL, CB-4, WB-1, WB-1DL, WB-2, WB-2DL, SDG-2 DUP, and SDG-2 DUPDL
Aroclor 1248	CB-2 and CB-3
Aroclor 1254	EB-2DL, CB-3DL, CB-4DL, WB-1DL, WB-2DL, and SDG-2 DUPDL
Aroclor 1260	CB-2 and CB-4

- The positive result for Aroclor 1242 reported in sample EB-1 should be considered estimated and has been flagged "J" on the data tables. Additionally, the quantitation limits for Aroclors 1016, 1221 and 1232 in sample EB-1 should be considered estimated and have been flagged "UJ" on the data tables. The Aroclor peak pattern observed in this sample closely resembles that of the Aroclors 1016, 1221, 1232 and 1242 and the peaks used for quantitation by the laboratory are identical for the four Aroclors. Therefore, the reported concentration of Aroclor 1242 in sample EB-1 may actually represent the total of the four Aroclors. The data reviewer agrees with the laboratory's identification of Aroclor 1242 in sample EB-1. However, the Aroclor peak pattern observed in sample EB-1 also exhibited peaks at retention times common to Aroclors 1016, 1221, and 1232 and their trace-level presence cannot be eliminated. Therefore, the quantitation limits for Aroclors 1016, 1221, and 1232 have been flagged as estimated because of interference from the Aroclor 1242 present in the sample.
- All soil samples within SDG Z1325 displayed very poor pesticide surrogate recoveries on both columns, especially for the surrogate decachlorobiphenyl, as a result of a matrix effect. Decachlorobiphenyl, in most cases, displayed 0% recovery or was diluted out on column DB-1701; whereas on column RTx-35, decachlorobiphenyl displayed recoveries greater than 500%. Because of this matrix effect, samples were not qualified for the surrogate recoveries which were outside of the QC limits.
- One field duplicate set (WB-1 and duplicate SDG-2 DUP) was submitted with the samples of SDG Z1325. In general, good precision and sample representativeness were demonstrated by the correlation observed between the results above the CRQLs in this blind field duplicate set with the exception of Aroclor 1248. The positive result for Aroclor 1248 in sample SDG-2 DUP should be considered estimated and has been



flagged "J" on the data tables. The positive results above the CRQLs (not flagged "U*") are summarized below.

<u>Compound</u>	<u>Sample WB-1 ($\mu\text{g/Kg}$)</u>	<u>Sample SDG-2 DUP ($\mu\text{g/Kg}$)</u>	<u>RPD^{1,2}</u>
phenanthrene	12,000	19,000	45.2% ³
fluoranthene	26,000	32,000	20.7% ³
pyrene	22,000	26,000	16.7% ³
benzo(a)anthracene	11,000	6400 U	NC ³
chrysene	13,000	15,000	14.3% ³
benzo(b)fluoranthene	14,000	16,000	13.3% ³
benzo(k)fluoranthene	8200	10,000	19.8% ³
benzo(a)pyrene	10,000	13,000	26.1% ³
4,4'-DDE	220	300	30.8% ³
4,4'-DDD	1400/1500 D	1800/2000 D	25% ³ /28.6% ³
4,4'-DDT	58	77	28.1% ³
gamma-chlordane	46	65	34.2% ³
Aroclor 1248	580 U	2800	NC ⁴
Aroclor 1254	1700/2600 D	3000/3200 D	55.3% ³ /20.7% ³

NOTES:

- D - Result marked with a "D" is a dilution for this analyte. Results for diluted sample and diluted field duplicate were evaluated separately from original samples.
- U - Compound was not detected at or above the associated numerical value. One-half the CRQL has been used as the result for evaluation purposes.
- NC - Not Calculated. In this case, one of the sample results is "not-detected." The acceptance limit is \pm two-times the CRQL.
- 1 - Relative Percent Difference.
- 2 - For all cases at least one of the results did not exceed five-times the Contract Required Quantitation Limit; the acceptance criterion used was that the difference between the results could not exceed \pm two-times the CRQL.



NOTES (Cont.):

- 3 - The difference between the results was within acceptance limits.
 - 4 - The difference between the results was outside of the acceptance limits. The positive results have been flagged "J" on the data tables.
- Tentatively Identified Compounds (TICs) have been evaluated and the majority of the TICs appear to be laboratory artifacts, alkanes, hydrocarbons, polyaromatic hydrocarbons and unknowns. TICs which were also detected in the laboratory method blanks or are known common laboratory artifacts (aldol condensates and siloxanes) should be considered unreliable and have been flagged "R" on the data tables. All other TIC results should be considered estimated and have been flagged "J" on the data tables. The TIC results are calculated based on an assumed response factor of 1.0.
- As per NYSDEC protocol, all positive results reported below the quantitation limits should be considered estimated and have been flagged "J" on the data summary tables.

A complete support documentation of this organic quality assurance review is presented in Section 3 of this report.

B. Inorganic Data

The inorganics analyses of 14 soil samples (including two QC samples) and one aqueous sample (field blank) collected as part of the Great Neck RIFS on November 24, 1993, were performed by Industrial and Environmental Analysts (IEA) located in Monroe, Connecticut. The samples were collectively analyzed by New York State Department of Environmental Conservation September, 1989 (12/91 Revision) Analytical Services Protocol (NYSDEC 12/91 ASP) for the Target Analyte List (TAL) metals and total cyanide as specified on Table 1.

The findings offered in this report are based upon rigorous review of the sample holding times, condition of samples upon receipt, blank analysis results, pre- and post-digestion matrix spike recoveries, laboratory and field duplicate analyses, quantitation of positive results, instrument sensitivity, calibrations, Contract Required Detection Limit (CRDL) standards, Laboratory Control Samples (LCSs), Method of Standard Additions (MSA) analyses, ICP linear ranges, ICP interference checks, ICP serial dilution results, duplicate burns, sample preparation and overall system performance. The analytical results are presented in Section 2, Part B.

Overall, inorganic data quality appears to be good. Analytical criteria and reporting requirements were met for the data packages received, with the following exceptions. It should be noted that the following items are contractual in nature and may not necessarily affect data usability. Usability is addressed in a subsequent section.



Correctable Deficiencies

1. The Analysis Run Logs (Form XIVs) for all metals which were analyzed by graphite furnace (arsenic, selenium, lead, and thallium) were not organized in the order specified by NYSDEC protocol. According to NYSDEC protocol, the Analysis Run Logs (Form XIVs) must be organized by method, by analytical run, and later runs within a method must follow earlier runs (NYSDEC 12/91 ASP, B-177). Instead, the Form XIVs were organized chronologically by date and time of analysis, and the analyses for each element were not grouped together.
2. The laboratory did not report the result for the CRDL standard analyzed for lead on 12/13/93 at 2:23 on instrument 5100. According to the raw data provided, 3.30 $\mu\text{g/L}$ was detected for this standard. The data reviewer assumes the "True Concentration" for this standard is 3.0 $\mu\text{g/L}$, which is the "True Concentration" listed for the other CRDL standards for lead reported on the Form IIBs. The data reviewer calculated a percent recovery of 110% for this standard, which is within the acceptable limits. The corrected Form IIB is included in the Support Documentation (Section 4).
3. The percent recovery for mercury in the matrix spike analysis of sample EB-3S was corrected by the laboratory from -8.0% to 18.0% on the Form V. According to the raw data provided, the data reviewer calculated a percent recovery of -8.0%, which is the value originally reported as the percent recovery for mercury. The Form V was corrected by the data reviewer to reflect the -8.0% recovery and is included in the Inorganic Support Documentation (Section 4).
4. The ICP Serial Dilution Form IX incorrectly lists the method for lead as an "F" for graphite furnace; the method should be listed as "P" for ICP. The analysis for lead was performed by ICP and graphite furnace, but a serial dilution was performed for ICP only. The corrected Form IX appears in the Inorganic Support Documentation (Section 4).
5. The laboratory did not use the laboratory sample IDs exactly as they appear on the Chains-of-Custody on all inorganic CLP QC forms and in the raw data. Specifically, a "0" was not included in the laboratory sample ID. For example, the laboratory sample ID for sample EB-1 is listed on the Chain-of-Custody as "1325001," but is referred to throughout the inorganic data package provided as "132501." Similarly, the laboratory incorrectly used the laboratory sample IDs in the column labelled "EPA Sample Number" on the Standard Addition Results form (Form VIII) and the Analysis Run Logs (Form XIV). The NYSDEC sample ID should be entered in these columns instead of the laboratory sample ID. In addition, according to NYSDEC, the columns labelled as "EPA Sample Number" on Forms VIII and XIV should be labelled as "NYSDEC Sample Number" (NYSDEC 12/91 ASP, B-192 and B-199).



6. The laboratory did not correctly complete the ICP Linear Ranges Summary forms (Form XII-INS) for all SDGs. The laboratory did not indicate the method of analysis for each analyte, as required by protocol (NYSDEC 12/91 ASP, B-175).
7. The laboratory did not include the NYSDEC sample numbers on the raw inorganic project sample or quality control sample data for all SDGs as required (NYSDEC 12/91 ASP, B-30 and B-31).

Noncorrectable Deficiency

- According to the digestion logs supplied with this data package, the laboratory used a soil sample weight of approximately 0.5 g and a final volume of 100 ml for ICP and furnace metals digestion. According to NYSDEC protocol (NYSDEC 12/91 ASP, pgs. D-V-16 and 17), a soil sample weight of 1.0 g - 1.5 g and a final volume of 200 ml are required for ICP and furnace metals digestion. It should be noted that the laboratory used a ratio of soil sample weight to final volume identical to that required by NYSDEC protocol. Therefore, it is the data reviewer's opinion that this does not affect data usability.

Comments

1. All soil sample results have been reported on a dry-weight basis as required by U.S. EPA protocol.
2. The sample identified on the Chain-of-Custody as SDG-2 DUP is the field duplicate of sample WB-1 for the inorganic fraction.

Data Evaluation

With regard to data usability, the principal areas of concern include pre-digestion matrix spike recoveries, Contract Required Detection Limit (CRDL) standard recoveries, serial dilution results, Method of Standard Addition results, field duplicate results, and post-digestion spike recoveries. Based upon an evaluation of the QC summary information reported by the laboratory, the following inorganic data qualifiers are offered. It should be noted that data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualification addresses issues relating to the sample matrix problems. Similarly, the validation guidelines 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 presence of nickel in a continuing calibration blank, the positive result for nickel in sample CB-4 should be considered "not-detected" and has been flagged "U*" on the data tables.
- The analysis for mercury in sample EB-4 is unusable, and the "not-detected" result has been flagged "UR" on the data tables. Similarly, the positive results for mercury in samples EB-1, EB-2, EB-3, CB-1, CB-2, CB-3, CB-4, WB-1, WB-2, and SDG-2 DUP, and for silver in all soil samples in SDG Z1325 should be considered estimated and have been flagged "J" on the data tables. Very low recoveries ($<0\%$) were observed for these analytes in the associated pre-digestion matrix spike sample.
- The positive results for antimony in samples EB-3 and SDG-2 DUP and for selenium in samples EB-1, EB-2, CB-1, CB-2, CB-3, WB-2, and SDG-2 DUP should be considered estimated and have been flagged "J" on the data tables. Similarly, the actual detection limits for antimony in samples EB-1, EB-2, EB-4, CB-1, CB-2, CB-3, CB-4, WB-1, and WB-2 may be higher than reported and the "not-detected" results have been flagged "UJ" on the data tables. Low recoveries ($<75\%$) were observed for these analytes in the associated pre-digestion matrix spike samples.
- The actual detection limit for lead in sample FB112493 may be higher than reported and the "not-detected" result has been flagged "UJ" on the data tables. A low recovery ($<85\%$) was observed for lead in the associated CRDL standard.
- The positive result for selenium in sample EB-2 should be considered estimated and has been flagged "J" on the data tables. A low correlation coefficient (<0.995) was obtained for selenium in the Method of Standard Addition analysis of this sample.
- The positive results for barium, chromium and zinc in all soil samples in SDG Z1325 should be considered estimated and have been flagged "J" on the data tables. High percent differences ($>10.0\%$) were obtained for barium, chromium and zinc in the associated serial dilution analyses.
- The positive result for selenium in samples CB-3, WB-2, and SDG-2 DUP should be considered estimated and has been flagged "J" on the data tables. Low recoveries ($<85\%$) were observed for selenium in the post-digestion spike analysis of these samples.
- One field duplicate set (WB-1 and duplicate SDG-2 DUP) was submitted with the samples of SDG Z1325. In general, good precision was observed in this blind field duplicate set with the exceptions of aluminum, calcium, cadmium, chromium, copper, lead, manganese, nickel, silver, vanadium and zinc. The positive results for aluminum,



calcium, cadmium, chromium, copper, lead, manganese, nickel, silver, vanadium and zinc in samples WB-1 and SDG-2 DUP should be considered estimated and have been flagged "J" on the data tables. Relative percent differences (RPDs) of greater than 40.0% were obtained between the results for chromium, copper, iron, lead, silver and zinc in the field duplicate pair, and differences of greater than two times the CRDL were obtained for nickel and vanadium in this field duplicate pair. The positive results reported at a concentration at or above the CRDL are summarized below.

Analyte	Sample WB-1 (mg/Kg)	Sample SDG-2 DUP (mg/Kg)	RPD ¹
aluminum	5220	10,100	63.7% ^{4,5}
arsenic	8.8	16.0	58.1% ^{2,3}
calcium	1300	5880	128% ^{4,5}
cadmium	2.7	7.2	90.9% ^{4,5}
chromium	42.6	156	114% ^{2,4}
copper	682	2060	100% ^{2,4}
iron	15,100	22,400	38.9% ^{2,3}
lead	383	1820	130% ^{2,4}
magnesium	1510	4450	98.7% ^{3,5}
manganese	53.3	97.4	58.5% ^{2,4}
mercury	1.4	2.0	35.3% ^{2,3}
nickel	40.0	90.1	77.0% ^{4,5}
silver	199	446	76.6% ^{2,4}
vanadium	69.3	250	113% ^{2,4}
zinc	404	992	84.2% ^{2,4}

NOTES:

- 1 - Relative Percent Difference (RPD).
- 2 - When both results are $\geq 5 \times$ CRDL, the acceptance criterion is 40.0%.
- 3 - Results are within the acceptance limits.
- 4 - Results are outside the acceptance limits.
- 5 - When at least one result is $< 5 \times$ CRDL, the acceptance criterion is $\pm 2 \times$ CRDL in difference between the results.



A complete support documentation of this inorganic quality assurance review is presented in Section 4 of this report.

C. Conclusions

This quality assurance review has identified several aspects of the analytical data that required qualification. In general, the majority of the data appears to be acceptable. To confidently use any of the analytical data within these sample sets, the data user should understand the qualifications and limitations of the results. The Project Case Narratives and Chains-of-Custody are presented in Section 5. The NYSDEC Matrix Summary and NYSDEC Sample Preparation Forms are presented in Sections 6 and 7, respectively. The Project Correspondence is presented in Section 8.

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SECTION 2

ANALYTICAL RESULTS

A. ORGANIC DATA

Organic Qualifiers

- Compound was not detected.
- U This compound should be considered "not-detected" since it was detected in a field, trip and/or laboratory method blank at a similar level.
- J Quantitation is approximate due to limitations identified during the quality assurance review (data validation).
- R Unreliable result - Compound may or may not be present in this sample.
- UJ This compound was not detected, but the quantitation limit may be higher due to a bias identified during the quality assurance review.

It should be noted that the results for all solid samples are reported on a "dry-weight" basis.

I2_VOC1.XLS

Unisys Sample ID	EB-2		EB-3		EB-4		CB-2		CB-3		CB-4	
IEA Sample ID	1325002		1325003		1325004		1325006		1325007		1325008	
Units	µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
Remarks												
Quant. Limit Multiplier	1.61		1.23		1.19		1.30		1.33		1.45	
Compound												
Chloromethane		U		U		U		U		U		U
Bromomethane												
Vinyl Chloride										UJ		UJ
Chloroethane												
Methylene Chloride									13	U	14	U
Acetone	96	U	24	U	22	U	13	U	38	U	16	U
Carbon Disulfide	2	J										
1,1-Dichloroethene												
1,1-Dichloroethane												
1,2-Dichloroethene (total)							3	J				
Chloroform												
1,2-Dichloroethane												
2-Butanone	24	U		U	12	U		U				
1,1,1-Trichloroethane												
Carbon Tetrachloride												
Bromodichloromethane												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
Trichloroethene							5	J	2	J		
Dibromochloromethane												
1,1,2-Trichloroethane												
Benzene												
trans-1,3-Dichloropropene												
Bromoform												
4-Methyl-2-pentanone		U		U		U		U				
2-Hexanone		U		U		U		U		U		U
Tetrachloroethene			3	J	4	J	16		10	J	4	J
1,1,2,2-Tetrachloroethane												
Toluene	4	J	2	J			3	J	2	J		
Chlorobenzene												
Ethylbenzene												
Styrene												
Xylene (total)												
Method Blank I.D.	VBLKBL		VBLKBL		VBLKBL		VBLKBL		VBLKBL		VBLKBL	
Date Collected	11/24/93		11/24/93		11/24/93		11/24/93		11/24/93		11/24/93	
Date Received	11/26/93		11/26/93		11/26/93		11/26/93		11/26/93		11/26/93	
Date Extracted	NA		NA		NA		NA		NA		NA	
Date Analyzed	11/29/93		11/29/93		11/29/93		11/29/93		11/30/93		11/30/93	

Unisys Sample ID	WB-2		EB-1		CB-1		SDG-2 DUP		WB-1	
IEA Sample ID	1325010		1325001		1325005		1325011		1325009	
Units	µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
Remarks										
Quant. Limit Multiplier	1.28		1.15		1.78		1.28		1.39	
Compound										
Chloromethane		U		U		U		U		U
Bromomethane										
Vinyl Chloride		UJ								UJ
Chloroethane										
Methylene Chloride	13	U	12	U	18	U	13	U	14	U
Acetone	91	U	35	U	160	U	32	U	33	U
Carbon Disulfide										
1,1-Dichloroethene										
1,1-Dichloroethane										
1,2-Dichloroethene (total)										
Chloroform										
1,2-Dichloroethane										
2-Butanone	27	U			47	U	13	U		
1,1,1-Trichloroethane										
Carbon Tetrachloride										
Bromodichloromethane										
1,2-Dichloropropane										
cis-1,3-Dichloropropene										
Trichloroethene										
Dibromochloromethane										
1,1,2-Trichloroethane										
Benzene										
trans-1,3-Dichloropropene										
Bromoform										
4-Methyl-2-pentanone										
2-Hexanone		U								
Tetrachloroethene	4	J			3	J	1	J	8	J
1,1,2,2-Tetrachloroethane										
Toluene	1	J								
Chlorobenzene										
Ethylbenzene										
Styrene										
Xylene (total)					1	J				
Method Blank I.D.	BLKBM		VBLKBN		VBLKBN		VBLKBN		VBLKBO	
Date Collected	11/24/93		11/24/93		11/24/93		11/24/93		11/24/93	
Date Received	11/26/93		11/26/93		11/26/93		11/26/93		11/26/93	
Date Extracted	NA		NA		NA		NA		NA	
Date Analyzed	11/30/93		11/30/93		11/30/93		11/30/93		12/01/93	

I2_VOC1.XLS

Unisys Sample ID	FB 112493		TB 112493		
IEA Sample ID	1325012		1325013		
Units	µg/L		µg/L		
Remarks	Field Blank		Trip Blank		Limit
Quant. Limit Multiplier	1.00		1.00		
Compound					
Chloromethane					10
Bromomethane					10
Vinyl Chloride		UJ		UJ	10
Chloroethane					10
Methylene Chloride	2	J	2	J	10
Acetone	12		11		10
Carbon Disulfide					10
1,1-Dichloroethene					10
1,1-Dichloroethane					10
1,2-Dichloroethene (total)					10
Chloroform					10
1,2-Dichloroethane					10
2-Butanone		U		U	10
1,1,1-Trichloroethane					10
Carbon Tetrachloride					10
Bromodichloromethane					10
1,2-Dichloropropane					10
cis-1,3-Dichloropropene					10
Trichloroethene					10
Dibromochloromethane					10
1,1,2-Trichloroethane					10
Benzene					10
trans-1,3-Dichloropropene					10
Bromoform					10
4-Methyl-2-pentanone		U		U	10
2-Hexanone		U		U	10
Tetrachloroethene					10
1,1,2,2-Tetrachloroethane					10
Toluene					10
Chlorobenzene					10
Ethylbenzene					10
Styrene					10
Xylene (total)					10
Method Blank I.D.	VBLKBQ		VBLKBQ		
Date Collected	11/24/93		11/24/93		
Date Received	11/26/93		11/26/93		
Date Extracted	NA		NA		
Date Analyzed	12/02/93	-	12/02/93		

Unisys Sample ID	EB-1	EB-3	EB-3 RE	EB-4	CB-1	CB-2	CB-3	CB-4
IEA Sample ID	1325001	1325003	1325003RE	1325004	1325005	1325006	1325007	1325008
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Remarks								
Quant. Limit Multiplier	7.70	1.21	1.21	1.15	38.5	13.5	37.8	4.72
Compound								
Phenol								
bis(2-Chloroethyl)ether								
2-Chlorophenol								
1,3-Dichlorobenzene								
1,4-Dichlorobenzene								
1,2-Dichlorobenzene	160 J		37 J				4200 J	
2-Methylphenol								
2,2'-oxybis(1-Chloropropane)								U
4-Methylphenol								
N-Nitroso-di-n-propylamine								
Hexachloroethane								
Nitrobenzene								
Isophorone								
2-Nitrophenol								
2,4-Dimethylphenol								
bis(2-Chloroethoxy)methane								
2,4-Dichlorophenol								
1,2,4-Trichlorobenzene								
Naphthalene	150 J	32 J	30 J				1400 J	
4-Chloroaniline								
Hexachlorobutadiene								
4-Chloro-3-methylphenol								
2-Methylnaphthalene	110 J	39 J	36 J					
Hexachlorocyclopentadiene								
2,4,6-Trichlorophenol								
2,4,5-Trichlorophenol								
2-Chloronaphthalene								
2-Nitroaniline								

Unisys Sample ID	EB-1	EB-3	EB-3 RE	EB-4	CB-1	CB-2	CB-3	CB-4
IEA Sample ID	1325001	1325003	1325003RE	1325004	1325005	1325006	1325007	1325008
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Remarks								
Quant. Limit Multiplier	7.70	1.21	1.21	1.15	38.5	13.5	37.8	4.72
Compound								
Dimethylphthalate								
Acenaphthylene	250 J	160 J	120 J			140 J		100 J
2,6-Dinitrotoluene								
3-Nitroaniline					U			
Acenaphthene	310 J	24 J			760 J	210 J	4900 J	71 J
2,4-Dinitrophenol								
4-Nitrophenol								
Dibenzofuran	150 J	22 J	18 J					U
2,4-Dinitrotoluene							2100 J	
Diethylphthalate		400 U						
4-Chlorophenyl-phenylether								
Fluorene	440 J	28 J	45 J		810 J	220 J	4600 J	
4-Nitroaniline					R		R	R
4,6-Dinitro-2-methylphenol								
N-Nitrosodiphenylamine (1)								
4-Bromophenyl-phenylether								
Hexachlorobenzene								
Pentachlorophenol	UJ							
Phenanthrene	3200	620	540	48 J	9700 J	2800 J	38000	1500 J
Anthracene	750 J	130 J	79 J	10 J	1500 J	570 J	9300 J	260 J
Carbazole	540 J	120	110		2800 J	700 J	7800 J	180 J
Di-n-butylphthalate	2500 U	400 U	400 U	1200	13000 U	4500 U	12000 U	1600 U
Fluoranthene	6400	1000	970	130 J	16000	5000	60000	4100
Pyrene	4700 J	1900 J	1200 J	130 J	11000 J	3600 J	48000 J	3300 J
Butylbenzylphthalate	U							
3,3'-Dichlorobenzidine		U						
Benzo(a)anthracene	3200	460	380 J	49 J	5400 J	1700 J	31000	
Chrysene	3800	1100	870	80 J	8100 J	2600 J	31000	1800

Unisys Sample ID	EB-1	EB-3	EB-3 RE	EB-4	CB-1	CB-2	CB-3	CB-4
IEA Sample ID	1325001	1325003	1325003RE	1325004	1325005	1325006	1325007	1325008
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Remarks								
Quant. Limit Multiplier	7.70	1.21	1.21	1.15	38.5	13.5	37.8	4.72
Compound								
bis(2-Ethylhexyl)phthalate	2000 J	400 U	400 U	380 U	13000 U	4500 U	12000 U	1600 U
Di-n-octylphthalate	U	400 U	U					
Benzo(b)fluoranthene	5200	2000 J	1000 J	74 J	7800 J	2400 J	23000	1100 J
Benzo(k)fluoranthene	4300		830 J	54 J	5700 J	2500 J	33000	1200 J
Benzo(a)pyrene	3800		760 J	47 J	5500 J	2000 J	28000	1100 J
Indeno(1,2,3-cd)pyrene	1800 J	320 J	440 J	28 J	3100 J	1100 J	16000 J	UJ
Dibenzo(a,h)anthracene	360 J		120 J					
Benzo(g,h,i)perylene	320 J	160 J	300 J		1200 J	510 J		UJ
Method Blank I.D.	SBLKTI	SBLKTI	SBLKTI	SBLKTI	SBLKTI	SBLKTI	SBLKTI	SBLKTI
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93
Date Received	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93
Date Extracted	11/30/93	11/30/93	11/30/93	11/30/93	11/30/93	11/30/93	11/30/93	11/30/93
Date Analyzed	12/10/93	12/10/93	12/14/93	12/17/93	12/17/93	12/17/93	12/21/93	12/21/93

Unisys Sample ID	WB-1	SDG-2 DUP	EB-2	WB-2	FB 112493	
IEA Sample ID	1325009	1325011	1325002	1325010	1325012	
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/L	
Remarks					Field Blank	Quant. Limit
Quant. Limit Multiplier	17.5	19.2	13.5	6.95	1.0	
Compound						
Phenol						330
bis(2-Chloroethyl)ether						330
2-Chlorophenol						330
1,3-Dichlorobenzene						330
1,4-Dichlorobenzene						330
1,2-Dichlorobenzene						330
2-Methylphenol						330
2,2'-oxybis(1-Chloropropane)					U	330
4-Methylphenol						330
N-Nitroso-di-n-propylamine						330
Hexachloroethane						330
Nitrobenzene						330
Isophorone						330
2-Nitrophenol						330
2,4-Dimethylphenol						330
bis(2-Chloroethoxy)methane						330
2,4-Dichlorophenol						330
1,2,4-Trichlorobenzene						330
Naphthalene	430 J	1000 J	470 J	170 J		330
4-Chloroaniline						330
Hexachlorobutadiene						330
4-Chloro-3-methylphenol						330
2-Methylnaphthalene			260 J	150 J		330
Hexachlorocyclopentadiene						330
2,4,6-Trichlorophenol						330
2,4,5-Trichlorophenol						800
2-Chloronaphthalene						330
2-Nitroaniline						800

Unisys Sample ID	WB-1	SDG-2 DUP	EB-2	WB-2	FB 112493	
IEA Sample ID	1325009	1325011	1325002	1325010	1325012	
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/L	
Remarks					Field Blank	Quant. Limit
Quant. Limit Multiplier	17.5	19.2	13.5	6.95	1.0	
Compound						
Dimethylphthalate						330
Acenaphthylene	280 J	400 J	480 J	370 J		330
2,6-Dinitrotoluene						330
3-Nitroaniline						800
Acenaphthene	1600 J	3300 J	570 J	600 J		330
2,4-Dinitrophenol						800
4-Nitrophenol	U	U	U	U	U	800
Dibenzofuran	730 J	1700 J	320 J	290 J		330
2,4-Dinitrotoluene						330
Diethylphthalate						330
4-Chlorophenyl-phenylether						330
Fluorene	1600 J	3200 J	840 J	730 J		330
4-Nitroaniline	R	R	R	R	R	800
4,6-Dinitro-2-methylphenol						800
N-Nitrosodiphenylamine (1)						330
4-Bromophenyl-phenylether	UJ	UJ	UJ	UJ		330
Hexachlorobenzene						330
Pentachlorophenol						800
Phenanthrene	12000	19000	6300	4700		330
Anthracene	3400 J	6000 J	1700 J	1300 J		330
Carbazole	3000 J	5200 J	1400 J	1100 J		330
Di-n-butylphthalate						330
Fluoranthene	26000	32000	18000	12000		330
Pyrene	22000	26000	12000	7300	UJ	330
Butylbenzylphthalate						330
3,3'-Dichlorobenzidine						330
Benzo(a)anthracene	11000					330
Chrysene	13000	15000	9000	6200		330

Unisys Sample ID	WB-1	SDG-2 DUP	EB-2	WB-2	FB 112493	
IEA Sample ID	1325009	1325011	1325002	1325010	1325012	
Units	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/L	
Remarks						Quant. Limit
Quant. Limit Multiplier	17.5	19.2	13.5	6.95	Field Blank	
Compound					1.0	
bis(2-Ethylhexyl)phthalate	7300	5100	3900	4900	0.7 J	330
Di-n-octylphthalate						330
Benzo(b)fluoranthene	14000	16000	760 J	5100		330
Benzo(k)fluoranthene	8200	10000	1100 J	16000		330
Benzo(a)pyrene	10000	13000	8100	5500		330
Indeno(1,2,3-cd)pyrene	3500 J	4300 J	3000 J		UJ	330
Dibenzo(a,h)anthracene						330
Benzo(g,h,i)perylene		2200 J		1100 J	UJ	330
Method Blank I.D.	SBLKTI	SBLKTI	SBLKXI	SBLKXI	SBLKMI	
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	
Date Received	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	
Date Extracted	11/30/93	11/30/93	12/01/93	12/01/93	11/29/93	
Date Analyzed	12/22/93	12/22/93	12/22/93	12/22/93	12/21/93	

Unisys Sample ID	EB-1	EB-2	EB-2 DL	EB-3	EB-4	CB-1	CB-1 DL	CB-2
IEA Sample ID	1325001	1325002	1325002DL	1325003	1325004	1325005	1325005DL	1325006
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Remarks								
Quant. Limit Multiplier	1.54	2.70	27	1.21	1.15	3.85	38.5	1.35
Compound								
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE	26 J	67 J	73 J		0.32 J	80 J	100 J	37 J
Endrin								
Endosulfan II								
4,4'-DDD	68 J	140 J	160 J	19 J		320 J	420 J	220
Endosulfan Sulfate								
4,4'-DDT	16 J	34	35 J	6.6 J		44 J	110 J	14 J
Methoxychlor							200 J	
Endrin-Ketone								
Endrin Aldehyde								
alpha-Chlordane								
gamma-Chlordane	11 J	23 J	29 J	1.6 J		35 J	49 J	13 J
Toxaphene								
Aroclor - 1016	UJ							
Aroclor - 1221	UJ							
Aroclor - 1232	UJ							
Aroclor - 1242	120 J							
Aroclor - 1248		890	1000	73		1400	2300	290 J
Aroclor - 1254	330	940	930 J	87		1500	2500	530
Aroclor - 1260								250 J
Method Blank I.D.	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93
Date Received	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93
Date Extracted	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93
Date Analyzed	12/08/93	12/08/93	12/09/93	12/08/93	12/08/93	12/08/93	12/11/93	12/08/93

Unisys Sample ID	CB-2 DL	CB-3	CB-3 DL	CB-4	CB-4 DL	WB-1	WB-1 DL
IEA Sample ID	1325006DL	1325007	1325007DL	1325008	1325008DL	1325009	1325009DL
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Remarks							
Quant. Limit Multiplier	13.5	18.5	185	1.18	11.8	17.5	175
Compound							
alpha-BHC							
beta-BHC							
delta-BHC							
gamma-BHC							
Heptachlor							
Aldrin							
Heptachlor Epoxide							
Endosulfan I							
Dieldrin							
4,4'-DDDE	47 J	120 J		11 J	17 J	220 J	320 J
Endosulfan II							
4,4'-DDD	280 J	920 J	1300	78	87	1400	1500
Endosulfan Sulfate							
4,4'-DDT	33 J	47 J	300 J	9.3 J	37 J	58 J	300 J
Methoxychlor							
Endrin-Ketone							
Endrin Aldehyde							
alpha-Chlordane							
gamma-Chlordane	19 J	55 J	130 J	4 J	7.9 J	46 J	76 J
Toxaphene							
Aroclor - 1016							
Aroclor - 1221							
Aroclor - 1232							
Aroclor - 1242							
Aroclor - 1248		2400 J	5000 J				
Aroclor - 1254	730	4300	7000 J	190	240 J	1700 J	2600 J
Aroclor - 1260				100 J	160 J		
Method Blank I.D.	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66	PBLK66
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93
Date Received	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93
Date Extracted	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93	12/01/93
Date Analyzed	12/11/93	12/08/93	12/11/93	12/08/93	12/11/93	12/09/93	12/11/93

Unisys Sample ID	WB-2	WB-2 DL	SDG-2 DUP	SDG-2 DUP DL	FB 112493	
IEA Sample ID	1325010	1325010DL	1325011	1325011DL	1325012	
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L	
Remarks					Field Blank	Quant. Limit
Quant. Limit Multiplier	13.9	139	19.2	192	1.0	
Compound						
alpha-BHC						1.7
beta-BHC						1.7
delta-BHC						1.7
gamma-BHC						1.7
Heptachlor						1.7
Aldrin						1.7
Heptachlor Epoxide						1.7
Endosulfan I						1.7
Diieldrin						3.3
4,4'-DDE	150 J	290 J	300 J	380 J		3.3
Endrin						3.3
Endosulfan II						3.3
4,4'-DDD	910	1100 J	1800 J	2000		3.3
Endosulfan Sulfate						3.3
4,4'-DDT	35 J	110 J	77 J	140 J		3.3
Methoxychlor						17
Endrin-Ketone						3.3
Endrin Aldehyde						3.3
alpha-Chlordane						1.7
gamma-Chlordane	37 J	64 J	65 J	110 J		1.7
Toxaphene						170
Aroclor - 1016						33
Aroclor - 1221						67
Aroclor - 1232						33
Aroclor - 1242						33
Aroclor - 1248	1400		2800 J			33
Aroclor - 1254	1300	2300 J	3000 J	3200 J		33
Aroclor - 1260		2100 J				33
Method Blank I.D.	PBLK66	PBLK66	PBLK66	PBLK66	PBLK64	
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93	11/24/93	
Date Received	11/26/93	11/26/93	11/26/93	11/26/93	11/26/93	
Date Extracted	12/01/93	12/01/93	12/01/93	12/01/93	11/30/93	
Date Analyzed	12/09/93	12/11/93	12/09/93	12/11/93	12/08/93	

B. ORGANIC TENTATIVELY IDENTIFIED COMPOUND

TABLE I's

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBKBL

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: VBKBL

324

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7842.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKBM

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

33

Matrix: (soil/water) SOIL

Lab Sample ID: VBLKBM

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7858.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKBN

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: VBLKBN 340

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7869.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBKBO

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: VBKBO

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7887.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. 0

Data Analyzed: 12/01/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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29.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBKKBQ

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

354

Matrix: (soil/water) WATER

Lab Sample ID: VBKKBQ

Sample wt/vol: 5.0

(g/mL) ML

Lab File ID: B7912.D

Level: (low/med) LOW

Date Received: / /

% Moisture: not dec. _____

Data Analyzed: 12/02/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
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27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MSBEB-3

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325003MSB

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7873.D

Level: (low/med) LOW

Date: Received: 11/26/93

% Moisture: not dec. 0

Data Analyzed: 11/30/93

GC Column: 607-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 |

LHD
12/17/93

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN STROXANE	25.40	7	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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21.				
22.				
23.				
24.				
25.				
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27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-1

5

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325001

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7870.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 13

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: ϕ 2 ^{HP} 12/16/93 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.66	130	J
2.	UNKNOWN SILOXANE	25.41	12	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

J
R

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325001 2

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7852.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 38

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

LHD
12/17/93

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.65	17	J
2.	UNKNOWN PAH	24.94	8	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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22.				
23.				
24.				
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26.				
27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-3

80

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325003

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7853.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 19

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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17.				
18.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-4

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325004

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7854.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 16

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

LHD
12/17/93 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.61	16	J
2.				
3.				
4.				
5.				
6.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-1

101

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325005

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7871.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 44

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: \emptyset 10 ^{LHP} 12/17/93 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.59	370	1
2.	UNKNOWN	3.61	39	1
3.	UNKNOWN BRANCHED ALKANE	24.35	29	1
4.	UNKNOWN BRANCHED ALKANE	23.99	28	1
5.	↓ ↓ ↓	23.58	20	1
6.	↓ ↓ ↓	23.14	18	1
7.	UNKNOWN	8.04	15	1
8.	UNKNOWN BRANCHED ALKANE	22.67	15	1
9.	↓ ↓	26.06	14	1
10.	UNKNOWN	26.61	14	1
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: 21325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325006

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7856.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 23

Data Analyzed: 11/29/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 4

LHD CONCENTRATION UNITS:
12/17/93 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.57	146	J
2.	UNKNOWN	10.34	80	J
3.	UNKNOWN SILOXANE	28.04	13	J
4.	UNKNOWN SILOXANE	29.59	13	J
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-3

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325007

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7861.D

Level: (low/med) LOW

Date Received: 11/20/93

% Moisture: not dec. 25

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: \emptyset 7 ^{LHD} 12/17/93 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.60	70	J
2.	UNKNOWN	27.14	25	J
3.	UNKNOWN	14.39	13	J
4. 91203	NAPHTHALENE	27.72	9	J N
5.	UNKNOWN	26.45	8	J
6.	UNKNOWN	9.49	3	J
7.	UNKNOWN	6.46	7	J
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TICs with a CAS number should be flagged with an "N" according to NYSDEC 12/91 ASP, B-81.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-4

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325008

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7862.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 31

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

LHD
12/17/93

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	25.49	20	T
2.	UNKNOWN	6.60	18	J
3.				
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WB-1

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325009

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7888.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec 28

Data Analyzed: 12/01/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: ~~6~~ 4 ^{LHP} 12/17/93 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.59	160	J
2.	UNKNOWN	26.59	14	J
3.	UNKNOWN SILOXANE	28.02	10	J
4.	UNKNOWN	3.62	9	J
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325010

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7864.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 22

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 7 LAD 12/17/93 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.59	52	J
2.	UNKNOWN SILOXANE	25.49	17	J
3.	UNKNOWN ISOMER OF 1-BROMO-ETHYL BENZENE	26.78	12	J
4. 91203	NAPHTHALENE	27.77	10	J N
5. 95501	1,2-DICHLOROBENZENE	24.88	8	J N
6.	UNKNOWN	26.87	8	J
7.	UNKNOWN BRANCHED ALKANE	23.01	8	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SDG-2DUP

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

209

Matrix: (soil/water) SOIL

Lab Sample ID: 1325011

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: B7878.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. 22

Data Analyzed: 11/30/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: ~~8~~ 4 ^{LHD} 12/17/93 (ug/L or ug/Kg) UG/KG

CONCENTRATION UNITS:

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.42	60	J
2.	UNKNOWN	10.37	30	J
3.	UNKNOWN	26.66	11	J
4.	UNKNOWN SELOXANE	25.45	10	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB112493

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) WATER

Lab Sample ID: 1325012

Sample wt/vol: 5.0

(g/mL) ML

Lab File ID: B7918.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. _____

Data Analyzed: 12/02/93

GC Column: 007-624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

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

EPA SAMPLE NO.

TB112493

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) WATER

Lab Sample ID: 1325013

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: B7923.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: not dec. _____

Data Analyzed: 12/02/93

GC Column: 007-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

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

EPA SAMPLE NO. 1044

SBLKMI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) WATER

Lab Sample ID: SBLKMI

Sample wt/vol: 1000

(g/mL) ML

Lab File ID: I5814.D

Level: (low/med) LOW

Date Received: / /

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 11/29/93

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	6.640	3	AJ
2.	Unknown	7.010	12	J
3.	Unknown	7.760	3	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKTI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

1057

Matrix: (soil/water) SOIL

Lab Sample ID: SBLKTI

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5811.D

Level: (low/med) LOW

Date Received: / /

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

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

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.530	290	J
2.	Unknown	6.080	360	J
3.	Unknown	6.250	310	J
4.	Aldol Condensation Product	7.030	40000	AJ
5.	Unknown	7.080	90	J
6.	Unknown	8.460	420	J
7.	Unknown	9.160	76	J
8.	Unknown	22.510	120	J
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKXI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: SBLKXI

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5813.D

Level: (low/med) LOW

Date Received: / /

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 12/01/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: _____

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.500	260	J
2.	Unknown	6.050	200	J
3.	Unknown	6.230	300	J
4.	Aldol Condensation Product	7.010	38000	AJ
5.	Unknown	7.060	78	J
6.	Unknown	8.450	400	J
7.	Unknown	8.780	84	J
8.	Unknown alkane	9.340	89	J
9.	Unknown	9.770	80	J
10.	Unknown alkane	10.630	190	J
11.	Unknown alkane	10.770	78	J
12.	Unknown alkane	11.220	450	J
13.	Unknown alkane	11.380	200	J
14.	Unknown alkane	11.620	200	J
15.	Unknown alkane	14.980	74	J
16.	Unknown alkane	18.040	100	J
17.	Unknown alkane	20.720	100	J
18.	Unknown	22.500	120	J
19.	Unknown alkane	23.120	73	J
20.	Unknown	24.780	110	J
21.	Unknown	25.490	98	J
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-3MSB

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325003MSB

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5812.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.510	160	BJ
2.	Unknown	6.040	230	BJ
3.	Unknown	6.180	170	J
4.	Aldol Condensation Product	6.970	22000	ABJ
5.	Unknown	8.430	260	BJ
6.	Unknown	22.500	78	BJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-1

Lab Name: IEA/CT

Contract:

Lab Code: 1EACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325001

Sample wt/vol: 30.0(g/mL) G

Lab File ID: I5825.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 35 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y

pH: 6.2

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.910	1400	BJ
2.	Aldol Condensation Product	6.700	56000	ABJ
3.	Unknown	8.350	1000	BJ
4.	Unknown	11.120	1000	J
5.	Unknown PAH MW=192	23.220	1200	J
6.	Unknown	23.529	2300	J
7.	Unknown alkane	24.800	900	J
8.	Unknown PAH MW=216	26.690	900	J
9.	Unknown	30.300	900	J
10.	Unknown	32.351	4000	J
11.	Unknown	32.550	1500	J
12.	Unknown	32.710	1800	J
13.	Unknown PAH MW=252	33.060	1500	J
14.	Unknown	33.870	3000	J
15.	Unknown	35.400	1000	J
16.	Unknown	36.046	4400	J
17.	Unknown	36.169	2300	J
18.	Unknown	37.014	2300	J
19.	Unknown	37.736	7700	J
20.	Unknown	40.040	2500	J
21.	Unknown	40.374	2200	J
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

4E

Matrix: (soil/water) SOIL

Lab Sample ID: 1325002

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5948.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 63 decanted: (Y/N) N

Date Extracted: 12/01/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/22/93

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

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

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.890	5700	ABJ
2.	Unknown	20.840	2000	J
3.	Unknown PAH MW=192	22.300	2600	J
4.	Unknown PAH MW=192	22.360	2200	J
5.	Unknown	22.580	4400	J
6.	Unknown	22.640	2000	J
7.	Unknown alkane	23.970	2200	J
8.	Unknown PAH MW=216	25.570	3000	J
9.	Unknown	27.530	2000	J
10.	Unknown	29.210	2600	J
11.	Unknown	30.940	5900	J
12.	Unknown PAH MW=252	31.450	7800	J
13.	Unknown	32.020	6400	J
14.	Unknown	32.850	7800	J
15.	Unknown	33.350	2400	J
16.	Unknown	33.830	9100	J
17.	Unknown	34.580	2300	J
18.	Unknown	35.180	14000	J
19.	Unknown	37.010	3700	J
20.	Unknown	37.250	3300	J
21.	Unknown PAH MW=276	37.490	3300	J
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23.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-3

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325003

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5821.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 18 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/10/93

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.530	340	BJ
2.	Unknown	6.120	360	BJ
3.	Unknown	6.280	350	BJ
4.	Aldol Condensation Product	7.070	59000	ABJ
5.	Unknown	8.500	580	BJ
6.	Unknown	8.810	330	J
7.	Unknown	9.190	420	BJ
8.	Unknown alkane	11.230	610	J
9.	Unknown PAH MW=192	23.360	290	J
10.	Unknown PAH MW=192	23.440	210	J
11. 84651	9,10-Anthracenedione	24.230	260	NJ
12.	Unknown PAH MW=206	24.840	250	J
13.	Unknown	25.620	190	J
14.	Unknown PAH MW=216	26.690	410	J
15.	Unknown PAH MW=216	26.960	340	J
16.	Unknown PAH MW=216	27.280	200	J
17.	Unknown	30.450	220	J
18.	Unknown alkane	32.450	990	J
19.	Unknown PAH MW=252	33.330	1700	J
20.	Unknown	36.310	860	J
21.	Unknown	38.040	1400	J
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EPA SAMPLE NO.

Contract:

SDG No.: Z1325

Lab Sample ID: 1325003RE

Lab File ID: I5846.D

Date Received: 11/26/93

Date Extracted: 11/30/93

Date Analyzed: 12/14/93

Dilution Factor: 1.0

pH: 6.5

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

541

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB-4

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325004

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5885.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/17/93

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.990	300	BJ
2.	Unknown	5.570	260	BJ
3.	Unknown	5.850	300	BJ
4.	Aldol Condensation Product	6.600	63000	ABJ
5.	Unknown	8.020	580	BJ
6.	Unknown	8.340	130	J
7.	Unknown	8.730	240	BJ
8.	Unknown	9.670	340	J
9.	Unknown alkane	10.180	91	J
10.	Unknown alkane	10.790	760	J
11.	Unknown alkane	10.940	100	J
12.	Unknown alkane	11.180	95	J
13.	Unknown	18.960	880	J
14.	Unknown	27.140	140	J
15.	Unknown alkane	28.740	98	J
16.	Unknown phthalate	30.120	100	J
17.	Unknown	30.450	100	J
18.	Unknown alkane	31.500	230	J
19.	Unknown alkane	34.230	110	J
20.	Unknown	34.720	260	J
21.	Unknown	36.230	180	J
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CB-1

Contract:

SDG No.: Z1325

625

Lab Sample ID: 1325005

Lab File ID: I5886.D

Date Received: 11/26/93

Date Extracted:11/30/93

Date Analyzed: 12/17/93

Dilution Factor: 10.0

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

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

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.480	3500	BJ
2.	Aldol Condensation Product	6.250	150000	ABJ
3.	Unknown	7.960	2700	BJ
4.	Unknown	8.690	3200	BJ
5.	Unknown	18.960	3700	J
6.	Unknown	22.260	2700	J
7.	Unknown PAH MW=192	22.790	5200	J
8.	Unknown	23.010	5200	J
9. 84651	9,10-Anthracenedione	23.570	4100	NJ
10.	Unknown	24.200	5900	J
11.	Unknown alkane	24.370	2600	J
12.	Unknown	25.980	4800	J
13.	Unknown alkane	27.940	10000	J
14.	Unknown	28.780	3100	J
15.	Unknown	29.560	4700	J
16.	Unknown	32.890	13000	J
17.	Unknown	34.300	6700	J
18.	Unknown	34.830	16000	J
19.	Unknown	36.350	29000	J
20.	Unknown	38.410	9000	J
21.	Unknown	41.880	2600	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SIX No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 13.5006

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5887.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 26 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/17/93

Injection Volume: 2.0(uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.490	1200	BJ
2.	Aldol Condensation Product	6.260	4700	ABJ
3.	Unknown PAH MW=192	22.790	2700	J
4.	Unknown	23.010	1700	J
5.	Unknown	25.980	1400	J
6.	Unknown	27.930	1900	J
7.	Unknown	30.470	2300	J
8.	Unknown	30.638	1400	J
9.	Unknown	30.884	1800	J
10.	Unknown	31.590	4800	J
11.	Unknown	31.750	2300	J
12.	Unknown	31.870	2200	J
13.	Unknown PAH MW=252	32.150	2700	J
14.	Unknown	32.900	3900	J
15.	Unknown	34.293	1500	J
16.	Unknown	34.840	6900	J
17.	Unknown	34.960	2200	J
18.	Unknown	35.720	2800	J
19.	Unknown	36.360	12000	J
20.	Unknown	38.410	4700	J
21.	Unknown	38.720	3000	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-3

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

70

Matrix: (soil/water) SOIL

Lab Sample ID: 1325007

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5931.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 47 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/21/93

Injection Volume: 2.0(uL)

Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y

pH: 6.4

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

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.920	55000	ABJ
2.	Unknown PAH MW=192	22.420	4800	J
3.	Unknown	22.700	7800	J
4. 84651	9,10-Anthracenedione	23.260	4100	NJ
5.	Unknown PAH MW=216	25.690	8000	J
6.	Unknown PAH MW=216	25.850	4400	J
7.	Unknown PAH MW=216	25.950	3400	J
8.	Unknown	27.010	3600	J
9.	Unknown C16H11N	28.420	3500	J
10.	Unknown	29.330	3800	J
11.	Unknown	30.270	4200	J
12.	Unknown PAH MW=252	31.050	5700	J
13.	Unknown	31.100	4400	J
14.	Unknown	31.340	4700	J
15.	Unknown PAH MW=252	31.590	12000	J
16.	Unknown	32.280	7600	J
17.	Unknown	33.090	6800	J
18.	Unknown	33.630	5700	J
19.	Unknown	34.070	12000	J
20.	Unknown	34.870	3900	J
21.	Unknown	35.480	18000	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CB-4

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325008

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5932.D

Level: (low/med) LOW

Date Received: 11/26/91

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/21/93

Injection Volume: 2.0(uL)

Dilution Factor: 4.0

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

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	6.040	24000	ABJ
2.	Unknown	7.700	610	BJ
3.	Unknown alkane	10.530	650	J
4.	Unknown	18.670	570	J
5.	Unknown PAH MW=192	22.410	530	J
6.	Unknown	22.690	730	J
7.	Unknown PAH MW=206	23.890	470	J
8.	Unknown PAH MW=216	25.680	1000	J
9.	Unknown	27.000	490	J
10.	Unknown	29.260	450	J
11.	Unknown	30.430	480	J
12.	Unknown PAH MW=252	31.020	410	J
13.	Unknown	31.110	660	J
14.	Unknown	31.360	600	J
15.	Unknown PAH MW=252	31.580	730	J
16.	Unknown	32.270	1000	J
17.	Unknown	34.080	1500	J
18.	Unknown	34.160	1000	J
19.	Unknown	34.870	820	J
20.	Unknown	35.480	2400	J
21.	Unknown	37.370	500	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WB-1

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325009

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5946.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 43 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/22/93

Injection Volume: 2.0(uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.8

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.820	43000	ABJ
2.	Unknown PAH MW=192	22.260	2300	J
3.	Unknown PAH MW=192	22.550	3400	J
4. 84651	9,10-Anthracenedione	23.100	1900	NJ
5.	Unknown PAH MW=216	25.540	4000	J
6.	Unknown PAH MW=216	25.690	2600	J
7.	Unknown C17H10O	26.870	1800	J
8.	Unknown	27.190	4500	J
9.	Unknown	27.570	2100	J
10.	Unknown	30.090	5600	J
11.	Unknown	30.930	18000	J
12.	Unknown	31.150	2300	J
13.	Unknown PAH MW=252	31.390	5000	J
14.	Unknown	32.040	4800	J
15.	Unknown	32.290	1700	J
16.	Unknown	32.810	5700	J
17.	Unknown	33.520	2600	J
18.	Unknown	33.770	6400	J
19.	Unknown	33.870	2400	J
20.	Unknown	34.560	2400	J
21.	Unknown	35.120	8500	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WB-2

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) SOIL

Lab Sample ID: 1325010

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5949.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 28 decanted: (Y/N) N

Date Extracted: 12/01/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/22/93

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.910	30000	ABJ
2.	Unknown PAH MW=192	22.580	2000	J
3.	Unknown PAH MW=204	23.080	1200	J
4. 84651	9,10-Anthracenedione	23.140	1300	NJ
5.	Unknown PAH MW=206	23.770	1300	J
6.	Unknown	29.180	1600	J
7.	Unknown	29.260	1900	J
8.	Unknown	29.940	2900	J
9.	Unknown	30.100	1600	J
10.	Unknown	30.980	10000	J
11.	Unknown	31.110	1800	J
12.	Unknown	32.150	3300	J
13.	Unknown	32.930	4800	J
14.	Unknown	33.440	1300	J
15.	Unknown	33.910	6200	J
16.	Unknown	34.660	1900	J
17.	Unknown	35.260	7100	J
18.	Unknown	35.910	1200	J
19.	Unknown PAH MW=276	36.290	1800	J
20.	Unknown	37.080	2600	J
21.	Unknown	37.340	1700	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SDG-2DUP

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

868

Matrix: (soil/water) SOIL

Lab Sample ID: 1325011

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: I5947.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: 48 decanted: (Y/N) N

Date Extracted: 11/30/93

Concentrated Extract Volume: 500(uL)

Date Analyzed: 12/22/93

Injection Volume: 2.0(uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.850	52000	ABJ
2. 132650	Dibenzothiophene	20.690	2100	NJ
3.	Unknown PAH MW=192	22.270	3200	J
4.	Unknown PAH MW=192	22.340	2900	J
5.	Unknown PAH MW=192	22.550	4500	J
6.	Unknown PAH MW=204	23.050	2200	J
7. 84651	9,10-Anthracenedione	23.110	2700	NJ
8.	Unknown PAH MW=216	25.280	2400	J
9.	Unknown PAH MW=216	25.550	4600	J
10.	Unknown	30.130	2900	J
11.	Unknown	30.920	9100	J
12.	Unknown	31.030	2400	J
13.	Unknown	31.150	2100	J
14.	Unknown PAH MW=252	31.410	6400	J
15.	Unknown	32.030	7300	J
16.	Unknown	32.310	2800	J
17.	Unknown	32.820	6200	J
18.	Unknown	33.780	6400	J
19.	Unknown	33.880	2800	J
20.	Unknown	35.120	7300	J
21.	Unknown	36.950	3800	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB112493

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix: (soil/water) WATER

Lab Sample ID: 1325012

Sample wt/vol: 1000

(g/mL) ML

Lab File ID: I5929.D

Level: (low/med) LOW

Date Received: 11/26/93

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 11/29/93

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/21/93

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensation Product	5.840	3	ABJ
2.	Unknown	6.200	9	BJ
3.	Unknown	7.050	3	BJ
4.	Unknown	8.020	3	J
5.	Unknown	30.460	2	J
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C. INORGANIC DATA

Inorganic Qualifiers

- Element was not detected.
- U* This result is qualitatively suspect since this constituent was detected in field and/or laboratory blanks at similar levels.
- R Unreliable result - Analyte may or may not be present in this sample.
- J Quantitation is approximate due to limitations identified during the quality assurance review (data validation).
- UJ This analyte was not detected, but the detection limit may be higher due to a bias identified during the quality assurance review.

Analytical Method

- P - Inductively Coupled Plasma
- F - Graphite Furnace Atomic Absorption
- CV - Cold Vapor Atomic Absorption
- A - Auto Analyzer

Unisys Sample ID	WB-1	WB-2	SDG-2 DUP	FB 112493
IEA Sample ID	1325009	1325010	1325011	1325012
Units	mg/Kg	mg/Kg	mg/Kg	ug/L
Remarks				
Percent Solids	57.5	51.7	41.8	
Compound				
Aluminum	5220 J	7780	10100 J	37 U
Antimony	6.9 UJ	7.8 UJ	10.4 J	21 U
Arsenic	8.8	10.3	16	1 U
Barium	29.6 J	75.5 J	80.5 J	2 U
Beryllium	0.33 U	0.37 U	0.43 U	1 U
Cadmium	2.7 J	6	7.2 J	2 U
Calcium	1300 J	6110	5880 J	15 U
Chromium	42.6 J	127 J	156 J	3 U
Cobalt	6.2	6.9	9.1	3 U
Copper	682 J	1470	2060 J	7 U
Iron	15100	16400	22400	87 U
Lead	383 J	1450	1820 J	2 U
Magnesium	1510	4360	4450	18 U
Manganese	53.3 J	81.9	97.4 J	2 U
Mercury	1.4 J	3.4 J	2 J	0.2 U
Nickel	40 J	74.7	90.1 J	11 U
Potassium	357	654	694	473 U
Selenium	0.66 UJ	0.78 J	1.5 J	2 U
Silver	199 J	378 J	446 J	2 U
Sodium	78.6	156	237	121 U
Thallium	0.33 U	0.37 U	0.43 U	1 U
Vanadium	69.3 J	199	250 J	16 U
Zinc	404 J	854 J	992 J	4 U
Cyanide	4.3 U	4.8 U	5.8 U	10 U
Date Collected	11/24/93	11/24/93	11/24/93	11/24/93
Date Received	11/26/93	11/26/93	11/26/93	11/26/93

SECTION 3

ORGANIC DATA SUPPORT DOCUMENTATION

Organic Analyses Support Documentation

Env. Project Name: Chlorine / Gen. Mat.
 Sample Collection Date: 4/24/92
 Job Number: 9109-532
 Project Manager: CTZ
 Laboratory: IEA

Reviewed By: David Linerick
 Approved By: Sept. 3/94
 Completion Date: 3/94

Applicable Sample No.'s: ☒ Refer to Attached Table

Deliverables: GLR ☒ NYSED
 Tier I ☐
 Tier II ☐
 Limited ☐
 Other ☐

Sample No. SDG 21325
 Lab Control No. _____

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

	Criteria Examined in Detail				Problems Identified				Support Documentation Attachments			
	VOA Method	BNA Method	PEST Method	Other Method	VOA Method	BNA Method	PEST Method	Other Method	VOA Method	BNA Method	PEST Method	Other Method
Holding Times	/	/	/									
Blank Analysis Results: Target Compounds	/	/	/		/	/			/	/	/	
Blank Analysis Results: TICs	/	/	/			/			/	/		
System Mntr. Compas. &/or Surrogate Spike Rslts.	/	/	/				/		/	/	/	
Matrix Spike / Matrix Spike Duplicate Results	/	/	/						/	/	/	
Duplicate Analysis Results <input checked="" type="checkbox"/> Field <input type="checkbox"/> Lab	/	/	/		/	/			/	/	/	
Qualitative Identification: Target Compounds	/	/	/									
Qualitative Identification: TICs	/	/	/									
DFTPP & BFB Mass Tuning	/	/	/			/			/	/		
GC Instrument Performance	/	/	/									
Initial Calibrations	/	/	/		/	/			/	/	/	
Continuing Calibrations	/	/	/		/	/			/	/	/	
Quantitation of Results	/	/	/									
Pest / PCB Linearity Check	/	/	/								/	
SDG / Endcap Breakdown	/	/	/								/	
Surrogate Retention Time Shifts	/	/	/								/	
Internal Standards Performance	/	/	/		/	/			/	/		
Resolution Check Standards	/	/	/								/	
Analytical Sequence	/	/	/								/	
Florisil Cartridge Check & GPC Calibration	/	/	/								/	
GC Column Agreement	/	/	/			/				/	/	
Others:												

Comments: Data acceptable for use with analytes listed in report.



44



2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

32

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKBL	104	95-100	100-97		0
02	EB-2	114	96	101		0
03	EB-3	96	105	94		0
04	EB-4	106	110	97		0
05	CB-2	106	94	99		0
06	VBLKBM	101	94	96		0
07	CB-3	98	80	86		0
08	CB-4	99	89	100		0
09	WB-1	106	89	105		0
10	VBLKEN	104	98	91		0
11	FB-1	101	100	88		0
12	CB-1	104	87	91		0
13	MSBEL-3	106	95	89		0
14	EB-3MS	103	89	93		0
15	EB-3MSD	108	95	90		0
16	SDG-2DUP	102	107	95		0
17	VBLKSO	110	111	103		0
18	WB-1	111	105	99		0
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Rec'd
12/16/93

SMC1 (TOL) = Toluene-d8 (84-138)
 SMC2 (BFB) = Bromofluorobenzene (59-113) ✓
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: IEA/CT

Contract:

31

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT CUT
01	VBLKEQ	/102	/101	/94		0
02	FB112493	101	112	/96		0
03	TB112493	97	95	/92		0
04						
05						
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SMC1 (TOL) = Toluene-d8
 SMC2 (BFB) = Bromofluorobenzene
 SMC3 (DCE) = 1,2-Dichloroethane-d4

QC LIMITS
 (88-110)
 (86-115)
 (76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

33

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix Spike - EPA Sample No.: EB-3

Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	62	0	✓ 44	71	59-172
Trichloroethene	62	0	✓ 52	84	62-137
Benzene	62	0	✓ 59	95	66-142
Toluene	62	2	✓ 52	81	59-139
Chlorobenzene	62	0	✓ 52	84	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	62	✓ 45	72	1	✓ 22 59-172
Trichloroethene	62	✓ 54	87	4	✓ 24 62-137
Benzene	62	✓ 62	100	5	21 66-142
Toluene	62	✓ 58	90	10	21 59-139
Chlorobenzene	62	✓ 57	92	9	21 60-133

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

3-ASP

VOLATILE MATRIX SPIKE BLANK RECOVERY SUMMARY

Lab Name: IEA-CTLab Project No: 3093-1325Lab Code: IEACTSDG Number: 71325Client Sample No.: EB-3Concentration Units: 8 UG/KGRSev
12/16/93

COMPOUND	SPIKE ADDED	SAMPLE CONC.	MSB CONC.	MSB % Rec.	QC Limits % Rec.
1,1-Dichloroethene	50	0	36	72	61-145
Trichloroethene			42	84	71-120
Benzene			49	98	76-127
Toluene			45	90	76-125
Chlorobenzene			45	90	75-130

RSev
12/16/93Spike Recovery: 0 out of 5 outside limits.
 Comments: _____

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Lab Name: IEA/CT

Contract:

VBLKBL

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: B7842.D

Lab Sample ID: VBLKBL

Date Analyzed: 11/29/93

Time Analyzed: 1032

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5995B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EB-2	13250012	B7852.D	1729
02	EB-3	1325003	B7853.D	1804
03	EB-4	1325004	B7854.D	1838
04	CB-2	1325006	B7856.D	1946
05				
06				
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PS
12/1/93

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

36

VBLKBM

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: B7858.D

Lab Sample ID: VBLKBM

Date Analyzed: 11/29/93

Time Analyzed: 2328

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5995B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	CB-3	1325007	B7861.D	0141
02	CB-4	1325008	B7862.D	0216
03	WB-2	1325010	B7864.D	0324
04				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKBN

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: B7869.D

Lab Sample ID: VBLKBN

Date Analyzed: 11/30/93 ✓

Time Analyzed: 1104 ✓

GC Column:007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5995B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EB-1	1325001	B7870.D	1154
02	CB-1	1325005	B7871.D	1232
03	MSBEB-3	1325003MSB	B7873.D	1341
04	EB-3MS	1325003MS	B7874.D	1415
05	EB-3MSD	1325003MSD	B7875.D	1449
06	SDG-2DUP	1325011	B7878.D	1557
07				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

38

VBLKBO

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: B7887.D

Lab Sample ID: VBLKBO

Date Analyzed: 12/01/93 /

Time Analyzed: 0007 /

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5995B /

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	WB-1	1325009	B7888.D	0115
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKBQ

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: B7912.D

Lab Sample ID: VBLKBQ

Date Analyzed: 12/02/93 /

Time Analyzed: 1055 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

Instrument ID: HP5995B ✓

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	FB112493	1325012	B7918.D	1437
02	TB112493	1325013	B7923.D	1727
03				
04				
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LHP
12/17/93

COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

40

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: BB259.D

BFB Injection Date: 11/11/93 ✓

Instrument ID: HP5995E

BFB Injection Time: 2232 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.4 ✓
75	30.0 - 50.0% of mass 95	51.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	77.0
175	4.0 - 9.0% of mass 174	6.9 (9.0)1
176	93.0 - 101.0% of mass 174	75.9 (98.6)1
177	5.0 - 9.0% of mass 176	5.9 (7.8)2

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7460.D	11/11/93 ✓	2303 ✓
02	VSTD020	VSTD020	B7461.D	11/12/93 ✓	0010 ✓
03	VSTD010	VSTD010	B7463.D	11/12/93 ✓	0124 ✓
04	VSTD100	VSTD100	B7466.D	11/12/93 ✓	0307 ✓
05	VSTD200	VSTD200	B7468.D	11/12/93 ✓	0415 ✓
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*Incorrect Ion Abundance Criteria used for mass ions
50, 75, 175 and 176, as specified in NYSDEC ASP 12/91 (D-11-29)*

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

compliant
238

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Associated

Instrument ID: HP5995B

Calibration Date(s): 11/11/93

11/12/93

FB11/24/93

Heated Purge: (Y/N) N

Calibration Times: 2303

0415

TE11/24/93

GC Column:007-624

ID: 0.53 (mm)

LAB FILE ID: RRF10 =B7463.D RRF20 =B7461.D ✓
RRF50 =B7460.D ✓ RRF100=B7466.D ✓ RRF200=B7468.D ✓

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane	0.300	0.459	0.538	0.409	0.404	0.437	24.2
Bromomethane	* 1.022	1.326	1.238	1.335	1.075	1.15	12.0*
Vinyl Chloride	* 0.787	1.046	1.105	0.948	0.803	0.938	15.2*
Chloroethane	0.377	0.845	1.169	1.102	0.862	0.871	35.7
Methylene Chloride	2.579	1.734	1.734	1.677	1.514	1.843	22.7
Acetone	3.172	0.927	0.871	0.571	0.605	1.229	89.3
Carbon Disulfide	4.003	4.267	4.221	4.575	3.667	4.147	8.1
1,1-Dichloroethene	* 1.270	1.352	1.349	1.418	1.173	1.313	7.2*
1,1-Dichloroethane	* 2.800	2.929	2.982	3.337	3.027	3.015	6.6*
1,2-Dichloroethene (total)	1.359	1.426	1.464	1.525	1.383	1.432	4.5
Chloroform	* 2.856	3.135	3.050	3.249	3.130	3.084	4.7*
1,2-Dichloroethane	* 2.308	2.339	2.223	2.542	2.585	2.400	6.5*
2-Butanone	1.233	0.998	0.800	0.897	0.954	0.977	16.5
1,1,1-Trichloroethane	* 0.445	0.499	0.506	0.524	0.499	0.495	6.0*
Carbon Tetrachloride	* 0.384	0.449	0.447	0.479	0.452	0.442	8.0*
Bromodichloromethane	* 0.386	0.429	0.434	0.475	0.494	0.443	9.5*
1,2-Dichloropropane	0.360	0.360	0.361	0.406	0.416	0.380	7.3
cis-1,3-Dichloropropene	* 0.473	0.536	0.529	0.555	0.599	0.538	8.5*
Trichloroethene	* 0.315	0.348	0.347	0.362	0.345	0.344	5.0*
Dibromochloromethane	* 0.295	0.334	0.332	0.377	0.421	0.352	13.7*
1,1,2-Trichloroethane	* 0.247	0.261	0.240	0.276	0.295	0.264	8.4*
Benzene	* 1.003	1.108	1.039	1.116	1.035	1.060	4.6*
trans-1,3-Dichloropropene	* 0.363	0.417	0.389	0.419	0.459	0.403	8.8*
Bromoform	* 0.279	0.300	0.268	0.346	0.374	0.313	14.4*
4-Methyl-2-Pentanone	0.462	0.535	0.426	0.530	0.527	0.496	9.9
2-Hexanone	0.278	0.336	0.243	0.329	0.341	0.305	14.0
Tetrachloroethene	* 0.350	0.430	0.394	0.431	0.385	0.398	8.6*
1,1,2,2-Tetrachloroethane	* 0.465	0.511	0.412	0.547	0.496	0.486	10.5* <-
Toluene	* 1.672	1.525	1.554	1.694	1.482	1.536	5.9*
Chlorobenzene	* 0.883	0.948	0.963	1.045	0.946	0.957	6.0*
Ethylbenzene	* 0.464	0.479	0.480	0.534	0.470	0.486	5.8*
Styrene	* 0.962	1.009	0.989	1.134	1.006	1.020	6.5*
Xylene (total)	0.543	0.558	0.545	0.628	0.538	0.562	6.6
Toluene-d8	1.111	1.276	1.411	1.202	1.103	1.222	10.4
Bromofluorobenzene	* 0.636	0.685	0.742	0.702	0.650	0.683	6.2*
1,2-Dichloroethane-d4	1.817	2.093	2.170	1.898	2.081	2.011	7.4

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

41

Lab Name: IEA/CT Contract:
Lab Code: IEACT Case No.: 1325 SAS No.: SDG No.: Z1325
Lab File ID: BB299.D BFB Injection Date: 11/18/93 ✓
Instrument ID: HP5995B BFB Injection Time: 0942 ✓
GC Column: 007-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.0 ✓
75	30.0 - 66.0% of mass 95	39.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	63.3
175	4.0 - 9.0% of mass 174	4.8 (7.6)1
176	93.0 - 101.0% of mass 174	63.5 (100.4)1
177	5.0 - 9.0% of mass 176	3.9 (6.2)2

NYSDEC ASP 12/91 (D-11-29)

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7592.D	11/18/93 ✓	1026 ✓
02	VSTD010	VSTD010	B7593.D	11/18/93 ✓	1124 ✓
03	VSTD020	VSTD020	B7594.D	11/18/93 ✓	1158 ✓
04	VSTD100	VSTD100	B7595.D	11/18/93 ✓	1232 ✓
05	VSTD200	VSTD200	B7598.D	11/18/93 ✓	1529 ✓
06					
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6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Compliant

259

Lab Name: IEA/C:

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5995B

Calibration Date(s): 11/18/93

Heated Purge: (Y/N) Y

Calibration Times: 1026

1529

GC Column: 007-624

ID: 0.53 (mm)

Associated
EB-2
EB-3 SDG-2
EB-4 WB-1
CB-2
CB-3
CB-4
WB-2
EB-1
CB-1

LAB FILE ID: RRF10 =B7593.D ✓ RRF20 =B7594.D ✓
RRF50 =B7592.D ✓ RRF100=B7595.D ✓ RRF200=B7598.D ✓

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane	2.214	1.891	1.958	1.844	✓1.533	1.888	13.0
Bromomethane	* 1.693	1.312	1.374	1.159	0.861	1.280	23.8* <-
Vinyl Chloride	* 1.748	✓1.609	1.554	1.482	1.101	1.499	16.2*
Chloroethane	0.931	0.843	1.038	✓0.978	0.770	0.912	11.7
Methylene Chloride	2.298	1.888	✓1.596	1.421	1.155	1.670	26.1
Acetone	2.408	1.751	1.028	1.139	1.017	1.468	41.3
Carbon Disulfide	✓4.901	4.414	4.498	4.079	3.369	4.252	13.5
1,1-Dichloroethene	* 1.561	1.357	1.204	1.176	0.837	✓1.227	21.7* <-
1,1-Dichloroethane	* 3.108	2.954	3.032	3.047	2.939	3.016	2.3*
1,2-Dichloroethene (total)	1.750	1.598	1.623	1.536	1.297	1.561	10.7
Chloroform	* 3.635	3.003	2.974	3.060	2.879	3.110	9.6*
1,2-Dichloroethane	* 2.252	2.167	2.182	2.225	2.126	2.190	2.2*
2-Butanone	2.244	2.858	2.070	2.438	2.678	2.457	13.0
1,1,1-Trichloroethane	* 0.596	0.500	0.466	0.440	✓0.429	0.486	13.8*
Carbon Tetrachloride	* 0.416	0.403	0.392	0.380	0.374	0.393	4.3*
Bromodichloromethane	* ✓0.461	0.477	0.445	✓0.465	0.454	0.460	2.6*
1,2-Dichloropropane	0.447	✓0.462	0.421	0.440	0.432	0.440	3.5
cis-1,3-Dichloropropene	* 0.662	0.629	✓0.625	0.650	0.613	0.636	3.1*
Trichloroethene	* 0.386	0.364	0.361	0.355	0.349	0.363	3.8*
Dibromochloromethane	* 0.421	0.419	0.384	0.396	0.386	0.401	4.4*
1,1,2-Trichloroethane	* 0.468	0.400	0.355	0.360	0.342	0.385	13.3*
Benzene	* 1.273	1.219	1.144	1.149	1.117	1.180	5.4*
trans-1,3-Dichloropropene	* 0.502	0.507	0.470	✓0.496	0.470	0.489	3.6*
Bromoform	* 0.412	0.437	0.397	0.423	0.417	0.417	3.5*
4-Methyl-2-Pentanone	1.315	1.420	1.247	1.322	1.468	1.354	6.5
2-Hexanone	0.912	1.032	0.881	0.999	1.048	0.974	7.6
Tetrachloroethene	* 0.455	0.413	0.427	0.412	0.372	0.417	7.2*
1,1,2,2-Tetrachloroethane	* 0.904	0.916	0.844	0.910	✓0.933	0.902	3.7*
Toluene	* 1.844	1.752	1.695	1.704	1.695	1.738	3.6*
Chlorobenzene	* ✓1.103	1.045	1.053	1.029	1.013	1.049	3.3*
Ethylbenzene	* 0.536	✓0.542	0.516	0.513	0.498	0.521	3.4*
Styrene	* 1.186	1.115	1.094	1.075	1.017	1.097	5.6*
Xylene (total)	0.653	0.608	✓0.618	0.573	0.569	0.604	5.7
Toluene-d8	1.553	1.377	1.421	1.242	1.375	1.394	8.0
Bromofluorobenzene	* 0.804	0.769	0.764	0.701	0.747	0.757	5.0*
1,2-Dichloroethane-d4	2.081	1.929	1.951	1.711	1.909	1.916	6.9

* Compounds with required minimum RPF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

42

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: BB322.D

BFB Injection Date: 11/29/93 ✓

Instrument ID: HP5995B

BFB Injection Time: 0758 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.1
75	30.0 - 66.0% of mass 95	42.5 ✓
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	77.2
175	5.0 - 9.0% of mass 174	5.9 (7.7)1
176	93.0 - 101.0% of mass 174	74.9 (97.0)1
177	5.0 - 9.0% of mass 176	5.4 (7.3)2

NYSDEC ASP 12/91 (D-11-21)

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7841.D ✓	11/29/93 ✓	0932 ✓
02	VBLKBL	VBLKBL	B7842.D ✓	11/29/93 ✓	1032 ✓
03	EB-272	13250012	B7852.D ✓	11/29/93 ✓	1729 ✓
04	EB-3	1325003	B7853.D ✓	11/29/93 ✓	1804 ✓
05	EB-4	1325004	B7854.D ✓	11/29/93 ✓	1838 ✓
06	CB-2	1325006	B7856.D ✓	11/29/93 ✓	1946 ✓
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7A
VOLATILE CONTINUING CALIBRATION CHECK

Compliant

275

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: 31325

Instrument ID: HP5995B

Calibration Date: 11/29/93

Time: 0932

Lab File ID: B7841.D

Init. Calibration Date(s): 11/18/93

Heated Purge: (Y/N) Y

Init. Calibration Times:

1026

1529

Associated Sample

GC Column: 007-624

ID: 0.53 (mm)

VBCKBL

EB-2

EB-3

EB-4

CB-2

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	1.888	0.533		71.8	
Bromomethane	1.280	1.356	0.100	-5.9	25.0
Vinyl Chloride	1.499	1.300	0.100	13.3	25.0
Chloroethane	0.912	1.019		-11.7	
Methylene Chloride	1.670	1.563		6.4	
Acetone	1.468	1.026		30.2	
Carbon Disulfide	4.252	3.641		9.7	
1,1-Dichloroethene	1.227	1.369	0.100	-11.6	25.0
1,1-Dichloroethane	3.010	3.249	0.200	-7.7	25.0
1,2-Dichloroethene (total)	1.561	1.550		0.7	
Chloroform	3.110	3.108	0.200	0.1	25.0
1,2-Dichloroethane	2.190	2.395	0.100	-9.3	25.0
2-Butanone	2.457	1.805		26.5	
1,1,1-Trichloroethane	0.486	0.434	0.100	10.8	25.0
Carbon Tetrachloride	0.393	0.351	0.100	10.7	25.0
Bromodichloromethane	0.460	0.443	0.200	3.7	25.0
1,2-Dichloropropane	0.440	0.420		4.6	
cis-1,3-Dichloropropene	0.636	0.629	0.200	1.2	25.0
Trichloroethene	0.363	0.357	0.300	1.7	25.0
Dibromochloromethane	0.401	0.360	0.100	10.3	25.0
1,1,2-Trichloroethane	0.385	0.344	0.100	10.6	25.0
Benzene	1.180	1.179	0.500	0.1	25.0
trans-1,3-Dichloropropene	0.489	0.489	0.100	0.0	25.0
Bromoform	0.417	0.345	0.100	17.3	25.0
4-Methyl-2-Pentanone	1.354	0.965		28.8	
2-Hexanone	0.974	0.639		34.5	
Tetrachloroethene	0.417	0.382	0.200	8.3	25.0
1,1,2,2-Tetrachloroethane	0.902	0.809	0.500	10.3	25.0
Toluene	1.738	1.743	0.400	-0.3	25.0
Chlorobenzene	1.049	1.103	0.500	-5.2	25.0
Ethylbenzene	0.521	0.557	0.100	-6.8	25.0
Styrene	1.097	1.165	0.300	-6.1	25.0
Xylene (total)	0.604	0.632	0.300	-4.6	25.0
Toluene-d8	1.394	1.486		-6.6	
Bromofluorobenzene	0.757	0.714	0.200	5.7	25.0
1,2-Dichloroethane-d4	1.916	2.091		-9.1	

45

*No impact, primary
flaged "B"*

45

45

45

All other compounds must meet a minimum RRF of 0.010.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

48

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): B7841.D

Date Analyzed: 11/29/93

Instrument ID: HP5995B

Time Analyzed: 0932

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
12 HOUR STD	✓ 37446	10.16	188636	12.61	142590	19.97
UPPER LIMIT	74892	10.66	377272	13.11	285180	20.47
LOWER LIMIT	18723	9.66	94318	12.11	71295	19.47
EPA SAMPLE No.						
01 VBLKBL	✓ 37064	10.04	190276	12.51	141267	20.04
02 EB-2	✓ 27963	10.06	128412	12.51	81993	19.93
03 EB-3	✓ 29454	10.13	137692	12.55	103960	19.99
04 EB-4	✓ 31897	10.05	149505	12.50	111966	19.96
05 CB-2	✓ 26021	10.04	122518	12.46	85551	19.92
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

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

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

43

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: BB325.D

BFB Injection Date: 11/29/93 ✓

Instrument ID: HP5995B

BFB Injection Time: 2146 ✓

GC Column: 007-624

ID: 0.53 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.3
75	30.0 - 66.0% of mass 95	44.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	71.0
175	5.0 - 9.0% of mass 174	6.4 (9.0)1
176	93.0 - 101.0% of mass 174	68.9 (97.0)1
177	5.0 - 9.0% of mass 176	4.4 (6.4)2

NYSDEC ASP 12/91 (D-11-21)

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7857.D ✓	11/29/93	2222 ✓
02	VBLKBM	VBLKBM	B7858.D ✓	11/29/93 ✓	2328 ✓
03	CB-3	1325007	B7861.D ✓	11/30/93 ✓	0141 ✓
04	CB-4	1325008	B7862.D ✓	11/30/93 ✓	0216 ✓
05	WB-2	1325010	B7864.D ✓	11/30/93 ✓	0324 ✓
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7A
VOLATILE CONTINUING CALIBRATION CHECK

Compliant

273

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5995B

Calibration Date: 11/29/93

Time: 2222

Lab File ID: B7857.D

Init. Calibration Date(s): 11/18/93

Heated Purge: (Y/N) Y

Init. Calibration Times:

1026

1529

GC Column: 017-624

ID: 0.53 (mm)

Associated Samples

VBKEM

CB-3

CB-4

WB-2

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	1.888	0.465		75.4	
Bromomethane	1.280	1.363	0.100	-6.5	25.0
Vinyl Chloride	1.499	1.073	0.100	28.4	25.0
Chloroethane	0.912	0.993		-8.8	
Methylene Chloride	1.670	1.653		1.0	
Acetone	1.468	1.335		9.1	
Carbon Disulfide	4.252	3.497		17.8	
1,1-Dichloroethene	1.227	1.285	0.100	-4.7	25.0
1,1-Dichloroethane	3.016	3.254	0.200	-7.9	25.0
1,2-Dichloroethene (total)	1.561	1.586		-1.6	
Chloroform	3.110	3.040	0.200	2.2	25.0
1,2-Dichloroethane	2.190	2.398	0.100	-9.5	25.0
2-Butanone	2.457	1.862		24.2	
1,1,1-Trichloroethane	0.486	0.417	0.100	14.3	25.0
Carbon Tetrachloride	0.393	0.333	0.100	15.2	25.0
Bromodichloromethane	0.460	0.415	0.200	10.0	25.0
1,2-Dichloropropane	0.440	0.399		9.4	
cis-1,3-Dichloropropene	0.636	0.588	0.200	7.6	25.0
Trichloroethene	0.363	0.354	0.300	2.4	25.0
Dibromochloromethane	0.401	0.334	0.100	16.7	25.0
1,1,2-Trichloroethane	0.385	0.334	0.100	13.1	25.0
Benzene	1.180	1.139	0.500	3.5	25.0
trans-1,3-Dichloropropene	0.489	0.452	0.100	7.6	25.0
Bromoform	0.417	0.334	0.100	20.0	25.0
4-Methyl-2-Pentanone	1.354	1.022		24.6	
2-Hexanone	0.974	0.645		33.8	
Tetrachloroethene	0.417	0.328	0.200	21.3	25.0
1,1,2,2-Tetrachloroethane	0.902	0.849	0.500	5.8	25.0
Toluene	1.738	1.684	0.400	3.1	25.0
Chlorobenzene	1.049	1.062	0.500	-1.2	25.0
Ethylbenzene	0.521	0.520	0.100	0.1	25.0
Styrene	1.097	1.106	0.300	-0.8	25.0
Xylene (total)	0.604	0.602	0.300	0.3	25.0
Toluene-d8	1.394	1.498		-7.5	
Bromofluorobenzene	0.757	0.773	0.200	-2.1	25.0
1,2-Dichloroethane-d4	1.916	2.217		-15.7	

All other compounds must meet a minimum RRF of 0.010.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA/CT Contract:
Lab Code: IEACT Case No.: 1325 SAS No.: SDG No.: Z1325
Lab File ID (Standard): B7857.D Date Analyzed: 11/29/93
Instrument ID: HP5995B Time Analyzed: 2222
GC Column: 007-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
12 HOUR STD	✓ 34510	10.08	180815	12.53	133600	20.02
UPPER LIMIT	69020	10.58	361630	13.03	267200	20.52
LOWER LIMIT	17255	9.58	90408	12.03	66800	19.52
EPA SAMPLE No.						
01 VBLKBM	✓ 32939	9.98	169413	12.46	126553	19.98
02 CB-3	✓ 28048	10.01	139329	12.49	90203	19.93
03 CB-4	✓ 26871	9.99	136350	12.46	100196	19.96
04 WB-2	✓ 21700	10.01	117188	12.46	79776	19.98
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22						

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

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

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

44

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: BB326.D

BFB Injection Date: 11/30/93 ✓

Instrument ID: HP5995B

BFB Injection Time: 0759 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	3.0 - 40.0% of mass 95	18.4
75	30.0 - 66.0% of mass 95	40.9 ✓
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	78.3
175	1.0 - 9.0% of mass 174	5.7 (7.3)1
176	93.0 - 101.0% of mass 174	77.2 (98.6)1
177	5.0 - 9.0% of mass 176	5.2 (6.8)2

NYSDEC ASD 12/91 (D-4-2)

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7868.D ✓	11/30/93 ✓	1003 ✓
02	VBLKBN	VBLKBN	B7869.D ✓	11/30/93 ✓	1104 ✓
03	EB-1	1325001 ✓	B7870.D ✓	11/30/93 ✓	1154 ✓
04	CB-1	1325005	B7871.D ✓	11/30/93 ✓	1232 ✓
05	MSBEB-3	1325003MSB	B7873.D ✓	11/30/93 ✓	1341 ✓
06	EB-3MS	1325003MS	B7874.D ✓	11/30/93 ✓	1415 ✓
07	EB-3MSD	1325003MSD	B7875.D ✓	11/30/93 ✓	1449 ✓
08	SDG-2DUP	1325011	B7878.D ✓	11/30/93 ✓	1557 ✓
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7A
VOLATILE CONTINUING CALIBRATION CHECK

283

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5995B

Calibration Date: 11/30/93

Time: 1003

Lab File ID: B7868.D

Init Calibration Date(s): 11/18/93

Heated Purge: (Y/N) Y

Init. Calibration Times:

1026

1529

GC Column: 007-624

ID: 0.53 (mm)

Associated Sample

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	1.888	0.556		70.6	
Bromomethane	1.280	1.294	0.100	-1.1	25.0
Vinyl Chloride	1.499	1.198	0.100	20.1	25.0
Chloroethane	0.912	1.003		-9.9	
Methylene Chloride	1.670	1.578		5.5	
Acetone	1.468	1.773		-20.8	
Carbon Disulfide	4.252	3.916		7.9	
1,1-Dichloroethene	1.227	1.338	0.100	-9.0	25.0
1,1-Dichloroethane	3.016	3.151	0.200	-4.5	25.0
1,2-Dichloroethene (total)	1.561	1.660		-6.4	
Chloroform	3.110	3.063	0.200	1.5	25.0
1,2-Dichloroethane	2.190	2.374	0.100	-8.4	25.0
2-Butanone	2.457	2.439		0.7	
1,1,1-Trichloroethane	0.486	0.416	0.100	14.5	25.0
Carbon Tetrachloride	0.393	0.334	0.100	15.1	25.0
Bromodichloromethane	0.450	0.428	0.200	7.0	25.0
1,2-Dichloropropane	0.440	0.401		8.9	
cis-1,3-Dichloropropene	0.636	0.610	0.200	4.1	25.0
Trichloroethene	0.363	0.357	0.300	1.7	25.0
Dibromochloromethane	0.401	0.365	0.100	9.0	25.0
1,1,2-Trichloroethane	0.385	0.346	0.100	10.2	25.0
Benzene	1.180	1.128	0.500	4.4	25.0
trans-1,3-Dichloropropene	0.489	0.468	0.100	4.4	25.0
Bromoform	0.417	0.350	0.100	16.1	25.0
4-Methyl-2-Pentanone	1.354	1.257		7.2	
2-Hexanone	0.974	0.916		6.0	
Tetrachloroethene	0.417	0.410	0.200	1.5	25.0
1,1,2,2-Tetrachloroethane	0.902	0.885	0.500	1.9	25.0
Toluene	1.738	1.688	0.400	2.9	25.0
Chlorobenzene	1.049	1.053	0.500	-0.3	25.0
Ethylbenzene	0.521	0.524	0.100	-0.7	25.0
Styrene	1.097	1.111	0.300	-1.2	25.0
Xylene (total)	0.604	0.624	0.300	-3.2	25.0
Toluene-d8	1.394	1.400		-0.5	
Bromofluorobenzene	0.757	0.706	0.200	6.8	25.0
1,2-Dichloroethane-d4	1.916	2.087		-8.9	

VALKBN

EB-1

CB-1

MSBEB-3

EB-3MS

EB-3MSD

SDG-2DUP

All other compounds must meet a minimum RRF of 0.010.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

50

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): B7868.D

Date Analyzed: 11/30/93/

Instrument ID: HP5995B

Time Analyzed: 1003 /

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	✓ 40070	10.07	208201	12.49	158107	19.96
UPPER LIMIT	80140	10.57	416402	12.99	316214	20.46
LOWER LIMIT	20035	9.57	104100	11.99	79054	19.46
EPA SAMPLE No.						
01 VBLKBN	✓ 41404	10.01	207167	12.44	153035	19.90
02 EB-1	✓ 38151	10.18	170424	12.57	135521	19.96
03 CB-1	✓ 27866	10.08	125327	12.48	95849	19.94
04 MSBEB-3	✓ 40676	10.01	188686	12.46	138814	19.92
05 EB-3MS	✓ 34457	10.05	163216	12.47	120133	19.91
06 EB-3MSD	✓ 36160	10.05	166269	12.47	114181	19.89
07 SDG-2DUP	✓ 34817	10.09	169280	12.51	129344	20.00
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IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

45

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: BB329.D

BFB Injection Date: 11/30/93 ✓

Instrument ID: HP5995B

BFB Injection Time: 2107 ✓

GC Column: 007-624

ID: 0.53 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 66.0% of mass 95	45.2
95	Base peak, 100% relative abundance	100.0 ✓
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	67.6
175	5.0 - 9.0% of mass 174	5.6 (8.3)1
176	95.0 - 101.0% of mass 174	67.2 (99.3)1
177	5.0 - 9.0% of mass 176	4.6 (6.9)2

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

NYSDEC 12/11/ASP(D-11-21)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7885.D ✓	11/30/93 ✓	2144 ✓
02	VBLKBO	VBLKBO	B7887.D ✓	12/01/93 ✓	0007 ✓
03	WB-1	1325009	B7888.D ✓	12/01/93 ✓	0115 ✓
04					
05					
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21					
22					

7A
VOLATILE CONTINUING CALIBRATION CHECK

287

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: 21325

Instrument ID: HP5995B

Calibration Date: 11/30/93

Time: 2144

Lab File ID: B7885.D

Init. Calibration Date(s): 11/18/93

Heated Purge: (Y/N) Y

Init. Calibration Times:

1026

1529

GC Column:007-624

ID: 0.53 (mm)

Associated Samples

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	1.888	0.450		76.1	
Bromomethane	1.280	1.279	0.100	0.1	25.0
Vinyl Chloride	1.499	0.981	0.100	34.5	25.0
Chloroethane	0.912	0.993		-9.4	
Methylene Chloride	1.670	1.532		8.2	
Acetone	1.468	1.308		10.9	
Carbon Disulfide	4.252	3.262		23.3	
1,1-Dichloroethene	1.227	1.177	0.100	4.1	25.0
1,1-Dichloroethane	3.016	3.001	0.200	0.5	25.0
1,2-Dichloroethene (total)	1.561	1.495		4.2	
Chloroform	3.110	2.886	0.200	7.2	25.0
1,2-Dichloroethane	2.190	2.303	0.100	-5.2	25.0
2-Butanone	2.457	2.011		18.2	
1,1,1-Trichloroethane	0.486	0.409	0.100	16.0	25.0
Carbon Tetrachloride	0.393	0.322	0.100	18.0	25.0
Bromodichloromethane	0.460	0.417	0.200	9.4	25.0
1,2-Dichloropropane	0.440	0.412		6.4	
cis-1,3-Dichloropropene	0.636	0.592	0.200	6.9	25.0
Trichloroethene	0.363	0.357	0.300	1.7	25.0
Dibromochloromethane	0.401	0.354	0.100	11.8	25.0
1,1,2-Trichloroethane	0.385	0.343	0.100	10.8	25.0
Benzene	1.180	1.130	0.500	4.3	25.0
trans-1,3-Dichloropropene	0.489	0.455	0.100	7.0	25.0
Bromoform	0.417	0.316	0.100	24.3	25.0
4-Methyl-2-Pentanone	1.354	1.079		20.4	
2-Hexanone	0.974	0.772		20.8	
Tetrachloroethene	0.417	0.387	0.200	7.2	25.0
1,1,2,2-Tetrachloroethane	0.902	0.814	0.500	9.7	25.0
Toluene	1.738	1.624	0.400	6.6	25.0
Chlorobenzene	1.049	1.034	0.500	1.4	25.0
Ethylbenzene	0.521	0.536	0.100	-2.9	25.0
Styrene	1.097	1.068	0.300	2.7	25.0
Xylene (total)	0.604	0.601	0.300	0.4	25.0
Toluene-d8	1.394	1.439		-3.3	
Bromofluorobenzene	0.757	0.688	0.200	9.1	25.0
1,2-Dichloroethane-d4	1.916	2.076		-8.3	

VOLK 80
WB-1

↓
←↓

All other compounds must meet a minimum RRF of 0.010.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): B7885.D

Date Analyzed: 11/30/93 ✓

Instrument ID: HP5995B

Time Analyzed: 2144 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) Y

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
12 HOUR STD	✓ 37592	10.02	188635	12.47	144516	19.88
UPPER LIMIT	75184	10.52	377270	12.97	289032	20.38
LOWER LIMIT	18796	9.52	94318	11.97	72258	19.38
EPA SAMPLE No.						
01 VBLKBO	✓ 31388	10.06	152841	12.51	119893	20.00
02 WB-1	✓ 34191	10.06	165728	12.54	120909	20.01
03						
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21						
22						

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

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

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

46

Lab Name: IEA/CT Contract:
Lab Code: IEACT Case No.: 1325 SAS No.: SDG No.: Z1325
Lab File ID: BB339.D BFB Injection Date: 12/02/93 ✓
Instrument ID: HP5995B BFB Injection Time: 0920 ✓
GC Column: 007-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	5.0 - 40.0% of mass 95	18.9
75	30.0 - 66.0% of mass 95	44.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	66.7
175	5.0 - 9.0% of mass 174	5.2 (7.8)1
176	95.0 - 101.0% of mass 174	63.8 (95.7)1
177	5.0 - 9.0% of mass 176	4.8 (7.5)2

NYSDEC ASP 12/91 (D-11-29)

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B7911.D ✓	12/02/93 ✓	0952 ✓
02	VBLKBQ	VBLKBQ	B7912.D ✓	12/02/93 ✓	1055 ✓
03	FB112493	1325012	B7918.D ✓	12/02/93 ✓	1437 ✓
04	TB112493	1325013	B7923.D	12/02/93	1727
05					
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7A
VOLATILE CONTINUING CALIBRATION CHECK

28

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5995B

Calibration Date: 12/02/93

Time: 0952

Lab File ID: B7911.D

Init. Calibration Date(s): 11/11/93 11/12/93

Heated Purge: (Y/N) N

Init. Calibration Times:

2303

0415

GC Column: 007-624

ID: 0.53 (mm)

Associated Samples

VLK 00

F8112493

TB 112493

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.432	0.522		-20.9	
Bromomethane	1.199	1.390	0.100	-15.9	25.0
Vinyl Chloride	0.938	1.216	0.100	-29.6	25.0
Chloroethane	0.871	1.067		-22.6	
Methylene Chloride	1.848	1.576		14.7	
Acetone	1.229	0.782		36.4	
Carbon Disulfide	4.147	3.624		12.6	
1,1-Dichloroethene	1.313	1.320	0.100	-0.5	25.0
1,1-Dichloroethane	3.015	3.308	0.200	-9.7	25.0
1,2-Dichloroethene (total)	1.432	1.588		-10.9	
Chloroform	3.084	1.151	0.200	-2.2	25.0
1,2-Dichloroethane	2.400	2.344	0.100	2.3	25.0
2-Butanone	0.977	1.313		-34.5	
1,1,1-Trichloroethane	0.495	0.425	0.100	14.1	25.0
Carbon Tetrachloride	0.442	0.356	0.100	19.5	25.0
Bromochloromethane	0.443	0.434	0.200	2.1	25.0
1,2-Dichloropropane	0.380	0.398		-4.6	
cis-1,3-Dichloropropene	0.538	0.579	0.200	-7.6	25.0
Trichloroethene	0.344	0.386	0.300	-12.5	25.0
Dibromochloromethane	0.352	0.368	0.100	-4.5	25.0
1,1,2-Trichloroethane	0.264	0.320	0.100	-21.2	25.0
Benzene	1.060	1.161	0.500	-9.5	25.0
trans-1,3-Dichloropropene	0.409	0.422	0.100	-3.2	25.0
Bromoform	0.313	0.298	0.100	4.9	25.0
4-Methyl-2-Pentanone	0.496	0.690		-39.1	
2-Hexanone	0.305	0.414		-35.5	
Tetrachloroethene	0.398	0.386	0.200	2.9	25.0
1,1,2,2-Tetrachloroethane	0.486	0.539	0.500	-10.8	25.0
Toluene	1.586	1.695	0.400	-6.9	25.0
Chlorobenzene	0.957	1.049	0.500	-9.7	25.0
Ethylbenzene	0.486	0.550	0.100	-13.3	25.0
Styrene	1.020	1.123	0.300	-10.1	25.0
Xylene (total)	0.562	0.601	0.300	-6.8	25.0
Toluene-d8	1.222	1.472		-20.5	
Bromofluorobenzene	0.683	0.687	0.200	-0.6	25.0
1,2-Dichloroethane-d4	2.011	2.053		-2.1	

<- 1st

↓ 1st

↑ 1st

↑

All other compounds must meet a minimum RRF of 0.010.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

47

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): B7911.D

Date Analyzed: 12/02/93 ✓

Instrument ID: HP5995B

Time Analyzed: 0952 ✓

GC Column: 007-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

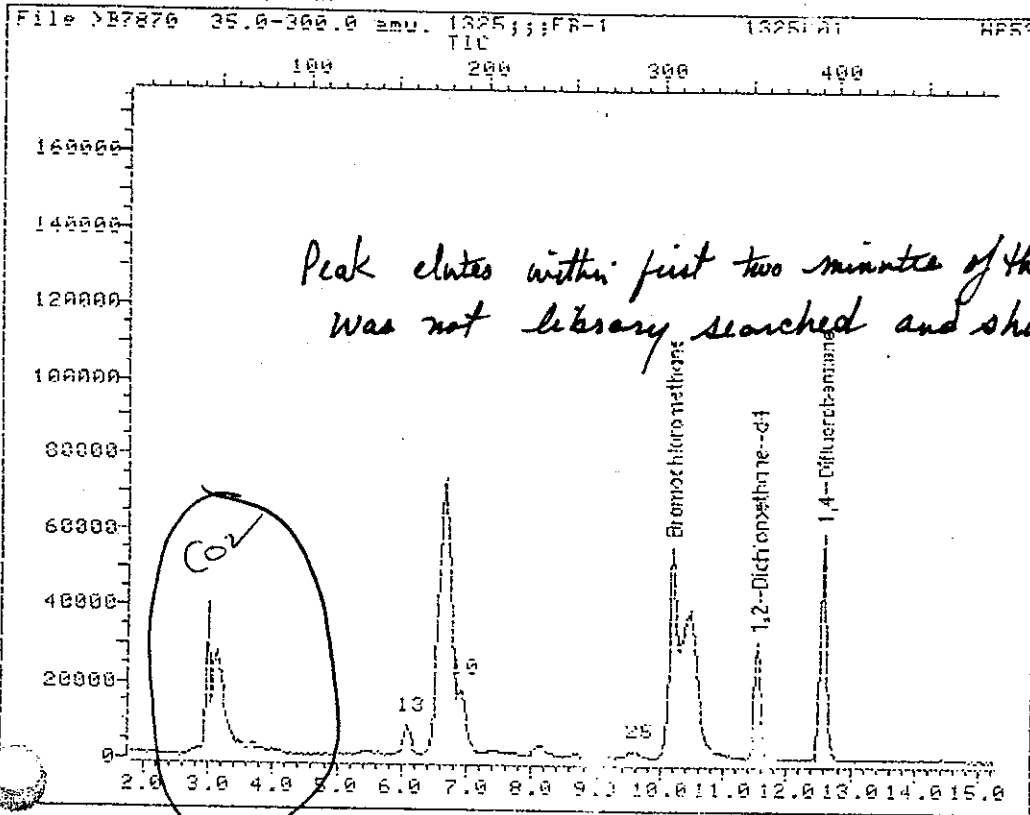
	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	✓ 34812	10.28	180497	12.71	136828	20.01
UPPER LIMIT	69624	10.78	360994	13.21	273656	20.51
LOWER LIMIT	17406	9.78	90248	12.21	68414	19.51
EPA SAMPLE No.						
01 VBLKBQ	✓ 36460	10.15	180829	12.60	135678	20.03
02 FB112493	✓ 34367	10.15	170545	12.57	131798	19.98
03 TB112493	✓ 35593	10.11	185451	12.56	141451	19.94
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20						
21						
22						

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

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

TOTAL ION CHROMATOGRAM



Data File: >B7870::B2

Quant Output File: >B7870::Q1

Name: 1325;;;FB-1

Misc: 132500

HP5995 B;;;LLS;CF1;

B2240

Id File: 1_IFBS::N2

Title: PURGEABLE ORGANIC COMPOUNDS

Last Calibration: 931202 23:11

Operator ID: MANAGER

Quant Time: 931202 23:12

Injected at: 931130 11:54

TIC page 1 of 2

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction (1)	Matrix (Ac, S)	Blank Type (2)	Blank Sample Number	Contaminant	Concentration (units) <i>ug/Kg</i>	Quantification Limit	
						5x	10x
SV	A _g	MB	SBLK MI	None detected			
		S	SBLK TI	Diethylphthalate	6		
				Di-n-butylphthalate	8		80
				Bis(2-ethylhexyl)phthalate	10		
				Di-n-octylphthalate	6		
	S	MB	SBLK XI	Diethylphthalate	7		70
				Di-n-butylphthalate	8		
				Bis(2-ethylhexyl)phthalate	12		
				Di-n-octylphthalate	7		70
	A _g	FB	FB112493	Bis(2-ethylhexyl)phthalate	0.7 $\mu\text{g/L}$	7 $\mu\text{g/L}$	
					(23 $\mu\text{g/Kg}$)	→ 230 $\mu\text{g/Kg}$	

1 - V = Volatile, S = Semivolatile, P = P-chloro/PCE, O = Other
 A_g = Aqueous, S = Solid
 MB = Method Blank, TB = Trip Blank, EB = Equipment Rinse Blank, FB = Field Blank
 IB = Instrument Blank, GB = Storage Blank
 * = Interfered from instrument protocols and/or supporting data

Date: _____

Environmental Standards, Inc.



2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

387

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLKTI	68	66	105	62	55	77	60	71	0
02	EB-3MSB	✓54	56	104	50	47	78	52	58	0
03	SBLKXI	73	78	120	68	59	86	68	81	0
04	EB-3	✓60	71	153*	74	58	110	68	68	1
05	EB-3MS	✓59	61	92	61	58	93	59	64	0
06	EB-3MSD	✓56	67	119	61	52	114	58	56	0
07	EB-1	✓78D	88D	71D	94D	78D	75D	90D	89D	0
08	EB-3RE	✓54	64	110	61	53	124*	59	62	1
09	EB-4	✓71	74	144*	74	65	153*	67	71	2
10	CB-1	✓79D	107D	82D	104D	86D	75D	96D	90D	0
11	CB-2	✓86D	111D	79D	100D	83D	74D	92D	86D	0
12	CB-3	✓80D	86D	94D	86D	74D	05	99D	79D	0
13	CB-4	✓66D	100D	109D	76D	62D	72D	84D	66D	0
14	WB-1	✓78D	94D	94D	93D	71D	41D	96D	75D	0
15	SDG-2DUP	✓72D	98D	90D	100D	70D	33D	97D	81D	0
16	EB-2	✓71D	99D	75D	87D	70D	76D	91D	76D	0
17	WB-2	✓80D	113D	56D	94D	78D	77D	96D	85D	0
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QC LIMITS

S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)
S7 (2CP) = 2-Chlorophenol-d4	(20-130) (advisory)
S8 (DCB) = 1,2-Dichlorobenzene-d4	(20-130) (advisory)

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

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

386

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLKMI	68	71	93	64	57	85	66	78	0
02	FB112493	73	71	74	52	58	107	60	70	0
03										
04										
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QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (35-114)
 S2 (FBP) = 2-Fluorobiphenyl (43-116)
 S3 (TPH) = Terphenyl-d14 (33-141)
 S4 (PHL) = Phenol-d5 (10-110)
 S5 (2FP) = 2-Fluorophenol (21-110)
 S6 (TBP) = 2,4,6-Tribromophenol (10-123)
 S7 (2CP) = 2-Chlorophenol-d4 (33-110) (advisory)
 S8 (DCB) = 1,2-Dichlorobenzene-d4 (16-110) (advisory)

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

3D
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix Spike - EPA Sample No.: EB-3

Level(low/med) LO7

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3000	0	1800	60	26- 90
2-Chlorophenol	3000	0	1700	57	25-102
1,4-Dichlorobenzene	2000	0	1200	60	28-104
N-Nitroso-di-n-prop. (1)	2000	0	1500	75	41-126
1,2,4-Trichlorobenzene	2000	0	1300	65	38-107
4-Chloro-3-methylphenol	3000	0	2300	77	26-103
Acenaphthene	2000	24	1400	69	31-137
4-Nitrophenol	3000	0	2800	93	11-114
2,4-Dinitrotoluene	2000	0	1600	80	28- 89
Pentachlorophenol	3000	0	2600	87	17-109
Pyrene	2000	1900	2200	15*	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Phenol	3000	1800	60	0	35 26- 90
2-Chlorophenol	3000	1700	57	0	50 25-102
1,4-Dichlorobenzene	2000	1000	50	18	27 28-104
N-Nitroso-di-n-prop. (1)	2000	1500	75	0	38 41-126
1,2,4-Trichlorobenzene	2000	1200	60	8	23 38-107
4-Chloro-3-methylphenol	3000	2600	87	12	33 26-103
Acenaphthene	2000	1600	79	14	19 31-137
4-Nitrophenol	3000	3600	120*	25	50 11-114
2,4-Dinitrotoluene	2000	1900	95*	17	47 28- 89
Pentachlorophenol	3000	3800	127*	37	47 17-109
Pyrene	2000	3800	95	145*	36 35-142

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

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

* Values outside of QC limits

RPD: 1 out of 11 outside limits

Spike Recovery: 4 out of 22 outside limits

COMMENTS:

3-ASP

SEMIVOLATILE MATRIX SPIKE BLANK RECOVERY SUMMARY

Lab Name: IEA-CT

Lab Project No: 1325

Lab Code: IEACT

SDG Number: 21325

Client Sample No.: EB-3

Concentration Units: ug/kg

COMPOUND	SPIKE ADDED	SAMPLE CONC.	MSB CONC.	MSB % Rec.	QC Limits % Rec.
Phenol	2500	0	1100	44	12-110
2-Chlorophenol	2500		1200	48	27-123
1,4-Dichlorobenzene	1700		840	49	36-97
N-Nitroso-di-n-prop.(1)	1700		1000	59	41-116
1,2,4-Trichlorobenzene	1700		900	53	39-98
4-Chloro-3-methylphenol	2500		1400	56	23-97
Acenaphthene	1700		1000	59	46-119
4-Nitrophenol	2500		2400	96*	10-80
2,4-Dinitrotoluene	1700		1300	76	24-96
Pentachlorophenol	2500		1800	72	9-103
Pyrene	1700	↓	1400	82	26-127

No impact, No ⊕

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

Spike Recovery: 1 out of 11 outside limits.

Comments:

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKMI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5814.D

Lab Sample ID: SBLKMI

390

Instrument ID: H.5971I

Date Extracted: 11/29/93

Matrix: (soil/water) WATER

Date Analyzed: 12/10/93 ✓

Level: (low/med) LOW

Time Analyzed: 0430 ✓

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	FB112493	1325012	I5929.D	12/21/93
02				
03				
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COMMENTS:

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKTI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5811.D

Lab Sample ID: SBLKTI

391

Instrument ID: HP5971I

Date Extracted: 11/30/93

Matrix: (soil/water) SOIL

Date Analyzed: 12/10/93

Level: (low/med) LOW

Time Analyzed: 0152

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EB-3MSB	1325003MSB	I5812.D	12/10/93
02	EB-3	1325003	I5821.D	12/10/93
03	EB-3MS	1325003MS	I5823.D	12/10/93
04	EB-3MSD	1325003MSD	I5824.D	12/10/93
05	EB-1	1325001	I5825.D	12/10/93
06	EB-3RE	1325003RE	I5846.D	12/14/93
07	EB-4	1325004	I5885.D	12/17/93
08	CB-1	1325005	I5886.D	12/17/93
09	CB-2	1325006	I5887.D	12/17/93
10	CB-3	1325007	I5931.D	12/21/93
11	CB-4	1325008	I5932.D	12/21/93
12	WB-1	1325009	I5946.D	12/22/93
13	SDG-2DUP	1325011	I5947.D	12/22/93
14				
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COMMENTS:

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKXI

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5813.D

Lab Sample ID: SBLKXI

Instrument ID: HP5971I

Date Extracted: 12/01/93

Matrix: (soil/water) SOIL

Date Analyzed: 12/10/93

Level: (low/med) LOW

Time Analyzed: 0337

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EB-2	1325002	I5948.D	12/22/93
02	WB-2	1325010	I5949.D	12/22/93
03				
04				
05				
06				
07				
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COMMENTS:

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

393

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5744T.D

DFTPP Injection Date: 12/03/93

Instrument ID: HP5971I

DFTPP Injection Time: 1218

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0 ^{60.0} of mass 198	38.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	51.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	45.0 - 75.0 ^{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	100.0
199	5.0 to 9.0% of mass 198	5.3
275	10.0 - 30.0% of mass 198	24.6
365	Greater than 1.00 ^{1.00} % of mass 198	3.18
441	Present, but less than mass 443	10.9
442	40.0 - 110.0% of mass 198	71.9
443	15.0 - 24.0 ^{17.0 - 23.0} of mass 442	14.1 (19.7)2

NYSDEC 12/91 ASP, D-III-68

1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5744.D ✓	12/03/93 ✓	1218 ✓
02	SSTD020	SSTD020	I5745.D ✓	12/03/93 ✓	1315 ✓
03	SSTD080	SSTD080	I5746.D ✓	12/03/93 ✓	1412 ✓
04	SSTD120	SSTD120	I5747.D ✓	12/03/93 ✓	1509 ✓
05	SSTD160	SSTD160	I5748.D ✓	12/03/93 ✓	1605 ✓
06					
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22					

Laboratory not using correct ion abundance criteria for mass ions 51, 127, 365 and 443, as specified

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Compliant

923

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date(s): 12/03/93

Calibration Times: 1218

1605

LAB FILE ID:		RRF20 =I5745.D		RRF50 =I5744.D			
RRF80 =I5746.D		RRF120=I5747.D		RRF160=I5748.D			
COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Phenol	* 1.584	1.317	1.242	1.171	1.044	1.272	15.9*
bis(2-Chloroethyl) ether	* 1.414	✓ 1.282	1.273	1.130	1.003	1.220	12.9
2-Chlorophenol	* 1.403	1.196	1.235	1.111	1.061	1.201	11.0*
1,3-Dichlorobenzene	* 1.586	1.435	1.424	1.294	✓ 1.298	1.407	8.5*
1,4-Dichlorobenzene	* ✓ 1.616	1.383	1.420	1.292	1.303	1.403	9.3*
1,2-Dichlorobenzene	* 1.469	1.264	✓ 1.230	1.097	1.228	1.257	10.7*
2-Methylphenol	* 1.205	1.021	1.020	✓ 0.853	0.781	0.976	17.0*
2,2'-oxybis(1-Chloropropane)	1.096	0.938	0.935	0.824	0.810	0.920	12.5
4-Methylphenol	* 1.254	1.010	0.924	0.756	0.890	0.967	19.1*
N-Nitroso-di-n-propylamine	* 0.991	0.861	0.876	0.776	0.863	0.874	8.8*
Hexachloroethane	* 0.974	0.916	0.959	0.837	0.950	✓ 0.927	✓ 5.9*
Nitrobenzene	* 0.525	0.487	0.488	0.482	0.454	0.487	5.2*
Isophorone	* 0.926	0.855	0.868	0.878	0.859	0.877	3.3*
2-Nitrophenol	* 0.248	0.234	0.230	0.226	0.214	0.230	5.4*
2,4-Dimethylphenol	* 0.503	0.490	0.499	0.507	0.479	0.496	2.2*
bis(2-Chloroethoxy)methane	* 0.512	0.471	0.456	0.436	0.398	0.455	9.2*
2,4-Dichlorophenol	* 0.331	0.307	0.309	0.292	0.293	0.306	5.1*
1,2,4-Trichlorobenzene	* ✓ 0.385	0.368	0.371	0.369	0.364	0.371	2.2*
Naphthalene	* 1.073	✓ 0.941	0.915	0.850	✓ 0.784	0.912	11.9*
4-Chloroaniline	0.423	0.404	✓ 0.396	0.388	0.366	0.395	5.3
Hexachlorobutadiene	0.397	0.377	0.396	0.413	0.435	0.404	5.3
4-Chloro-3-methylphenol	* 0.458	0.421	0.431	0.430	0.413	0.431	3.9*
2-Methylnaphthalene	* 0.679	0.601	0.582	0.556	0.519	0.587	10.2*
Hexachlorocyclopentadiene	0.692	0.715	0.822	0.886	0.943	0.812	13.3
2,4,6-Trichlorophenol	* 0.507	0.532	0.509	0.514	0.527	0.518	2.1*
2,4,5-Trichlorophenol	* 0.000	0.533	0.539	0.527	0.543	0.536	1.3*
2-Chloronaphthalene	* 1.314	1.243	1.222	1.167	1.155	1.220	5.3*
2-Nitroaniline	0.000	0.556	0.567	0.572	0.588	0.571	2.3
Dimethylphthalate	1.823	1.691	1.696	1.665	1.670	1.709	3.8
Acenaphthylene	* 2.064	1.873	1.833	1.699	1.666	1.827	8.7*
2,6-Dinitrotoluene	* 0.405	0.395	0.396	0.391	0.387	0.395	1.6*
3-Nitroaniline	0.000	0.290	0.339	0.358	0.355	0.336	9.4
Acenaphthene	* ✓ 1.256	1.124	1.114	1.083	✓ 1.048	1.125	7.0*
2,4-Dinitrophenol	0.000	0.229	0.254	0.282	0.306	0.268	12.5
4-Nitrophenol	0.000	✓ 0.513	0.596	✓ 0.650	0.732	0.623	14.8
Dibenzofuran	* 1.851	1.636	1.595	1.526	1.582	1.638	7.6*
2,4-Dinitrotoluene	* 0.620	0.564	✓ 0.585	0.556	0.572	0.579	4.3*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Associated Samples

E6-3

E6-1

E6-3RE 924

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date(s): 12/03/93

Calibration Times: 1218

1605

LAB FILE ID:		RRF20 =I5745.D		RRF50 =I5744.D			
RRF80 =I5746.D		RRF120=I5747.D		RRF160=I5748.D			
COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Diethylphthalate	2.188	2.040	2.021	1.940	1.961	2.030	4.8
4-Chlorophenyl-phenylether	* 0.724	0.679	0.729	0.790	0.986	0.781	15.5*
Fluorene	* 1.350	1.168	1.146	1.194	1.425	1.257	9.8*
4-Nitroaniline	0.000	0.334	0.371	0.368	0.367	0.360	4.8
4,6-Dinitro-2-methylphenol	0.000	0.193	0.204	0.194	0.203	0.198	2.9
N-Nitrosodiphenylamine (1)	0.576	0.479	0.473	0.444	0.430	0.480	11.9
4-Bromophenyl-phenylether	* 0.306	0.307	0.333	0.357	0.383	0.337	9.8*
Hexachlorobenzene	* 0.548	0.532	0.584	0.615	0.674	0.591	9.6*
Pentachlorophenol	* 0.000	0.255	0.283	0.295	0.354	0.297	14.1*
Phenanthrene	* 1.238	1.105	1.126	1.003	1.010	1.096	8.8*
Anthracene	* 1.265	1.086	1.043	1.032	1.034	1.092	9.1*
Carbazole	0.884	0.713	0.818	0.841	0.844	0.820	7.8
Di-n-butylphthalate	2.193	1.866	1.897	1.681	1.724	1.872	10.8
Fluoranthene	* 1.260	1.071	1.225	1.105	1.232	1.178	7.2*
Pyrene	* 1.307	1.146	1.116	1.040	0.997	1.121	10.7*
Butylbenzylphthalate	0.914	0.854	0.814	0.727	0.649	0.792	13.2
3,3'-Dichlorobenzidine	0.221	0.247	0.294	0.445	0.631	0.368	46.5
Benzo(a) anthracene	* 1.165	1.119	1.128	1.148	1.311	1.174	6.7*
Chrysene	* 1.030	0.986	0.959	1.029	1.090	1.019	4.9*
bis(2-Ethylhexyl)phthalate	1.275	1.158	1.090	0.952	0.889	1.073	14.5
Di-n-octylphthalate	2.203	2.017	1.930	1.642	1.658	1.890	12.7
Benzo(b) fluoranthene	* 1.231	1.139	1.249	1.257	1.311	1.237	5.0*
Benzo(k) fluoranthene	* 0.983	0.994	0.966	0.964	1.094	1.000	5.4*
Benzo(a) pyrene	* 0.960	0.969	1.013	1.032	1.097	1.014	5.4*
Indeno(1,2,3-cd) pyrene	* 0.941	0.978	0.961	1.068	1.034	0.996	5.3*
Dibenz(a,h) anthracene	* 0.778	0.809	0.813	0.903	0.960	0.852	8.9*
Benzo(g,h,i) perylene	* 0.917	0.897	0.910	0.946	0.939	0.922	2.2*
Nitrobenzene-d5	* 0.567	0.518	0.523	0.514	0.503	0.525	4.7*
2-Fluorobiphenyl	* 1.446	1.305	1.267	1.243	1.260	1.304	6.3*
Terphenyl-d14	* 0.996	0.965	0.971	0.983	1.012	0.986	1.9*
Phenol-d5	* 1.615	1.391	1.347	1.211	1.121	1.337	14.2*
2-Fluorophenol	* 1.189	1.120	1.139	1.057	1.033	1.108	5.7*
2,4,6-Tribromophenol	0.517	0.535	0.627	0.677	0.764	0.624	16.4
2-Chlorophenol-d4	* 1.369	1.233	1.226	1.137	1.072	1.207	9.3*
1,2-Dichlorobenzene-d4	* 0.962	0.826	0.815	0.768	0.830	0.840	8.6*

(1) - Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

39

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5810T.D

DFTPP Injection Date: 12/10/93

Instrument ID: HP5971I

DFTPP Injection Time: 0003

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0 60.0% of mass 198	38.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	50.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	45.0 - 75.0 17.0-23.0% of mass 198	43.9
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.0
275	10.0 - 30.0% of mass 198	28.0
365	Greater than 0.75 1.0% of mass 198	4.65
441	Present, but less than mass 443	14.2
442	40.0 - 110.0% of mass 198	92.6
443	15.0 - 24.0 17.0-23.0% of mass 442	18.2 (19.6)2

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

NYSDEC 12/11/93, D-111-68

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5810.D	12/10/93	0003
02	SBLKTI	SBLKTI	I5811.D	12/10/93	0152
03	EB-3MSB	1325003MSB	I5812.D	12/10/93	0244
04	SBLKXI	SBLKXI	I5813.D	12/10/93	0337
05	SBLKMI	SBLKMI	I5814.D	12/10/93	0430
06	EB-3	1325003	I5821.D	12/10/93	1040
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

927

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/10/93

Time: 0003

Lab File ID: I5810.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times: 1218

1605

Associated Samp

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.272	1.545	0.800	-21.5	25.0
bis(2-Chloroethyl) ether	1.220	1.414	0.700	-15.9	25.0
2-Chlorophenol	1.201	1.340	0.800	-11.5	25.0
1,3-Dichlorobenzene	1.407	1.494	0.600	-6.2	25.0
1,4-Dichlorobenzene	1.403	1.500	0.500	-6.9	25.0
1,2-Dichlorobenzene	1.257	1.247	0.400	0.8	25.0
2-Methylphenol	0.976	1.059	0.700	-8.5	25.0
2,2'-oxybis(1-Chloropropane)	0.920	1.015		-10.3	
4-Methylphenol	0.967	0.947	0.600	2.1	25.0
N-Nitroso-di-n-propylamine	0.874	0.993	0.500	-13.6	25.0
Hexachloroethane	0.927	0.912	0.300	1.7	25.0
Nitrobenzene	0.487	0.536	0.200	-10.0	25.0
Isophorone	0.877	1.036	0.400	-18.1	25.0
2-Nitrophenol	0.230	0.251	0.100	-8.9	25.0
2,4-Dimethylphenol	0.496	0.540	0.200	-9.0	25.0
bis(2-Chloroethoxy)methane	0.455	0.525	0.300	-15.6	25.0
2,4-Dichlorophenol	0.306	0.343	0.200	-11.9	25.0
1,2,4-Trichlorobenzene	0.371	0.388	0.200	-4.4	25.0
Naphthalene	0.912	1.001	0.700	-9.7	25.0
4-Chloroaniline	0.395	0.337		14.8	
Hexachlorobutadiene	0.404	0.415		-2.9	
4-Chloro-3-methylphenol	0.431	0.471	0.200	-9.3	25.0
2-Methylnaphthalene	0.587	0.641	0.400	-9.1	25.0
Hexachlorocyclopentadiene	0.812	0.727		10.4	
2,4,6-Trichlorophenol	0.518	0.497	0.200	4.1	25.0
2,4,5-Trichlorophenol	0.536	0.507	0.200	5.3	25.0
2-Chloronaphthalene	1.220	1.161	0.800	4.9	25.0
2-Nitroaniline	0.571	0.547		4.1	
Dimethylphthalate	1.709	1.765		-3.3	
Acenaphthylene	1.827	1.800	1.300	1.5	25.0
2,6-Dinitrotoluene	0.395	0.414	0.200	-4.9	25.0
3-Nitroaniline	0.336	0.059		82.4	
Acenaphthene	1.125	1.060	0.800	5.8	25.0
2,4-Dinitrophenol	0.268	0.232		13.6	
4-Nitrophenol	0.623	0.505		18.9	
Dibenzofuran	1.638	1.613	0.800	1.5	25.0
2,4-Dinitrotoluene	0.579	0.590	0.200	-1.8	25.0

SOLKT I
EB-3MSB
SALKXI
SBLKMI
EB-3

Flag (wa)
↓ (H)

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

928

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: 21325

Instrument ID: HP5971I

Calibration Date: 12/10/93 Time: 0003

Lab File ID: I5810.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times: 1218 1605

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	2.030	2.072		-2.1	
4-Chlorophenyl-phenylether	0.781	0.630	0.400	19.3	25.0
Fluorene	1.257	1.118	0.900	11.1	25.0
4-Nitroaniline	0.360	0.214		40.6	
4,6-Dinitro-2-methylphenol	0.198	0.199		-0.3	
N-Nitrosodiphenylamine (1)	0.480	0.434		9.7	
4-Bromophenyl-phenylether	0.337	0.321	0.100	4.8	25.0
Hexachlorobenzene	0.591	0.578	0.100	2.2	25.0
Pentachlorophenol	0.297	0.251	0.050	15.5	25.0
Phenanthrene	1.096	1.132	0.700	-3.3	25.0
Anthracene	1.092	1.132	0.700	-3.7	25.0
Carbazole	0.820	0.505		38.4	
Di-n-butylphthalate	1.872	2.178		-16.3	
Fluoranthene	1.178	1.229	0.600	-4.3	25.0
Pyrene	1.121	1.287	0.600	-14.8	25.0
Butylbenzylphthalate	0.792	1.044		-31.9	
3,3'-Dichlorobenzidine	0.368	0.191		48.0	
Benzo(a)anthracene	1.174	1.179	0.800	-0.4	25.0
Chrysene	1.019	0.967	0.700	5.0	25.0
bis(2-Ethylhexyl)phthalate	1.073	1.398		30.3	
Di-n-octylphthalate	1.890	2.991		58.3	
Benzo(b)fluoranthene	1.237	1.299	0.700	-5.0	25.0
Benzo(k)fluoranthene	1.000	0.985	0.700	1.5	25.0
Benzo(a)pyrene	1.014	1.011	0.700	0.3	25.0
Indeno(1,2,3-cd)pyrene	0.996	0.882	0.500	11.5	25.0
Dibenz(a,h)anthracene	0.852	0.756	0.400	11.3	25.0
Benzo(g,h,i)perylene	0.922	0.808	0.500	12.3	25.0
Nitrobenzene-d5	0.525	0.575	0.200	-9.6	25.0
2-Fluorobiphenyl	1.304	1.237	0.700	5.1	25.0
Terphenyl-d14	0.986	1.074	0.500	-9.0	25.0
Phenol-d5	1.337	1.554	0.800	-16.3	25.0
2-Fluorophenol	1.108	1.249	0.600	-12.8	25.0
2,4,6-Tribromophenol	0.624	0.572		8.4	
2-Chlorophenol-d4	1.207	1.336	0.800	-10.7	25.0
1,2-Dichlorobenzene-d4	0.840	0.853	0.400	-1.5	25.0

↓ JE

↓ UT

↑ no impact, B flag
↑ no impact, B flag

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

401

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5810.D

Date Analyzed: 12/10/93 ✓

Instrument ID: HP5971I

Time Analyzed: 0003 ✓

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	✓ 40050	10.45	137730	13.64	78317	18.18
UPPER LIMIT	80100	10.95	275460	14.14	156634	18.68
LOWER LIMIT	20025	9.95	68865	13.14	39158	17.68
EPA SAMPLE No.						
01 SBLKTI	40831	10.45	141504	13.64	81413	18.17
02 EB-3MSB	✓ 41557	10.45	154991	13.63	83579	18.17
03 SBLKXI	38088	10.45	140648	13.63	75333	18.17
04 SBLKMI	✓ 42027	10.44	160994	13.62	82817	18.17
05 EB-3	✓ 37175	10.48	155307	13.66	81748	18.22
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

402

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDC No.: Z1325

Lab File ID (Standard): I5810.D

Date Analyzed: 12/10/93

Instrument ID: HP5971I

Time Analyzed: 0003

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓ 120698	21.97	119094	28.85	97110	33.50
UPPER LIMIT	241396	22.47	238188	29.35	194220	34.00
LOWER LIMIT	60345	21.47	59547	28.35	48555	33.00
EPA SAMPLE No.						
01 SBLKTI	145072	21.97	117273	28.84	87549	33.49
02 EB-3MSB	153416	21.97	120923	28.83	96568	33.49
03 SBLKXI	133124	21.96	103360	28.83	84745	33.48
04 SBLKMI	✓ 145409	21.95	109991	28.84	84149	33.48
05 <u>EB-3</u>	✓ 134197	22.04	74182	28.96	<u>34597*</u>	33.80
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flag
G/LAD
J/WT

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

395

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5822T.D

DFTPP Injection Date: 12/10/93

Instrument ID: HP5971I

DFTPP Injection Time: 1329

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0 ^{60.0} of mass 198	36.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	50.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 60.0 ^{15.0 - 23.0} of mass 198	45.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	5.9
275	10.0 - 30.0% of mass 198	26.8
365	Greater than 0.75 ^{0.02} of mass 198	3.50
441	Present, but less than mass 443	12.8
442	40.0 - 110.0% of mass 198	82.9
443	15.0 - 24.0 ^{17.0 - 23.0} of mass 442	15.2 (18.4)2

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

NYSDEC 12/91 ASP, D-111-68

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5822.D	12/10/93	1329
02	EB-3MS	1325003MS	I5823.D	12/10/93	1444
03	EB-3MSD	1325003MSD	I5824.D	12/10/93	1536
04	EB-1	1325001	I5825.D	12/10/93	1629
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

929

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/10/93

Time: 1329

Lab File ID: I5822.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times:

1218

1605

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.272	1.489	0.800	-17.1	25.0
bis(2-Chloroethyl) ether	1.220	1.440	0.700	-18.0	25.0
2-Chlorophenol	1.201	1.302	0.800	-8.4	25.0
1,3-Dichlorobenzene	1.407	1.405	0.600	0.2	25.0
1,4-Dichlorobenzene	1.403	1.463	0.500	-4.3	25.0
1,2-Dichlorobenzene	1.257	1.220	0.400	3.0	25.0
2-Methylphenol	0.976	1.070	0.700	-9.7	25.0
2,2'-oxybis(1-Chloropropane)	0.920	1.074		-16.7	
4-Methylphenol	0.967	1.060	0.600	-9.6	25.0
N-Nitroso-di-n-propylamine	0.874	1.004	0.500	-15.0	25.0
Hexachloroethane	0.927	0.837	0.300	9.8	25.0
Nitrobenzene	0.487	0.526	0.200	-8.0	25.0
Isophorone	0.877	0.992	0.400	-13.1	25.0
2-Nitrophenol	0.230	0.244	0.100	-5.9	25.0
2,4-Dimethylphenol	0.496	0.509	0.200	-2.8	25.0
bis(2-Chloroethoxy)methane	0.455	0.524	0.300	-15.3	25.0
2,4-Dichlorophenol	0.306	0.302	0.200	1.3	25.0
1,2,4-Trichlorobenzene	0.371	0.368	0.200	0.9	25.0
Naphthalene	0.912	0.957	0.700	-4.9	25.0
4-Chloroaniline	0.395	0.437		-10.5	
Hexachlorobutadiene	0.404	0.352		12.7	
4-Chloro-3-methylphenol	0.431	0.471	0.200	-9.2	25.0
2-Methylnaphthalene	0.587	0.624	0.400	-6.3	25.0
Hexachlorocyclopentadiene	0.812	0.629		22.5	
2,4,6-Trichlorophenol	0.518	0.510	0.200	1.4	25.0
2,4,5-Trichlorophenol	0.536	0.524	0.200	2.2	25.0
2-Chloronaphthalene	1.220	1.235	0.800	-1.2	25.0
2-Nitroaniline	0.571	0.616		-7.9	
Dimethylphthalate	1.709	1.868		-9.3	
Acenaphthylene	1.827	1.970	1.300	-7.8	25.0
2,6-Dinitrotoluene	0.395	0.451	0.200	-14.2	25.0
3-Nitroaniline	0.336	0.324		3.4	
Acenaphthene	1.125	1.182	0.800	-5.0	25.0
2,4-Dinitrophenol	0.268	0.251		6.5	
4-Nitrophenol	0.623	0.561		10.0	
Dibenzofuran	1.638	1.759	0.800	-7.4	25.0
2,4-Dinitrotoluene	0.579	0.677	0.200	-16.8	25.0

Associated Sample

EA-3MS

EA-3MSD

EA-1

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

930

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/10/93

Time: 1329

Lab File ID: I5822.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times: 1218 1605

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	2.030	2.173		-7.0	
4-Chlorophenyl-phenylether	0.731	0.663	0.400	15.1	25.0
Fluorene	1.257	1.211	0.900	3.6	25.0
4-Nitroaniline	0.360	0.394		-9.3	
4,6-Dinitro-2-methylphenol	0.198	0.178		10.2	
N-Nitrosodiphenylamine (1)	0.480	0.457		5.0	
4-Bromophenyl-phenylether	0.337	0.287	0.100	14.9	25.0
Hexachlorobenzene	0.591	0.486	0.100	17.8	25.0
Pentachlorophenol	0.297	0.216	0.050	27.4	25.0
Phenanthrene	1.096	1.103	0.700	-0.6	25.0
Anthracene	1.092	1.105	0.700	-1.2	25.0
Carbazole	0.820	0.785		4.2	
Di-n-butylphthalate	1.872	2.046		-9.3	
Fluoranthene	1.178	1.170	0.600	0.7	25.0
Pyrene	1.121	1.415	0.600	-26.2	25.0
Butylbenzylphthalate	0.792	1.074		-35.6	
3,3'-Dichlorobenzidine	0.368	0.293		20.2	
Benzo(a)anthracene	1.174	1.142	0.800	2.7	25.0
Chrysene	1.019	1.035	0.700	-1.6	25.0
bis(2-Ethylhexyl)phthalate	1.073	1.416		-31.9	
Di-n-octylphthalate	1.890	2.875		-52.1	
Benzo(b)fluoranthene	1.237	1.242	0.700	-0.4	25.0
Benzo(k)fluoranthene	1.000	0.990	0.700	1.0	25.0
Benzo(a)pyrene	1.014	1.035	0.700	-2.0	25.0
Indeno(1,2,3-cd)pyrene	0.996	0.941	0.500	5.6	25.0
Dibenz(a,h)anthracene	0.852	0.891	0.400	-4.6	25.0
Benzo(g,h,i)perylene	0.922	0.901	0.500	2.3	25.0
Nitrobenzene-d5	0.525	0.552	0.200	-5.1	25.0
2-Fluorobiphenyl	1.304	1.282	0.700	1.7	25.0
Terphenyl-d14	0.986	1.096	0.500	-11.2	25.0
Phenol-d5	1.337	1.522	0.800	-13.8	25.0
2-Fluorophenol	1.108	1.182	0.600	-6.7	25.0
2,4,6-Tribromophenol	0.624	0.579		7.1	
2-Chlorophenol-d4	1.207	1.324	0.800	-9.7	25.0
1,2-Dichlorobenzene-d4	0.840	0.836	0.400	0.5	25.0

<- v UT

<- ↑ J ⊕
↑ UT

↑ no impact, B flag
↑ UT

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5822.D

Date Analyzed: 12/10/93

Instrument ID: HP5971I

Time Analyzed: 1329

403

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	✓ 37350	10.39	133618	13.57	71200	18.10
UPPER LIMIT	74700	10.89	267236	14.07	142400	18.60
LOWER LIMIT	18675	9.89	66809	13.07	35600	17.60
EPA SAMPLE No.						
01 EB-3MS	✓ 34407	10.39	134642	13.57	76064	18.10
02 EB-3MSD	✓ 30321	10.39	118313	13.57	61980	18.10
03 EB-1	✓ 35010	10.38	140454	13.56	76082	18.10
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

404

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5822.D

Date Analyzed: 12/10/93

Instrument ID: HP5971I

Time Analyzed: 1329

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓ 128710	21.90	108215	28.79	98502	33.41
UPPER LIMIT	257420	22.40	216430	29.29	197004	33.91
LOWER LIMIT	64355	21.40	54108	28.29	49251	32.91
EPA SAMPLE No.						
01 EB-3MS	✓ 126097	21.90	111507	28.79	86931	33.46
02 EB-3MSD	✓ 103911	21.90	90755	28.81	66960	33.49
03 EB-1	✓ 120129	21.90	129407	28.81	80992	33.51
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22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

306

Lab Name: IEA/CT

Contract:

Lab Code: IFACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5834T.D

DFTPP Injection Date: 12/13/93

Instrument ID: HP5971I

DFTPP Injection Time: 1649

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0 of mass 198	42.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	57.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0 of mass 198	47.4
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	25.9
365	Greater than 0.75 of mass 198	4.33
441	Present, but less than mass 443	12.8
442	40.0 - 110.0% of mass 198	89.7
443	15.0 - 24.0 of mass 442	16.4 (18.3)2

1-Value is % mass 69

2-Value is % mass 442

NYSDEC 12/91 ASP D-111-68

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5834.D	12/13/93	1649
02	EB-3RE	1325003RE	I5846.D	12/14/93	0350
03					
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/13/93

Time: 1649

Lab File ID: I5834.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times:

1218

1605

Associated Sample

COMPOUND	RRF /	RRF50	MIN RRF	%D	MAX %D
Phenol	1.272	1.576	0.800	-23.9	25.0
bis(2-Chloroethyl) ether	1.220	1.455	0.700	-19.2	25.0
2-Chlorophenol	1.201	1.333	0.800	-11.0	25.0
1,3-Dichlorobenzene	1.407	1.514	0.600	-7.5	25.0
1,4-Dichlorobenzene	1.403	1.479	0.500	-5.4	25.0
1,2-Dichlorobenzene	1.257	1.178	0.400	6.3	25.0
2-Methylphenol	0.976	1.137	0.700	-16.5	25.0
2,2'-oxybis(1-Chloropropane)	0.920	1.155		(25.4)	
4-Methylphenol	0.967	1.056	0.600	-9.3	25.0
N-Nitroso-di-n-propylamine	0.874	1.039	0.500	-18.9	25.0
Hexachloroethane	0.927	0.887	0.300	4.4	25.0
Nitrobenzene	0.487	0.577	0.200	-18.4	25.0
Isophorone	0.877	1.032	0.400	-17.6	25.0
2-Nitrophenol	0.230	0.245	0.100	-6.3	25.0
2,4-Dimethylphenol	0.496	0.527	0.200	-6.3	25.0
bis(2-Chloroethoxy)methane	0.455	0.538	0.300	-18.4	25.0
2,4-Dichlorophenol	0.306	0.322	0.200	-5.1	25.0
1,2,4-Trichlorobenzene	0.371	0.378	0.200	-1.9	25.0
Naphthalene	0.912	1.007	0.700	-10.4	25.0
4-Chloroaniline	0.395	0.345		12.7	
Hexachlorobutadiene	0.404	0.363		10.1	
4-Chloro-3-methylphenol	0.431	0.468	0.200	-8.5	25.0
2-Methylnaphthalene	0.587	0.621	0.400	-5.8	25.0
Hexachlorocyclopentadiene	0.812	0.634		21.9	
2,4,6-Trichlorophenol	0.518	0.481	0.200	7.1	25.0
2,4,5-Trichlorophenol	0.536	0.485	0.200	9.5	25.0
2-Chloronaphthalene	1.220	1.216	0.800	0.4	25.0
2-Nitroaniline	0.571	0.602		-5.4	
Dimethylphthalate	1.709	1.756		-2.8	
Acenaphthylene	1.827	1.830	1.300	-0.2	25.0
2,6-Dinitrotoluene	0.395	0.420	0.200	-6.5	25.0
3-Nitroaniline	0.336	0.076		(77.2)	
Acenaphthene	1.125	1.102	0.800	2.0	25.0
2,4-Dinitrophenol	0.268	0.254		5.0	
4-Nitrophenol	0.623	0.500		19.7	
Dibenzofuran	1.638	1.683	0.800	-2.7	25.0
2,4-Dinitrotoluene	0.579	0.610	0.200	-5.4	25.0

FB-3RE

↑ UT

↓ UT

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

932

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/13/93

Time: 1649

Lab File ID: I5834.D

Init. Calibration Date(s): 12/03/93

Init. Calibration Times:

1218

1605

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	2.030	1.827		10.0	
4-Chlorophenyl-phenylether	0.781	0.597	0.400	23.6	25.0
Fluorene	1.257	1.125	0.900	10.4	25.0
4-Nitroaniline	0.360	0.280		22.3	
4,6-Dinitro-2-methylphenol	0.198	0.198		0.2	
N-Nitrosodiphenylamine (1)	0.480	0.390		18.9	
4-Bromophenyl-phenylether	0.337	0.283	0.100	16.0	25.0
Hexachlorobenzene	0.591	0.473	0.100	19.9	25.0
Pentachlorophenol	0.297	0.193	0.050	35.0	25.0
Phenanthrene	1.096	1.147	0.700	-4.6	25.0
Anthracene	1.092	1.065	0.700	2.5	25.0
Carbazole	0.820	0.469		42.8	
Di-n-butylphthalate	1.872	2.149		-14.8	
Fluoranthene	1.178	1.158	0.600	1.8	25.0
Pyrene	1.121	1.513	0.600	-34.9	25.0
Butylbenzylphthalate	0.792	1.205		-52.3	
3,3'-Dichlorobenzidine	0.368	0.249		32.4	
Benzo(a)anthracene	1.174	1.190	0.800	-1.4	25.0
Chrysene	1.019	1.024	0.700	-0.5	25.0
Bis(2-Ethylhexyl)phthalate	1.073	1.589		-48.1	
Di-n-octylphthalate	1.890	3.271		-73.1	
Benzo(b)fluoranthene	1.237	1.220	0.700	1.4	25.0
Benzo(k)fluoranthene	1.000	1.079	0.700	-7.8	25.0
Benzo(a)pyrene	1.014	1.027	0.700	-1.2	25.0
Indeno(1,2,3-cd)pyrene	0.996	0.900	0.500	9.7	25.0
Dibenz(a,h)anthracene	0.852	0.768	0.400	9.8	25.0
Benzo(g,h,i)perylene	0.922	0.864	0.500	6.3	25.0
Nitrobenzene-d5	0.525	0.614	0.200	-16.9	25.0
2-Fluorobiphenyl	1.304	1.251	0.700	4.1	25.0
Terphenyl-d14	0.986	1.148	0.500	-16.5	25.0
Phenol-d5	1.337	1.552	0.800	-16.1	25.0
2-Fluorophenol	1.108	1.266	0.600	-14.3	25.0
2,4,6-Tribromophenol	0.624	0.446		28.5	
2-Chlorophenol-d4	1.207	1.311	0.800	-8.6	25.0
1,2-Dichlorobenzene-d4	0.840	0.847	0.400	-0.8	25.0

<- ↓ UT

↓ J ⊕

<- ↑ J ⊕

↑ UT

↓ UT

↑ no impact, B/H

↑ UT

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

405

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5834.D

Date Analyzed: 12/13/93

Instrument ID: HP5971I

Time Analyzed: 1649

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	45016	10.32	154588	13.50	83251	18.03
UPPER LIMIT	90032	10.82	309176	14.00	166502	18.53
LOWER LIMIT	22508	9.82	77294	13.00	41626	17.53
EPA SAMPLE No.						
01 EB-3RE	✓ 38446	10.29	154125	13.46	83564	17.99
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
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20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

406

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5834.D

Date Analyzed: 12/13/93

Instrument ID: HP5971I

Time Analyzed: 1649

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓ 131196	21.80	105108	28.67	89332	33.20
UPPER LIMIT	262392	22.30	210216	29.17	178664	33.70
LOWER LIMIT	65598	21.30	52554	28.17	44666	32.70
EPA SAMPLE No.						
01 EB-3RE	✓ 132609	21.78	95028	28.66	40545*	33.20
02						
03						
04						
05						
06						
07						
08						
09						
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20						
21						
22						

Flag
out
(ND) w

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

397

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5869T.D

DFTPP Injection Date: 12/16/93

Instrument ID: HP5971I

DFTPP Injection Time: 1034

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 30.0 % of mass 198	47.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	74.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 ^{42.6} % of mass 198	48.4
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.5
365	Greater than 0.75 % of mass 198	3.72
441	Present, but less than mass 443	8.8
442	40.0 - 110.0% of mass 198	67.2
443	15.0 ^{17.23} % of mass 442	12.4 (18.5)2

1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5869.D ✓	12/16/93	1034 ✓
02	SSTD020	SSTD020	I5870.D ✓	12/16/93	1135 ✓
03	SSTD080	SSTD080	I5871.D ✓	12/16/93	1228 ✓
04	SSTD120	SSTD120	I5872.D ✓	12/16/93	1320 ✓
05	SSTD160	SSTD160	I5874.D ✓	12/16/93	1413 ✓
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Associated Samples

WB-1 EB-4
SDG-2DUP CB-1
EB-2 CB-2
WB-2 FB 112493
CB-3
CB-4

925

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date(s): 12/16/93

Calibration Times: 1034

1413

LAB FILE ID:	RRF20 =I5870.D	RRF50 =I5869.D				
RRF80 =I5871.D	RRF120=I5872.D	RRF160=I5874.D				
COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF
Phenol	20.6 * 1.686	1.477	1.307	1.086	0.826	1.276
bis(2-Chloroethyl) ether	20.5 * 1.462	1.322	1.177	0.879	0.710	1.110
2-Chlorophenol	* 1.327	1.251	1.172	1.041	0.920	1.142
1,3-Dichlorobenzene	* 1.519	1.388	1.332	1.227	1.134	1.320
1,4-Dichlorobenzene	* 1.551	1.393	1.307	1.188	1.105	1.309
1,2-Dichlorobenzene	* 1.395	1.150	1.005	0.969	0.979	1.100
2-Methylphenol	* 1.149	1.073	0.950	0.822	0.716	0.942
2,2'-oxybis(1-Chloropropane)	1.318	1.180	0.905	1.014	0.896	1.062
4-Methylphenol	20.5 * 1.262	1.142	1.045	0.862	0.725	1.007
N-Nitroso-di-n-propylamine	* 1.194	1.038	0.889	0.860	0.774	0.951
Hexachloroethane	* 0.963	0.856	0.861	0.852	0.804	0.867
Nitrobenzene	* 0.535	0.564	0.522	0.500	0.484	0.521
Isophorone	* 0.947	1.040	0.952	0.967	1.044	0.990
2-Nitrophenol	* 0.220	0.245	0.214	0.210	0.210	0.220
2,4-Dimethylphenol	* 0.461	0.501	0.454	0.465	0.470	0.470
bis(2-Chloroethoxy)methane	* 0.499	0.528	0.466	0.452	0.431	0.475
2,4-Dichlorophenol	* 0.306	0.323	0.286	0.267	0.265	0.289
1,2,4-Trichlorobenzene	* 0.349	0.377	0.318	0.305	0.317	0.333
Naphthalene	0.700 * 0.988	0.992	0.823	0.746	0.692	0.848
4-Chloroaniline	0.360	0.351	0.318	0.344	0.355	0.345
Hexachlorobutadiene	0.315	0.339	0.319	0.344	0.371	0.338
4-Chloro-3-methylphenol	* 0.394	0.438	0.391	0.383	0.379	0.397
2-Methylnaphthalene	* 0.621	0.636	0.531	0.483	0.475	0.549
Hexachlorocyclopentadiene	0.467	0.547	0.555	0.649	0.656	0.575
2,4,6-Trichlorophenol	* 0.463	0.447	0.429	0.434	0.407	0.436
2,4,5-Trichlorophenol	* 0.000	0.470	0.433	0.425	0.400	0.432
2-Chloronaphthalene	* 1.211	1.171	1.064	1.002	0.936	1.077
2-Nitroaniline	0.000	0.584	0.571	0.602	0.563	0.580
Dimethylphthalate	1.687	1.667	1.594	1.481	1.396	1.565
Acenaphthylene	1.300 * 2.007	1.851	1.664	1.505	1.255	1.656
2,6-Dinitrotoluene	* 0.408	0.423	0.386	0.369	0.349	0.387
3-Nitroaniline	0.000	0.198	0.204	0.270	0.269	0.235
Acenaphthene	0.800 * 1.169	1.095	0.987	0.897	0.777	0.985
2,4-Dinitrophenol	0.000	0.224	0.224	0.257	0.260	0.242
4-Nitrophenol	0.000	0.412	0.448	0.507	0.521	0.472
Dibenzofuran	* 1.730	1.628	1.468	1.425	1.272	1.505
2,4-Dinitrotoluene	* 0.558	0.574	0.551	0.552	0.534	0.554

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

926

Lab Name: IEA/CT

Contract:

Associated Samples

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325 EB-4

Instrument ID: HP5971I

Calibration Date(s): 12/16/93

Calibration Times: 1034

1413

CB-1 SDG-2 DVP
CB-2 EB-2
EB NB-2
EB
CB-4
CB-3
WB-1

LAB FILE ID:	RRF20 =I5870.D	RRF50 =I5869.D					
RRF80 =I5871.D	RRF120=I5872.D	RRF160=I5874.D					
COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Diethylphthalate	1.979	1.889	1.811	1.673	1.966	1.864	6.8
4-Chlorophenyl-phenylether	* 0.623	0.584	0.537	0.538	0.665	0.589	9.4*
Fluorene	* 1.337	1.190	1.022	0.906	1.139	1.119	14.7*
4-Nitroaniline	0.000	0.270	0.227	0.297	0.018	0.203	62.5*
4,6-Dinitro-2-methylphenol	0.000	0.196	0.158	0.154	0.152	0.165	12.6*
N-Nitrosodiphenylamine (1)	0.443	0.464	0.367	0.320	0.326	0.384	17.4
4-Bromophenyl-phenylether	* 0.192	0.223	0.197	0.231	0.245	0.218	10.3*
Hexachlorobenzene	* 0.285	0.369	0.323	0.408	0.443	0.365	17.3*
Pentachlorophenol	* 0.000	0.168	0.153	0.177	0.191	0.172	9.2*
Phenanthrene	* 1.057	1.152	0.883	0.827	0.766	0.937	17.3*
Anthracene	* 1.079	1.138	0.852	0.816	0.773	0.932	17.7*
Carbazole	0.597	0.563	0.492	0.592	0.549	0.559	7.6
Di-n-butylphthalate	1.92	2.055	1.570	1.463	1.363	1.675	17.9
Fluoranthene	* 1.128	1.180	0.910	0.900	0.876	0.999	14.4*
Pyrene	20.5 * 1.573	1.667	1.278	1.111	0.980	1.322	22.2* <-
Butylbenzylphthalate	1.190	1.284	1.064	0.897	0.728	1.033	21.6
3,3'-Dichlorobenzidine	0.209	0.260	0.200	0.283	0.347	0.260	23.0
Benzo(a)anthracene	* 1.198	1.208	1.110	1.189	1.165	1.174	3.4*
Chrysene	* 1.085	1.071	0.970	1.007	0.967	1.020	5.4*
bis(2-Ethylhexyl)phthalate	1.496	1.549	1.308	1.120	0.998	1.294	18.3
Di-n-octylphthalate	3.169	3.077	3.101	2.814	2.725	2.977	6.6
Benzo(b)fluoranthene	* 1.216	1.317	1.478	1.622	1.503	1.427	11.2*
Benzo(k)fluoranthene	* 1.094	0.957	1.071	1.147	1.398	1.133	14.4*
Benzo(a)pyrene	* 1.118	1.098	1.176	1.214	1.221	1.165	4.8*
Indeno(1,2,3-cd)pyrene	* 0.979	1.051	1.079	1.142	1.167	1.084	6.9*
Dibenz(a,h)anthracene	* 0.928	0.928	0.952	1.093	1.057	0.991	7.8*
Benzo(g,h,i)perylene	* 1.046	1.081	1.051	1.123	1.068	1.074	2.9*
Nitrobenzene-d5	* 0.546	0.570	0.538	0.543	0.549	0.549	2.2*
2-Fluorobiphenyl	* 1.300	1.216	1.094	1.039	0.957	1.121	12.3*
Terphenyl-d14	* 0.962	1.015	0.945	1.026	1.031	0.996	4.0*
Phenol-d5	* 1.617	1.492	1.391	1.274	1.117	1.378	14.0*
2-Fluorophenol	* 1.175	1.096	1.094	1.045	1.020	1.086	5.5*
2,4,6-Tribromophenol	0.262	0.366	0.386	0.494	0.562	0.414	28.2
2-Chlorophenol-d4	* 1.340	1.242	1.135	0.966	0.855	1.108	17.8*
1,2-Dichlorobenzene-d4	* 0.954	0.850	0.759	0.717	0.683	0.792	13.8*

(1) - Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

398

Lab Name: IEA/CT

Contract:

Lab Code: IFACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5875T.D

DFTPP Injection Date: 12/16/93

Instrument ID: HP5971I

DFTPP Injection Time: 1723 ✓

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0 of mass 198	44.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	63.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 40.0 of mass 198	46.4
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0 ✓
199	5.0 to 9.0% of mass 198	5.9
275	10.0 - 30.0% of mass 198	22.8
365	Greater than 0.75 of mass 198	3.81
441	Present, but less than mass 443	10.3
442	40.0 - 110.0% of mass 198	68.6
443	15.0 - 24.0 of mass 442	13.6 (19.9)2

17.23
1-Value is % mass 69

NYSDEC 12/17/93 D-111-68
2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5875.D	12/16/93	1723
02	EB-4	1325004	I5885.D	12/17/93	0249
03	CB-1	1325005	I5886.D	12/17/93	0341
04	CB-2	1325006	I5887.D	12/17/93	0434
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

933

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/16/93 Time: 1723

Lab File ID: I5875.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times: 1034 1413

Associated Sample

EB-4

CB-1

CB-2

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.276	1.444	0.800	-13.1	25.0
bis(2-Chloroethyl) ether	1.110	1.268	0.700	-14.2	25.0
2-Chlorophenol	1.142	1.251	0.800	-9.6	25.0
1,3-Dichlorobenzene	1.320	1.391	0.600	-5.4	25.0
1,4-Dichlorobenzene	1.309	1.403	0.500	-7.2	25.0
1,2-Dichlorobenzene	1.100	1.118	0.400	-1.7	25.0
2-Methylphenol	0.942	1.034	0.700	-9.7	25.0
2,2'-oxybis(1-Chloropropane)	1.062	0.900		15.3	
4-Methylphenol	1.007	1.169	0.600	-16.0	25.0
N-Nitroso-di-n-propylamine	0.951	1.018	0.500	-7.0	25.0
Hexachloroethane	0.867	0.895	0.300	-3.3	25.0
Nitrobenzene	0.521	0.567	0.200	-8.8	25.0
Isophorone	0.990	1.052	0.400	-6.2	25.0
2-Nitrophenol	0.220	0.251	0.100	-14.3	25.0
2,4-Dimethylphenol	0.470	0.511	0.200	-8.7	25.0
bis(2-Chloroethoxy)methane	0.475	0.535	0.300	-12.6	25.0
2,4-Dichlorophenol	0.289	0.343	0.200	-18.4	25.0
1,2,4-Trichlorobenzene	0.333	0.382	0.200	-14.5	25.0
Naphthalene	0.848	1.024	0.700	-20.7	25.0
4-Chloroaniline	0.345	0.353		-2.1	
Hexachlorobutadiene	0.338	0.345		-2.0	
4-Chloro-3-methylphenol	0.397	0.450	0.200	-13.4	25.0
2-Methylnaphthalene	0.549	0.652	0.400	-18.7	25.0
Hexachlorocyclopentadiene	0.575	0.519		9.7	
2,4,6-Trichlorophenol	0.436	0.430	0.200	1.5	25.0
2,4,5-Trichlorophenol	0.432	0.466	0.200	-7.8	25.0
2-Chloronaphthalene	1.077	1.148	0.800	-6.6	25.0
2-Nitroaniline	0.580	0.573		1.2	
Dimethylphthalate	1.565	1.662		-6.2	
Acenaphthylene	1.656	1.813	1.300	-9.5	25.0
2,6-Dinitrotoluene	0.387	0.406	0.200	-5.0	25.0
3-Nitroaniline	0.235	0.156		33.6	
Acenaphthene	0.985	1.086	0.800	-10.2	25.0
2,4-Dinitrophenol	0.242	0.239		0.9	
4-Nitrophenol	0.472	0.400		15.3	
Dibenzofuran	1.505	1.655	0.800	-10.0	25.0
2,4-Dinitrotoluene	0.554	0.576	0.200	-4.1	25.0

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

937

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/16/93

Time: 1723

Lab File ID: I5875.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times:

1034

1413

COMPOUND	RRF ✓	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.864	1.936		-3.9	
4-Chlorophenyl-phenylether	0.589	0.582	0.400	1.3	25.0
Fluorene	1.119	1.207	0.900	-7.9	25.0
4-Nitroaniline	0.203	0.196		3.2	
4,6-Dinitro-2-methylphenol	0.165	0.192		-16.3	
N-Nitrosodiphenylamine (1)	0.384	0.451		-17.5	
4-Bromophenyl-phenylether	0.218	0.230	0.100	-5.7	25.0
Hexachlorobenzene	0.365	0.342	0.100	6.3	25.0
Pentachlorophenol	0.172	0.157	0.050	8.5	25.0
Phenanthrene	0.937	1.112	0.700	-18.7	25.0
Anthracene	0.932	1.085	0.700	-16.5	25.0
Carbazole	0.559	0.492		12.0	
Di-n-butylphthalate	1.675	1.912		-14.1	
Fluoranthene	0.999	1.098	0.600	-9.9	25.0
Pyrene	1.322	1.524	0.600	-15.3	25.0
Butylbenzylphthalate	1.033	1.188		-15.0	
3,3'-Dichlorobenzidine	0.260	0.224		13.7	
Benzo(a)anthracene	1.174	1.205	0.800	-2.6	25.0
Chrysene	1.020	1.055	0.700	-3.4	25.0
bis(2-Ethylhexyl)phthalate	1.294	1.461		-12.9	
Di-n-octylphthalate	2.977	3.086		-3.7	
Benzo(b)fluoranthene	1.427	1.299	0.700	9.0	25.0
Benzo(k)fluoranthene	1.133	1.073	0.700	5.3	25.0
Benzo(a)pyrene	1.165	1.092	0.700	6.3	25.0
Indeno(1,2,3-cd)pyrene	1.084	1.029	0.500	5.0	25.0
Dibenz(a,h)anthracene	0.991	0.871	0.400	12.1	25.0
Benzo(g,h,i)perylene	1.074	0.997	0.500	7.2	25.0
Nitrobenzene-d5	0.549	0.603	0.200	-9.7	25.0
2-Fluorobiphenyl	1.121	1.179	0.700	-5.1	25.0
Terphenyl-d14	0.996	0.990	0.500	0.6	25.0
Phenol-d5	1.378	1.445	0.800	-4.9	25.0
2-Fluorophenol	1.086	1.132	0.600	-4.3	25.0
2,4,6-Tribromophenol	0.414	0.363		12.1	
2-Chlorophenol-d4	1.108	1.258	0.800	-13.6	25.0
1,2-Dichlorobenzene-d4	0.792	0.847	0.400	-6.9	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

9B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

407

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5875.D

Date Analyzed: 12/16/93

Instrument ID: HP5971I

Time Analyzed: 1723 ✓

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	✓ 40348	10.01	142690	13.18	87107	17.69
UPPER LIMIT	80696	10.51	285380	13.68	174214	18.19
LOWER LIMIT	20174	9.51	71345	12.68	43554	17.19
EPA SAMPLE No.						
01 EB-4	✓ 38481	9.98	135198	13.14	71719	17.65
02 CB-1	✓ 40780	9.98	147653	13.15	78558	17.65
03 CB-2	✓ 47982	9.98	168294	13.14	90425	17.66
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IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

408

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5875.D

Date Analyzed: 12/16/93

Instrument ID: HP5971I

Time Analyzed: 1723

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓ 145360	21.44	107551	28.28	90069	32.51
UPPER LIMIT	290720	21.94	215102	28.78	180138	33.01
LOWER LIMIT	72680	20.94	53776	27.78	45034	32.01
EPA SAMPLE No.						
01 EB-4	✓ 108360	21.41	72939	28.25	55849	32.46
02 CB-1	✓ 111193	21.41	104315	28.27	88619	32.55
03 CB-2	✓ 127926	21.42	117478	28.28	102355	32.57
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IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

399

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5926T.D

DFTPP Injection Date: 12/21/93

Instrument ID: HP5971I

DFTPP Injection Time: 0917

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
(51)	30.0 - 20.0 of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	56.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
(127)	25.0 - 40-60 of mass 198	43.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0 ✓
199	5.0 to 9.0% of mass 198	5.8
275	10.0 - 30.0% of mass 198	23.1
(365)	Greater than 0.75 of mass 198	4.61
441	Present, but less than mass 443	6.6
442	40.0 - 110.0% of mass 198	57.7
(443)	15.0 - 24.0 of mass 442	11.6 (20.1)2

1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5927.D	12/21/93	1003
02	FB112493	1325012	I5929.D	12/21/93	1200
03	CB-3	1325007	I5931.D	12/21/93	1338
04	CB-4	1325008	I5932.D	12/21/93	1427
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Compliant

935

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP59711

Calibration Date: 12/21/93

Time: 1003

Lab File ID: I5927.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times: 1034

1413

Associated Sample

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.276	1.055	0.800	17.3	25.0
bis(2-Chloroethyl) ether	1.110	1.201	0.700	-8.3	25.0
2-Chlorophenol	1.142	1.164	0.800	-1.9	25.0
1,3-Dichlorobenzene	1.320	1.437	0.600	-8.9	25.0
1,4-Dichlorobenzene	1.309	1.479	0.500	-13.0	25.0
1,2-Dichlorobenzene	1.100	1.332	0.400	-21.1	25.0
2-Methylphenol	0.942	0.998	0.700	-5.9	25.0
2,2'-oxybis(1-Chloropropane)	1.062	1.347		-26.7	
4-Methylphenol	1.007	1.125	0.600	-11.6	25.0
N-Nitroso-di-n-propylamine	0.951	1.005	0.500	-5.7	25.0
Hexachloroethane	0.867	0.791	0.300	8.8	25.0
Nitrobenzene	0.521	0.468	0.200	10.1	25.0
Isophorone	0.990	0.836	0.400	15.5	25.0
2-Nitrophenol	0.220	0.249	0.100	-13.5	25.0
2,4-Dimethylphenol	0.470	0.412	0.200	12.4	25.0
bis(2-Chloroethoxy)methane	0.475	0.442	0.300	6.9	25.0
2,4-Dichlorophenol	0.289	0.336	0.200	-16.3	25.0
1,2,4-Trichlorobenzene	0.333	0.400	0.200	-19.9	25.0
Naphthalene	0.848	0.975	0.700	-15.0	25.0
4-Chloroaniline	0.345	0.409		-18.3	
Hexachlorobutadiene	0.338	0.338		0.0	
4-Chloro-3-methylphenol	0.397	0.372	0.200	6.4	25.0
2-Methylnaphthalene	0.549	0.584	0.400	-6.4	25.0
Hexachlorocyclopentadiene	0.575	0.565		1.7	
2,4,6-Trichlorophenol	0.436	0.496	0.200	-13.6	25.0
2,4,5-Trichlorophenol	0.432	0.462	0.200	-7.0	25.0
2-Chloronaphthalene	1.077	1.160	0.800	-7.7	25.0
2-Nitroaniline	0.580	0.508		12.3	
Dimethylphthalate	1.565	1.574		-0.6	
Acenaphthylene	1.656	1.866	1.300	-12.6	25.0
2,6-Dinitrotoluene	0.387	0.394	0.200	-1.9	25.0
3-Nitroaniline	0.235	0.284		-20.7	
Acenaphthene	0.985	1.071	0.800	-8.7	25.0
2,4-Dinitrophenol	0.242	0.228		5.6	
4-Nitrophenol	0.472	0.326		31.0	
Dibenzofuran	1.505	1.679	0.800	-11.6	25.0
2,4-Dinitrotoluene	0.554	0.542	0.200	2.1	25.0

FB 112493

CB-3

CB-4

✓ UJ

✓ UJ

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

931

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/21/93

Time: 1003

Lab File ID: I5927.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times: 1034 1413

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.864	1.696		9.0	
4-Chlorophenyl-phenylether	0.589	0.659	0.400	-11.8	25.0
Fluorene	1.119	1.169	0.900	-4.5	25.0
4-Nitroaniline	0.203	0.276		-36.1	
4,6-Dinitro-2-methylphenol	0.165	0.190		-15.5	
N-Nitrosodiphenylamine (1)	0.384	0.451		-17.5	
4-Bromophenyl-phenylether	0.218	0.255	0.100	-17.3	25.0
Hexachlorobenzene	0.365	0.332	0.100	9.1	25.0
Pentachlorophenol	0.172	0.197	0.050	-14.6	25.0
Phenanthrene	0.937	1.136	0.700	-21.3	25.0
Anthracene	0.932	1.117	0.700	-19.9	25.0
Carbazole	0.559	0.681		-21.8	
Di-n-butylphthalate	1.675	1.563		6.7	
Fluoranthene	0.999	0.862	0.600	13.7	25.0
Pyrene	1.322	1.751	0.600	-32.5	25.0
Butylbenzylphthalate	1.033	1.069		-3.5	
3,3'-Dichlorobenzidine	0.260	0.254		2.2	
Benzo(a)anthracene	1.174	1.188	0.800	-1.2	25.0
Chrysene	1.020	1.101	0.700	-7.9	25.0
bis(2-Ethylhexyl)phthalate	1.294	1.359		-5.0	
Di-n-octylphthalate	2.977	2.893		2.8	
Benzo(b)fluoranthene	1.427	1.256	0.700	12.0	25.0
Benzo(k)fluoranthene	1.133	1.059	0.700	6.6	25.0
Benzo(a)pyrene	1.165	1.075	0.700	7.7	25.0
Indeno(1,2,3-cd)pyrene	1.084	0.780	0.500	28.0	25.0
Dibenz(a,h)anthracene	0.991	0.761	0.400	23.2	25.0
Benzo(g,h,i)perylene	1.074	0.778	0.500	27.5	25.0
Nitrobenzene-d5	0.549	0.484	0.200	11.9	25.0
2-Fluorobiphenyl	1.121	1.186	0.700	-5.8	25.0
Terphenyl-d14	0.996	1.108	0.500	-11.2	25.0
Phenol-d5	1.378	1.283	0.800	6.9	25.0
2-Fluorophenol	1.086	1.078	0.600	0.7	25.0
2,4,6-Tribromophenol	0.414	0.213		48.6	
2-Chlorophenol-d4	1.108	1.064	0.800	4.0	25.0
1,2-Dichlorobenzene-d4	0.792	0.916	0.400	-15.6	25.0

↓ No impact, R/R

← 10/15

↓ 10/15

← 15

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

40

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5927.D

Date Analyzed: 12/21/93

Instrument ID: HP5971I

Time Analyzed: 1003 ✓

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	✓ 32260	9.70	112442	12.87	66548	17.36
UPPER LIMIT	64520	10.20	224884	13.37	133096	17.86
LOWER LIMIT	16130	9.20	56221	12.37	33274	16.86
EPA SAMPLE No.						
01 FB112493	✓ 33170	9.71	116293	12.86	68563	17.35
02 CB-3	✓ 34196	9.71	114336	12.87	73500	17.36
03 CB-4	✓ 39900	9.70	140892	12.86	73504	17.35
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IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

410

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5927.D

Date Analyzed: 12/21/93

Instrument ID: HP5971I

Time Analyzed: 1003 ✓

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓ 118855	21.09	57679	27.92	44778	31.90
UPPER LIMIT	237710	21.59	115358	28.42	89556	32.40
LOWER LIMIT	59428	20.59	28840	27.42	22389	31.40
EPA SAMPLE No.						
01 FB112493	✓ 114911	21.09	64832	27.90	47944	31.89
02 CB-3	✓ 110698	21.10	54649	27.95	40383	31.99
03 CB-4	✓ 105761	21.10	55854	27.93	40148	31.97
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IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

400

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID: I5941T.D

DFTPP Injection Date: 12/22/93

Instrument ID: HP5971I

DFTPP Injection Time: 0815

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 30.0 % of mass 198	57.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Area 69 relative abundance	64.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 40.0 % of mass 198	45.1
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	5.1
275	10.0 - 30.0% of mass 198	21.5
365	Greater than 0.75 % of mass 198	5.28
441	Present, but less than mass 443	7.0
442	40.0 - 110.0% of mass 198	54.4
443	15.0 - 24.0% of mass 442	9.4 (17.2)2

1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	I5942.D	12/22/93	0838
02	WB-1	1325009	I5946.D	12/22/93	1157
03	SDG-2DUP	1325011	I5947.D	12/22/93	1246
04	EB-2	1325002	I5948.D	12/22/93	1335
05	WB-2	1325010	I5949.D	12/22/93	1424
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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

93

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/22/93

Time: 0838

Lab File ID: I5942.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times: 1034

1413

Associated Samples

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.276	1.012	0.800	20.7	25.0
bis(2-Chloroethyl) ether	1.110	1.037	0.700	6.6	25.0
2-Chlorophenol	1.142	1.105	0.800	3.3	25.0
1,3-Dichlorobenzene	1.320	1.409	0.600	-6.7	25.0
1,4-Dichlorobenzene	1.309	1.407	0.500	-7.5	25.0
1,2-Dichlorobenzene	1.100	1.318	0.400	-19.8	25.0
2-Methylphenol	0.942	0.952	0.700	-1.0	25.0
2,2'-oxybis(1-Chloropropane)	1.062	1.252		-17.8	
4-Methylphenol	1.007	0.980	0.600	2.7	25.0
N-Nitroso-di-n-propylamine	0.951	0.926	0.500	2.6	25.0
Hexachloroethane	0.867	0.763	0.300	12.0	25.0
Nitrobenzene	0.521	0.461	0.200	11.6	25.0
Isophorone	0.990	0.823	0.400	16.9	25.0
2-Nitrophenol	0.220	0.239	0.100	-9.0	25.0
2,4-Dimethylphenol	0.470	0.410	0.200	12.9	25.0
bis(2-Chloroethoxy)methane	0.475	0.425	0.300	10.6	25.0
2,4-Dichlorophenol	0.289	0.341	0.200	-17.8	25.0
1,2,4-Trichlorobenzene	0.333	0.402	0.200	-20.5	25.0
Naphthalene	0.848	0.975	0.700	-15.0	25.0
4-Chloroaniline	0.345	0.402		-16.3	
Hexachlorobutadiene	0.338	0.365		-8.2	
4-Chloro-3-methylphenol	0.397	0.360	0.200	9.4	25.0
2-Methylnaphthalene	0.549	0.580	0.400	-5.6	25.0
Hexachlorocyclopentadiene	0.575	0.575		-0.1	
2,4,6-Trichlorophenol	0.436	0.486	0.200	-11.4	25.0
2,4,5-Trichlorophenol	0.432	0.495	0.200	-14.5	25.0
2-Chloronaphthalene	1.077	1.144	0.800	-6.3	25.0
2-Nitroaniline	0.580	0.478		17.7	
Dimethylphthalate	1.565	1.588		-1.4	
Acenaphthylene	1.656	1.802	1.300	-8.8	25.0
2,6-Dinitrotoluene	0.387	0.397	0.200	-2.5	25.0
3-Nitroaniline	0.235	0.280		-19.1	
Acenaphthene	0.985	1.061	0.800	-7.6	25.0
2,4-Dinitrophenol	0.242	0.239		1.0	
4-Nitrophenol	0.472	0.321		32.1	
Dibenzofuran	1.505	1.619	0.800	-7.6	25.0
2,4-Dinitrotoluene	0.554	0.539	0.200	2.7	25.0

WB-1
SDG-200P
EB-2
WB-2

↓ UT

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

938

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID: HP5971I

Calibration Date: 12/22/93

Time: 0838

Lab File ID: I5942.D

Init. Calibration Date(s): 12/16/93

Init. Calibration Times:

1034

1413

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.864	1.745		6.4	
4-Chlorophenyl-phenylether	0.589	0.705	0.400	-19.7	25.0
Fluorene	1.119	1.146	0.900	-2.5	25.0
4-Nitroaniline	0.203	0.313		-54.3	
4,6-Dinitro-2-methylphenol	0.165	0.197		-19.8	
N-Nitrosodiphenylamine (1)	0.384	0.454		-18.3	
4-Bromophenyl-phenylether	0.218	0.277	0.100	-27.5	25.0
Hexachlorobenzene	0.365	0.372	0.100	-1.8	25.0
Pentachlorophenol	0.172	0.212	0.050	-23.0	25.0
Phenanthrene	0.937	1.146	0.700	-22.3	25.0
Anthracene	0.932	1.028	0.700	-10.4	25.0
Carbazole	0.559	0.612		-9.5	
Di-n-butylphthalate	1.675	1.503		10.3	
Fluoranthene	0.999	0.842	0.600	15.7	25.0
Pyrene	1.322	1.476	0.600	-11.7	25.0
Butylbenzylphthalate	1.033	1.056		-2.3	
3,3'-Dichlorobenzidine	0.260	0.239		7.8	
Benzo(a)anthracene	1.174	1.229	0.800	-4.7	25.0
Chrysene	1.020	1.086	0.700	-6.4	25.0
bis(2-Ethylhexyl)phthalate	1.294	1.547		-19.5	
Di-n-octylphthalate	2.977	2.844		4.5	
Benzo(b)fluoranthene	1.427	1.268	0.700	11.2	25.0
Benzo(k)fluoranthene	1.133	0.940	0.700	17.1	25.0
Benzo(a)pyrene	1.165	1.024	0.700	12.1	25.0
Indeno(1,2,3-cd)pyrene	1.084	1.152	0.500	-6.3	25.0
Dibenz(a,h)anthracene	0.991	0.963	0.400	2.9	25.0
Benzo(g,h,i)perylene	1.074	1.153	0.500	-7.4	25.0
Nitrobenzene-d5	0.549	0.461	0.200	16.1	25.0
2-Fluorobiphenyl	1.121	1.199	0.700	-7.0	25.0
Terphenyl-d14	0.996	1.214	0.500	-21.9	25.0
Phenol-d5	1.378	1.185	0.800	14.0	25.0
2-Fluorophenol	1.086	0.975	0.600	10.3	25.0
2,4,6-Tribromophenol	0.414	0.255		38.4	
2-Chlorophenol-d4	1.108	1.047	0.800	5.5	25.0
1,2-Dichlorobenzene-d4	0.792	0.889	0.400	-12.2	25.0

↑ previously
R flagged

← ↑ UT

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA/CT

Contract:

411

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5942.D

Date Analyzed: 12/22/93

Instrument ID: HP5971I

Time Analyzed: 0838

	IS1 (DCB)	RT #	IS2 (NPT)	RT #	IS3 (ANT)	RT #
	AREA #		AREA #		AREA #	
12 HOUR STD	✓ 38001	9.59	123717	12.75	75046	17.23
UPPER LIMIT	76002	10.09	247434	13.25	150092	17.73
LOWER LIMIT	19000	9.09	61858	12.25	37523	16.73
EPA SAMPLE No.						
01 WB-1	✓ 38619	9.58	138137	12.73	86863	17.22
02 SDG-2DUP	✓ 40612	9.57	152802	12.74	88288	17.22
03 EB-2	✓ 40513	9.58	150271	12.74	85001	17.22
04 WB-2	✓ 40123	9.58	151447	12.74	81285	17.23
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

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

412

Lab Name: IEA/CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab File ID (Standard): I5942.D

Date Analyzed: 12/22/93

Instrument ID: HP5971I

Time Analyzed: 0838

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	✓134819	20.96	60847	27.75	53095	31.64
UPPER LIMIT	269638	21.46	121694	28.25	106190	32.14
LOWER LIMIT	67410	20.46	30424	27.25	26548	31.14
EPA SAMPLE No.						
01 WB-1	✓114825	20.96	64130	27.79	43246	31.77
02 SDG-2DUP	✓109579	20.96	61128	27.80	40389	31.77
03 EB-2	✓93309	20.97	68956	27.82	39764	31.81
04 WB-2	✓97505	20.98	89990	27.87	33461	31.89
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

INSTRUMENT DETECTION LIMITS

Page 1 of 2

41

Instrument I
Date: 07/29/93

UNITS: UG/L

IDL

Phenol	1
bis(2-Chloroethyl) ether	2
2-Chlorophenol	1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
Benzyl alcohol	1
1,2-Dichlorobenzene	1
2-Methylphenol	1
bis(2-Chloroisopropyl) ether	1
4-Methylphenol	1
N-Nitroso-Di-N-propylamine	1
Hexachloroethane	1
Nitrobenzene	1
Isophorone	1
2-Nitrophenol	1
2,4-Dimethylphenol	1
Benzoic acid	1
bis(2-Chloroethoxy) methane	1
2,4-Dichlorophenol	1
1,2,4-Trichlorobenzene	1
Naphthalene	1
4-Chloroaniline	8
Hexachlorobutadiene	1
4-Chloro-3-methylphenol	1
2-Methylnaphthalene	1
Hexachlorocyclopentadiene	2
2,4,6-Trichlorophenol	1
2,4,5-Trichlorophenol	3
2-Chloronaphthalene	1
2-Nitroaniline	1
Dimethylphthalate	1
Acenaphthylene	1
2,6-Dinitrotoluene	2
3-Nitroaniline	8
Acenaphthene	1
2,4-Dinitrophenol	7
4-Nitrophenol	3
Dibenzofuran	1
2,4-Dinitrotoluene	1
Diethylphthalate	1
4-Chlorophenyl-phenylether	1
Fluorene	1
4-Nitroaniline	11
4,6-Dinitro-2-methylphenol	2
N-Nitrosodiphenylamine(1)	1
4-Bromophenyl-phenylether	1
Hexachlorobenzene	1
Pentachlorophenol	2

INSTRUMENT DETECTION LIMITS

Page 2 of 2

Instrument I
Date: 07/29/93

UNITS: UG/L

IDL

Phenanthrene	1
Anthracene	1
Di-N-butylphthalate	1
Fluoranthene	1
Pyrene	1
Butylbenzylphthalate	1
3,3'-Dichlorobenzidine	2
Benzo(a)anthracene	1
Chrysene	1
bis(2-Ethylhexyl)phthalate	1
Di-N-octylphthalate	1
Benzo(b)fluoranthene	1
Benzo(k)fluoranthene	1
Benzo(a)pyrene	1
Indeno(1,2,3-cd)pyrene	1
Dibenzo(a,h)anthracene	1
Benzo(g,h,i)perylene	1
Nitrobenzene-d5	1
2-Fluorobiphenyl	1
Terphenyl-d14	1
Phenol-d5	1
2-Fluorophenol	1
2,4,6-Tribromophenol	1

IEA/CT

BNA GPC LOGBOOK GPC #1

Calibration Date: 11/29/93

Conditions

Dump: 26Collect: 23Wash: 15

Flow Rate and Column Pressure

4.5 / 10% psi5.0 / 11 psi5.0 / 11 psi5.0 / 11Date: 11/29/9311/30/9312/1/9312/2/93

Date	Client	Lab ID	Date Extr.	Pos	Lvl/Mtrx	Date	Client	Lab ID	Date Extr.	Pos	Lvl/Mtrx
		Flow chh	-	1	-	12/1/93	Blank	1130-B03	11/30/93	1	LLS
11/29/93	Blank	1118-B05	11/18/93	1	LLS			1130-B03MS		2	
	135	1252-27		2				1130-B01		3	
		-30		3				1201-B01	12/1/93	4	
		-26		4			Unisys	1325-4	11/30/93	5	
		-28		5				-3		6	
		-29		6				-3MS		7	
		-20		7				-3MSD		8	
		-22		8			Atlantic	1322-4	11/30/93	9	
		-21		9			Unisys	1325-1		10	
		1305-2		10				-5		11	
		1252-19		11				-6		12	
		-32		12				-7		13	
		-33		13				-8		14	
		1305-3		14				-9		15	
		-4		15				-11		16	
		-1		16				1325-2	12/1/93	17	
		-1MS		17				-10		18	
		-1MSD		18			Atlantic	1322-1	11/30/93	19	
11/29/93		Flow check	11/30/93	1	-			-2		20	
11/29/93	Blank	1124-B05	11/24/93	1	LLS			-3		21	
		-B05MS		2							
	11/29/93	1270-25		3		12/3/93		Flow CK		1	
		25		4				1202-B03	12/2/93	2	
		29		5				1202-B04		3	
		23		6				1322-10		4	
		30		7				19		5	
		26		8				13		6	
		24		9				6		7	
		21		10				17		8	
		21MS		11				15		9	
		21MSD		12				8		10	
		23		13				18		11	
12/1/93		Flow chh	-	1				16		12	
								14		13	

Organic Sample Preparation Log

[illegible]

Organic Sample Preparation Log

Parameter	390 BUA LLS	Ext. Meth	20-11-13 11:00	Na2SO4 Lot #	8024 KLPL	Extraction Date	7/30/93
Corr. MS/MSD	1725 003			Alumina Lot	NA	Completion Date	12/03/93
Surrogate By	DP			Reagent H2O Lot	NA	Surrogate Code	WU: 110993: P30F
Spike By	DP			H2SO4 Lot #	9VA	Spike Code	MS: 021193: P85A
Extracted By	DP			NaOH Lot #	NA		
Int. Conc By	DP						
Final Conc By	MC						

Client	IEA Sample #	Sign Out COC	Init pH/C12	Vol/Vol Extracted	Surr. Volume (ul)	Matrix Spike Volume (ul)	CU	Final Extract Volume (ml)	Soil pH	% Solids Info			Location			Comments	
										Tare Wt.	Wet Wt.	Dry Wt.	% Solids (dwt)	Ref	Tray		Slot
Blank	1130-003	NA	NA	10g	500	NA	6K	0.5ml						31	VII	9D	T
Blank	1130-004					NA											U
Blank	1130-003MSD					500											
U1545	1125-001	DP				NA			6.2	1.57	13.92	9.55	0.64				
	002									1.62	12.74						02-120193
	003								6.5	1.62	12.25	16.28	0.514				
	003MS					500											
	003MSD					500											
	004					NA											
	005								6.1	1.66	17.79	15.64	0.866				
	006								6.4	1.60	12.56	4.46	0.260				
	007								6.2	1.64	12.84	9.97	0.740				
	008								6.4	1.61	14.22	8.35	0.534				
	009								6.4	1.62	12.82	11.16	0.851				
	010								5.8	1.67	15.14	9.59	0.560				02-120193
	011								6.3	1.58	11.74						
										1.61	12.19	7.13	0.521			9F	
									</								

Organic Sample Preparation Log

[illegible]

BLANK ANALYSIS RESULTS FOR TARGET ORGANIC COMPOUNDS

Fraction	Matrix	Blank Type	Blank Sample Number	Contaminant	Concentration (units)	Evaluation Limit	
						5x	10x
Pest	A ₁	IS	PIBLK25	None detected	column DB-17C		
			PIBLK26	None detected			
			PIBLK27	None detected			
			PIBLK28	None detected			
			PIBLK29	None detected			
			PIBLK31	None detected			
			PIBLK32	None detected			
			PIBLK33	None detected			
			PIBLK34	None detected			
			PIBLK35	None detected			
			PIBLK37	None detected	column RTX-35		
			PIBLK38	None detected			
			PIBLK39	None detected			
			PIBLK41	None detected			

1 - V = Volatile, S = Semivolatile, P = Pesticide/PCE, O = Other

A₁ = Aqueous, S = Solid

2 - AS = Ambient Sample, IS = Tap Water, ES = Equipment Rinse Blank, FS = Field Blank
 B = Instrument Blank, JS = Storage Blank

3 = Extract from equipment previously analyzed supporting data

Notes: _____

Environmental Standards, Inc.



[illegible]
$$h_0 = h_{\text{outlet}}, \quad h = h_{\text{inlet}}$$

* = Interest from unimproved properties under supporting docs.

61

3F
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

116

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Matrix Spike - EPA Sample No.: EB-3

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)	20	0.0	✓ 14	70	46-127
Heptachlor	20	0.0	✓ 18	90	35-130
Aldrin	20	0.0	✓ 46	230 *	34-132
Dieldrin	41	0.0	✓ 30	73	31-134
Endrin	41	0.0	✓ 87	212 *	42-139
4,4'-DDT	41	6.6	✓ 41	84	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
gamma-BHC (Lindane)	20	✓ 14	70	0	50 46-127
Heptachlor	20	✓ 16	80	12	31 35-130
Aldrin	20	✓ 67	335 *	37	43 34-132
Dieldrin	41	✓ 28	68	7	38 31-134
Endrin	41	✓ 160	390 *	59 *	45 42-139
4,4'-DDT	41	✓ 60	130	43	50 23-134

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

* Values outside of QC limits

RPD: 1 out of 6 outside limits

Spike Recovery: 4 out of 12 outside limits

*No impact
Because of matrix
interference from HROders.*

COMMENTS: _____

3F
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

A. May 12-20-02

Name: IEA/CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: 21325
 Matrix Spike - EPA Sample No.: EB-3M2B

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS. CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)	17	0	9.9	58	46-127
Heptachlor	17	0	10	59	35-130
Aldrin	17	0	12	71	34-132
Dieldrin	33	0	28	85	31-134
Endrin	33	0	28	85	42-139
4,4'-DDT	33	0	28	85	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS	
gamma-BHC (Lindane)					RPD	REC.
Heptachlor					50	46-127
Aldrin					31	35-130
Dieldrin					43	34-132
Endrin					38	31-134
4,4'-DDT					45	42-139
					50	23-134

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

0: _____ out of _____ outside limits
 Spike Recovery: 0 out of 6 outside limits

REMARKS:

6D
PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

1377

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Instrument ID: HP58905B Level (x low): low 1 mid 4 high 16
 GC Column: DB-1701 ✓ ID: 0.53 (mm) Date(s) Analyzed: 12/07/93 12/08/93

COMPCUND	RT OF STANDARDS			MEAN RT	RT WINDOW	
	LOW	MID	HIGH		FROM	TO
alpha-BHC	✓8.09	8.10	✓8.10	8.10	8.05	8.15
beta-BHC	12.29	✓12.29	12.29	12.29	12.24	12.34
delta-BHC	✓13.26	13.26	13.27	13.26	13.21	13.31
gamma-BHC	9.44	✓9.44	9.44	9.44	9.39	9.49
Heptachlor	10.10	10.10	✓10.10	10.10	10.05	10.15
Aldrin	11.01	11.01	✓11.02	11.01	10.96	11.06
Heptachlor epoxide	13.89	13.89	13.90	13.89	13.82	13.96
Endosulfan I	✓15.30	15.30	15.30	15.30	15.23	15.37
Dieldrin	17.82	✓17.82	17.82	17.82	17.75	17.89
4,4'-DDE	✓17.09	17.09	17.10	17.09	17.02	17.16
Endrin	19.34	19.34	19.35	19.34	19.27	19.41
Endosulfan II	23.89	23.89	✓23.90	23.89	23.82	23.96
4,4'-DDD	24.10	24.09	24.10	24.10	24.03	24.17
Endosulfan sulfate	28.87	28.87	28.88	28.87	28.80	28.94
4,4'-DDT	25.25	25.24	25.25	25.25	25.18	25.32
Methoxychlor	29.58	✓29.58	✓29.59	29.58	29.51	29.65
Endrin ketone	30.93	30.93	30.94	30.93	30.86	31.00
Endrin aldehyde	✓26.85	✓26.85	26.86	26.85	26.78	26.92
alpha-Chlordane	16.16	16.16	16.17	16.16	16.09	16.23
gamma-Chlordane	15.80	✓15.80	✓15.81	15.80	15.73	15.87
Tetrachloro-m-xylene	5.21	5.21	5.21	5.21	5.16	5.26
Decachlorobiphenyl	✓35.31	35.31	35.32	35.31	35.21	35.41

* Surrogate retention times are measured from Standard Mix A analysis.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ± 0.07 minutes for all other compounds, except ± 0.10 minutes for Decachlorobiphenyl.

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Instrument ID: HP58905B Level (x low): low 1 mid 4 high 16GC Column: DB-1701 ID: 0.53 (mm) Date(s) Analyzed: 12/07/93 12/08/93

COMPOUND	CALIBRATION FACTORS			MEAN	%RSD
	LOW	MID	HIGH		
alpha-BHC	✓16524200	19610100	✓23591550	19908617	17.8
beta-BHC	13472400	✓12934750	12600050	13002400	3.4
delta-BHC	✓17448000	19367500	23038100	19951200	14.2
gamma-BHC	17539200	✓20666450	23360738	20522129	14.2
Heptachlor	22932800	22804150	✓21996600	22577850	2.2
Aldrin	17937400	19634600	✓21916362	19829454	10.1
Heptachlor epoxide	21233600	21486400	22244600	21654867	2.4
Endosulfan I	✓19177000	19497550	20580512	19751687	3.7
Dieldrin	17738000	✓19001075	20665038	19134704	7.7
4,4'-DDE	✓17982300	19234825	21282081	19499735	8.5
Endrin	16832600	17398450	18265156	17498735	4.1
Endosulfan II	19272000	19418100	✓19955500	19548533	1.8
4,4'-DDD	14591200	14806300	15632025	15009842	3.7
Endosulfan sulfate	17696100	✓18459875	19267769	18474581	4.2
4,4'-DDT	13839600	15104625	16526075	15156767	8.9
Methoxychlor	7936720	✓7678495	✓6612824	7409346	9.5
Endrin ketone	18862600	20108600	20240588	19737263	3.8
Endrin aldehyde	✓21209800	16524700	16222856	17985785	15.5
alpha-Chlordane	25592400	25283200	24965462	25280354	1.2
gamma-Chlordane	24372200	✓23740750	✓23548812	23887254	1.8
Tetrachloro-m-xylene	19648000	19685200	19119738	19484313	1.6
Decachlorobiphenyl	✓28503400	27290500	24278556	26690819	8.2

* Surrogate retention times are measured from Standard Mix A analysis.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6D
PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Instrument ID: HP58901A Level (x low): low 1 mid 4 high 16
 GC Column: RTX-35 ID: 0.53 (mm) Date(s) Analyzed: 12/09/93 12/10/93

COMPOUND	RT OF STANDARDS			MEAN RT	RT WINDOW	
	LOW	MID	HIGH		FROM	TO
alpha-BHC	16.25	16.25	16.24	16.25	16.20	16.30
beta-BHC	19.19	19.19	19.19	19.19	19.14	19.24
delta-BHC	21.19	21.20	21.20	21.20	21.15	21.25
gamma-BHC	18.63	18.63	18.62	18.63	18.58	18.68
Heptachlor	20.91	20.91	20.90	20.91	20.86	20.96
Aldrin	22.45	22.45	22.45	22.45	22.40	22.50
Heptachlor epoxide	24.61	24.61	24.61	24.61	24.54	24.68
Endosulfan I	25.81	25.81	25.81	25.81	25.74	25.88
Dieldrin	26.73	26.73	26.73	26.73	26.66	26.80
4,4'-DDE	26.51	26.51	26.51	26.51	26.44	26.58
Endrin	27.71	27.71	27.71	27.71	27.64	27.78
Endosulfan II	28.21	28.21	28.21	28.21	28.14	28.28
4,4'-DDD	28.05	28.05	28.05	28.05	27.98	28.12
Endosulfan sulfate	29.53	29.53	29.52	29.53	29.46	29.60
4,4'-DDT	28.89	28.89	28.89	28.89	28.82	28.96
Methoxychlor	31.48	31.48	31.48	31.48	31.41	31.55
Endrin ketone	32.02	32.01	32.01	32.01	31.94	32.08
Endrin aldehyde	29.04	29.04	29.04	29.04	28.97	29.11
alpha-Chlordane	25.77	25.78	25.77	25.77	25.70	25.84
gamma-Chlordane	25.27	25.28	25.27	25.27	25.20	25.34
Tetrachloro-m-xylene	12.17	12.17	12.17	12.17	12.12	12.22
Decachlorobiphenyl	39.39	39.39	39.39	39.39	39.29	39.49

* Surrogate retention times are measured from Standard Mix A analysis.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ± 0.07 minutes for all other compounds, except ± 0.10 minutes for Decachlorobiphenyl.

Compliant

1380

6E
PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Instrument ID: HP58901A Level (x low): low 1 mid 4 high 16

GC Column: RTX-35 ID: 0.53 (mm) Date(s) Analyzed: 12/09/93 12/10/93

COMPOUND	CALIBRATION FACTORS			MEAN	%RSD
	LOW	MID	HIGH		
alpha-BHC	13374400	✓11435900	10184162	11664821	13.8
beta-BHC	12623000	10618450	✓9095975	10779142	16.4
delta-BHC	13934400	✓11624500	10283888	11947596	15.4
gamma-BHC	✓14175000	12078850	✓10722975	12325608	14.1
Heptachlor	16958600	14212250	13077688	14749513	13.5
Aldrin	✓22320800	23734450	29567288	25207513	15.2
Heptachlor epoxide	15960800	13828800	13467538	14419046	9.3
Endosulfan I	12908800	✓11088500	10939638	11645646	9.4
Dieldrin	✓18002400	21017750	✓24344762	21121637	15.0
4,4'-DDE	25515700	30756225	29825331	28699085	9.7
Endrin	17036000	19666975	22821156	19841377	14.6
Endosulfan II	✓9409900	7672225	✓7316525	8132883	13.8
4,4'-DDD	15936100	14599300	13604100	14713167	8.0
Endosulfan sulfate	17221800	20383450	24603288	20736179	17.8
4,4'-DDT	19588700	22492475	24673756	22251644	11.5
Methoxychlor	✓10025620	9108215	✓8063685	9065840	10.8
Endrin ketone	8561400	✓6587325	5517338	6888688	22.4
Endrin aldehyde	✓8614600	7151550	6562062	7442737	14.2
alpha-Chlordane	23053400	✓22940900	✓25846362	23946887	6.9
gamma-Chlordane	19906200	18626400	20335488	19622696	4.5
Tetrachloro-m-xylene	23454000	24553400	26752512	24919971	6.7
Decachlorobiphenyl	25926900	24027900	23701606	24552135	4.9

* Surrogate retention times are measured from Standard Mix A analysis.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6F
PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Instrument ID: HP58905B Date(s) Analyzed: 12/07/93 12/08/93
 GC Column: DB-1701 ID: .53 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	TO	CALIBRATION FACTOR
Toxaphene ✓	0.50	*1	23.46	23.39	23.53	573496
		*2	24.03	23.96	24.10	364602
		*3	25.41	25.34	25.48	1084240
		4	27.70	27.63	27.77	857008
		5	28.28	28.21	28.35	590566
Aroclor-1016 ✓	0.10	*1	7.09	7.02	7.16	679960
		*2	8.34	8.27	8.41	1317470
		*3	9.89	9.82	9.96	2345370
		4	10.31	10.24	10.38	1182730
		5	10.66	10.59	10.73	787120
Aroclor-1221 ✓	0.20	*1	7.09	7.02	7.16	804365
		*2	8.34	8.27	8.41	203155
		*3	9.89	9.82	9.96	255480
		4	10.31	10.24	10.38	121780
		5	10.66	10.59	10.73	68465
Aroclor-1232 ✓	0.10	*1	7.09	7.02	7.16	986910
		*2	8.34	8.27	8.41	793780
		*3	9.89	9.82	9.96	1287890
		4	10.31	10.24	10.38	685080
		5	10.66	10.59	10.73	451660
Aroclor-1242 ✓	0.10	*1	7.09	7.02	7.16	597270
		*2	8.34	8.27	8.41	1115430
		*3	9.89	9.82	9.96	1933820
		4	10.31	10.24	10.38	992000
		5	10.66	10.59	10.73	665110
Aroclor-1248 ✓	0.10	*1	8.34	8.27	8.41	563120
		*2	9.88	9.81	9.95	1228770
		*3	10.31	10.24	10.38	608150
		4	11.92	11.85	11.99	1316270
		5	13.69	13.62	13.76	2770250
Aroclor-1254 ✓	0.10	*1	17.49	17.42	17.56	1836090
		*2	19.55	19.48	19.62	1555070
		*3	20.81	20.74	20.88	987570
		4	21.84	21.77	21.91	526360
		5	22.61	22.54	22.68	893160
Aroclor-1260 ✓	0.10	*1	23.79	23.72	23.86	2970950
		*2	26.33	26.26	26.40	2001320
		*3	28.24	28.17	28.31	2966420
		4	30.23	30.16	30.30	1919630
		5	33.46	33.39	33.53	842470

* Denotes required peaks

6F
PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: 21325
 Instrument ID: HP58901A Date(s) Analyzed: 12/09/93 12/10/93
 GC Column: RTX-35 ✓ ID: .53 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM TO		CALIBRATION FACTOR
Toxaphene ✓	0.50	*1	28.40	28.33	28.47	720406
		*2	29.76	29.69	29.83	444560
		*3	30.87	30.80	30.94	775734
		✓ 4	31.09	31.02	31.16	649146
		5	32.42	32.35	32.49	287118
Aroclor-1016 ✓	0.10	*1	15.82	15.75	15.89	✓ 905990
		*2	18.45	18.38	18.52	✓ 1893200
		✓ *3	20.84	20.77	20.91	✓ 3251330
		4	21.56	21.49	21.63	✓ 1272570
		5	22.13	22.06	22.20	✓ 801040
Aroclor-1221 ✓	0.20	*1	15.81	15.74	15.88	973705
		*2	18.46	18.39	18.53	417470
		✓ *3	20.84	20.77	20.91	386700
		4	21.56	21.49	21.63	127340
		5	22.12	22.05	22.19	92935
Aroclor-1232 ✓	0.10	*1	15.81	15.74	15.88	1097360
		*2	18.45	18.38	18.52	1217190
		*3	20.83	20.76	20.90	1830430
		✓ 4	21.56	21.49	21.63	717450
		5	22.12	22.05	22.19	456090
Aroclor-1242 ✓	0.10	*1	15.81	15.74	15.88	719250
		*2	18.45	18.38	18.52	1658600
		*3	20.84	20.77	20.91	2715620
		✓ 4	21.56	21.49	21.63	1054260
		5	22.12	22.05	22.19	665040
Aroclor-1248 ✓	0.10	*1	15.82	15.75	15.89	149560
		*2	18.45	18.38	18.52	811500
		✓ *3	20.83	20.76	20.90	1746930
		4	22.63	22.56	22.70	878250
		5	23.62	23.55	23.69	1403700
Aroclor-1254 ✓	0.10	*1	25.09	25.02	25.16	1369080
		*2	25.45	25.38	25.52	1655940
		✓ *3	26.63	26.56	26.70	1078620
		4	26.94	26.87	27.01	2192150
		5	27.40	27.33	27.47	2650080
Aroclor-1260 ✓	0.10	*1	27.84	27.77	27.91	✓ 2025910
		*2	30.13	30.06	30.20	✓ 1353420
		✓ *3	30.72	30.65	30.79	✓ 2435480
		4	32.40	32.33	32.47	✓ 1692950
		5	34.94	34.87	35.01	✓ 658070

* Denotes required peaks

6G
PESTICIDE ANALYTE RESOLUTION SUMMARY

1383

Lab Name: IEA-CT Contract: _____
Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column (1): DB-1701 ✓ ID: 0.53 (mm) Intstrument ID (1): HP58905B ✓
EPA Sample No. (Standard 1): RESCH3 Lab Sample ID (1): RESCH3
Date Analyzed (1): 12/07/93 ✓ Time Analyzed (1): 1140 ✓

	ANALYTE	RT	RESOLUTION (%) ✓
01	Tetrachloro-m-xylene	✓ 5.21	100.0
02	Endosulfan I	✓ 15.30	100.0
03	gamma-Chlordane	✓ 15.81	100.0
04	4,4'-DDE	✓ 17.10	100.0
05	Dieldrin	✓ 17.82	100.0
06	Endosulfan Sulfate	✓ 28.88	100.0
07	Methoxychlor	✓ 29.58	100.0
08	Endrin Ketone	✓ 30.93	100.0
09	Decachlorobiphenyl	✓ 35.32	

GC Column (2): RTX-35 ID: 0.53 (mm) Intstrument ID (2): HP58901A
EPA Sample No. (Standard 2): RESC21 Lab Sample ID (2): RESC21
Date Analyzed (2): 12/09/93 Time Analyzed (2): 1750

	ANALYTE	RT	RESOLUTION (%) ✓
01	Tetrachloro-m-xylene	✓ 12.17	100.0
02	gamma-Chlordane	✓ 25.27	100.0
03	Endosulfan I	✓ 25.81	100.0
04	4,4'-DDE	✓ 26.51	✓ 95.0
05	Dieldrin	✓ 26.73	100.0
06	Endosulfan Sulfate	✓ 29.53	100.0
07	Methoxychlor	✓ 31.48	100.0
08	Endrin Ketone	✓ 32.02	100.0
09	Decachlorobiphenyl	✓ 39.39	

Resolution of two adjacent peaks must be calculated as a percentage of the height of the smaller peak, and must be greater than or equal to 60.0%.

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325GC Column: DB-1701 ✓ ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): _____ Date Analyzed : _____

Lab Sample No. (PIBLK): _____ Time Analyzed : _____

EPA Sample No. (PEM): PEML6 Date Analyzed : 12/07/93 ✓Lab Sample No. (PEM): PEML6 Time Analyzed : 1233 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD AD
alpha-BHC	8.10	8.05	8.15	✓ 0.009	0.010	10.00
beta-BHC	12.29	12.24	12.34	✓ 0.011	0.010	10.0
gamma-BHC (Lindane)	9.44	9.39	9.49	✓ 0.009	0.010	10.0
Endrin	19.35	19.27	19.41	✓ 0.048	0.050	4.0
4,4'-DDT	25.25	25.18	25.32	✓ 0.104	0.100	4.0
Methoxychlor	29.59	29.51	29.65	✓ 0.217	0.250	13.2

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 2.8Combined breakdown (1) : 2.8 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKZ5 Date Analyzed : 12/08/93

Lab Sample No. (PIBLK): PIBLKZ5 Time Analyzed : 0056

EPA Sample No. (PEM): PEML7 Date Analyzed : 12/08/93

Lab Sample No. (PEM): PEML7 Time Analyzed : 0149

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	✓ 8.10	8.05	8.15	✓ 0.009	0.010	10.0
beta-BHC	✓ 12.29	12.24	12.34	✓ 0.011	0.010	10.0
gamma-BHC (Lindane)	✓ 9.44	9.39	9.49	✓ 0.009	0.010	10.0
Endrin	✓ 19.35	19.27	19.41	✓ 0.050	0.050	0.0
4,4'-DDT	✓ 25.25	25.18	25.32	✓ 0.111	0.100	11.0
Methoxychlor	✓ 29.59	29.51	29.65	✓ 0.241	0.250	3.6

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 0.0

Combined breakdown (1) : 0.0 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93
 EPA Sample No. (PIBLK): PIBLKZ7 Date Analyzed : 12/08/93
 Lab Sample No. (PIBLK): PIBLKZ7 Time Analyzed : 2143
 EPA Sample No. (PEM): PEML8 Date Analyzed : 12/08/93
 Lab Sample No. (PEM): PEML8 Time Analyzed : 2237

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.09	8.05	8.15	✓ 0.009	0.010	10.0
beta-BHC	12.28	12.24	12.34	0.010	0.010	0.0
gamma-BHC (Lindane)	9.44	9.39	9.49	0.008	0.010	20.0
Endrin	✓ 19.33	19.27	19.41	✓ 0.046	0.050	8.0
4,4'-DDT	25.23	25.18	25.32	0.086	0.100	14.0
Methoxychlor	✓ 29.58	29.51	29.65	✓ 0.214	0.250	14.4

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 0.0
 Combined breakdown (1) : 0.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%
 4,4'-DDT breakdown must be less than or equal to 20.0%
 Endrin breakdown must be less than or equal to 20.0%
 Combined breakdown must be less than or equal to 30.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93EPA Sample No. (PIBLK): PIBLKZ9 Date Analyzed : 12/09/93 ✓Lab Sample No. (PIBLK): PIBLKZ9 Time Analyzed : 1709 ✓EPA Sample No. (PEM): PEMLP9 Date Analyzed : 12/09/93 ✓Lab Sample No. (PEM): PEMLP9 Time Analyzed : 1804 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.10	8.05	8.15	0.009	0.010	10.0
beta-BHC	12.29	12.24	12.34	0.010	0.010	0.0
gamma-BHC (Lindane)	9.44	9.39	9.49	0.009	0.010	10.0
Endrin	19.34	19.27	19.41	0.048	0.050	4.0
4,4'-DDT	25.25	25.18	25.32	0.104	0.100	4.0
Methoxychlor	29.59	29.51	29.65	0.228	0.250	8.8

4,4'-DDT breakdown (1) : 0.0Endrin breakdown (1) : 0.0Combined breakdown (1) : 0.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKA2 Date Analyzed : 12/10/93 ✓

Lab Sample No. (PIBLK): PIBLKA2 Time Analyzed : 1551 ✓

EPA Sample No. (PEM): PEM01 Date Analyzed : 12/10/93 ✓

Lab Sample No. (PEM): PEM01 Time Analyzed : 1748 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.09	8.05	8.15	0.009	0.010	10.0
beta-BHC	✓12.29	12.24	12.34	✓0.010	0.010	0.0
gamma-BHC (Lindane)	9.44	9.39	9.49	0.008	0.010	20.0
Endrin	✓19.35	19.27	19.41	✓0.047	0.050	6.0
4,4'-DDT	✓25.25	25.18	25.32	✓0.108	0.100	8.0
Methoxychlor	29.58	29.51	29.65	0.236	0.250	5.6

4,4'-DDT breakdown (1) : 1.4 Endrin breakdown (1) : 0.0

Combined breakdown (1) : 1.4 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKA4 Date Analyzed: 12/11/93 ✓

Lab Sample No. (PIBLK): PIBLKA4 Time Analyzed: 1335 ✓

EPA Sample No. (PEM): PEMQ2 Date Analyzed: 12/11/93 ✓

Lab Sample No. (PEM): PEMQ2 Time Analyzed: 1428 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC ✓	8.10	8.05	8.15	✓0.010	0.010	0.0
beta-BHC	12.29	12.24	12.34	0.012	0.010	20.0
gamma-BHC (Lindane)	9.45	9.39	9.49	0.010	0.010	0.0
Endrin ✓	19.36	19.27	19.41	✓0.054	0.050	8.0
4,4'-DDT ✓	25.26	25.18	25.32	✓0.110	0.100	10.0
Methoxychlor	29.59	29.51	29.65	0.230	0.250	8.0

4,4'-DDT breakdown (1) : 1.0 Endrin breakdown (1) : 0.0

Combined breakdown (1) : 1.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325GC Column: RTX-35 ✓ ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): _____ Date Analyzed : _____

Lab Sample No. (PIBLK): _____ Time Analyzed : _____

EPA Sample No. (PEM): PEM05 Date Analyzed : 12/09/93 ✓Lab Sample No. (PEM): PEM05 Time Analyzed : 1843 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT 'ng)	NOM AMOUNT (ng)	RPD ✓
alpha-BHC	✓16.24	16.20	16.30	✓0.011	0.010	10.0
beta-BHC	19.19	19.14	19.24	0.010	0.010	0.0
gamma-BHC (Lindane)	✓18.62	18.58	18.68	✓0.011	0.010	10.0
Endrin	27.71	27.64	27.78	0.049	0.050	2.0
4,4'-DDT	✓28.89	28.82	28.96	✓0.105	0.100	5.0
Methoxychlor	31.48	31.41	31.55	0.229	0.250	8.4

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 8.0Combined breakdown (1) : 8.0 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK27 Date Analyzed : 12/10/93

Lab Sample No. (PIBLK): PIBLK27 Time Analyzed : 0712

EPA Sample No. (PEM): PEM07 Date Analyzed : 12/10/93 ✓

Lab Sample No. (PEM): PEM07 Time Analyzed : 0805 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD ✓
alpha-BHC	✓ 16.24	16.20	16.30	✓ 0.011	0.010	10.0
beta-BHC	19.19	19.14	19.24	0.010	0.010	0.0
gamma-BHC (Lindane)	18.62	18.58	18.68	0.011	0.010	10.0
Endrin	✓ 27.71	27.64	27.78	✓ 0.051	0.050	2.0
4,4'-DDT	✓ 28.89	28.82	28.96	✓ 0.108	0.100	8.0
Methoxychlor	31.48	31.41	31.55	0.237	0.250	5.2

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 8.8

Combined breakdown (1) : 8.8 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK35 Date Analyzed : 12/13/93

Lab Sample No. (PIBLK): PIBLK35 Time Analyzed : 1050

EPA Sample No. (PEM): PEM11 Date Analyzed : 12/13/93 ✓

Lab Sample No. (PEM): PEM11 Time Analyzed : 1143 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NCM AMOUNT (ng)	RPD
alpha-BHC	16.26	16.20	16.30	0.010	0.010	0.0
beta-BHC	19.21	19.14	19.24	0.009	0.010	10.0
gamma-BHC (Lindane)	✓ 18.65	18.58	18.68	✓ 0.009	0.010	10.0
Endrin	27.73	27.64	27.78	0.046	0.050	8.0
4,4'-DDT	28.91	28.82	28.96	0.100	0.100	0.0
Methoxychlor	✓ 31.50	31.41	31.55	✓ 0.205	0.250	18.0

4,4'-DDT breakdown (1) : 0.0 Endrin breakdown (1) : 6.2

Combined breakdown (1) : 6.2 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

1393

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK39 Date Analyzed : 12/14/93 ✓
 Lab Sample No. (PIBLK): PIBLK39 Time Analyzed : 1142 ✓
 EPA Sample No. (PFM): PEM13 Date Analyzed : 12/14/93 ✓
 Lab Sample No. (PEM): PEM13 Time Analyzed : 1335 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	✓16.27	16.20	16.30	✓0.012	0.010	20.0
beta-BHC	19.22	19.14	19.24	0.011	0.010	10.0
gamma-BHC (Lindane)	18.65	18.58	18.68	0.011	0.010	10.0
Endrin	✓27.73	27.64	27.78	✓0.045	0.050	10.0
4,4'-DDT	28.91	28.82	28.96	0.085	0.100	15.0
Methoxychlor	✓31.50	31.41	31.55	✓0.206	0.250	17.6

4,4'-DDT breakdown (1) : 1.8 Endrin breakdown (1) : 3.7
 Combined breakdown (1) : 5.5 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%
 4,4'-DDT breakdown must be less than or equal to 20.0%
 Endrin breakdown must be less than or equal to 20.0%
 Combined breakdown must be less than or equal to 30.0%

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK41 Date Analyzed : 12/15/93 ✓
 Lab Sample No. (PIBLK): PIBLK41 Time Analyzed : 0825 ✓
 EPA Sample No. (PEM): PEM15 Date Analyzed : 12/15/93 ✓
 Lab Sample No. (PEM): PEM15 Time Analyzed : 1209 ✓

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	16.28	16.20	16.30	0.012	0.010	20.0
beta-BHC	✓ 19.23	19.14	19.24	✓ 0.011	0.010	10.0
gamma-BHC (Lindane)	18.66	18.58	18.68	0.011	0.010	10.0
Endrin	✓ 27.74	27.64	27.78	✓ 0.045	0.050	10.0
4,4'-DDT	✓ 28.92	28.82	28.96	✓ 0.081	0.100	19.0
Methoxychlor	31.52	31.41	31.55	0.195	0.250	22.0

4,4'-DDT breakdown (1) : 2.5 Endrin breakdown (1) : 13.2
 Combined breakdown (1) : 15.7 ✓

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%
 4,4'-DDT breakdown must be less than or equal to 20.0%
 Endrin breakdown must be less than or equal to 20.0%
 Combined breakdown must be less than or equal to 30.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93EPA Sample No. (PIBLK): PIBLK45 Date Analyzed : 12/16/93Lab Sample No. (PIBLK): PIBLK45 Time Analyzed : 0716EPA Sample No. (PEM): PEM17 Date Analyzed : 12/16/93Lab Sample No. (PEM): PEM17 Time Analyzed : 1058

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	✓16.26	16.20	16.30	✓0.012	0.010	20.0
beta-BHC	19.21	19.14	19.24	0.011	0.010	10.0
gamma-BHC (Lindane)	✓18.65	18.58	18.68	✓0.011	0.010	10.0
Endrin	27.73	27.64	27.78	0.039	0.050	22.0
4,4'-DDT	28.92	28.82	28.96	0.086	0.100	14.0
Methoxychlor	✓31.50	31.41	31.55	✓0.193	0.250	22.8

4,4'-DDT breakdown (1) : 3.4 / Endrin breakdown (1) : 9.7Combined breakdown (1) : 13.1

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

Combined breakdown must be less than or equal to 30.0%

7E

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKZ6 Date Analyzed: 12/08/93 ✓

Lab Sample No. (PIBLK): PIBLKZ6 Time Analyzed: 1132 ✓

EPA Sample No. (INDA): INDAMU1 Date Analyzed: 12/08/93 ✓

Lab Sample No. (INDA): INDAMU1 Time Analyzed: 1432 ✓

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.10	8.05	8.15	0.020	0.020	0.0
gamma-BHC (Lindane)	9.44	9.39	9.49	0.019	0.020	5.0
Heptachlor	10.10	10.05	10.15	0.018	0.020	10.0
Endosulfan I	15.30	15.23	15.37	0.018	0.020	10.0
Dieldrin	17.83	17.75	17.89	0.036	0.040	10.0
Endrin	19.35	19.27	19.41	0.037	0.040	7.5
4,4'-DDD	24.10	24.03	24.17	0.038	0.040	5.0
4,4'-DDT	25.25	25.18	25.32	0.037	0.040	7.5
Methoxychlor	29.59	29.51	29.65	0.189	0.200	5.5
Tetrachloro-m-xylene	5.21	5.16	5.26	0.020	0.020	0.0
Decachlorobiphenyl	35.32	35.21	35.41	0.030	0.040	25.0

EPA Sample No. (INDB): INDBMU1 Date Analyzed: 12/08/93

Lab Sample No. (INDB): INDBMU1 Time Analyzed: 1525

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	12.29	12.24	12.34	0.018	0.020	10.0
delta-BHC	13.27	13.21	13.31	0.018	0.020	10.0
Aldrin	11.01	10.96	11.06	0.018	0.020	10.0
Heptachlor Epoxide	13.89	13.82	13.96	0.018	0.020	10.0
4,4'-DDE	17.10	17.02	17.16	0.037	0.040	7.5
Endosulfan II	23.90	23.82	23.96	0.036	0.040	10.0
Endosulfan Sulfate	28.88	28.80	28.94	0.035	0.040	12.5
Endrin Ketone	30.93	30.86	31.00	0.035	0.040	12.5
Endrin Aldehyde	26.86	26.78	26.92	0.040	0.040	0.0
alpha-Chlordane	16.17	16.09	16.23	0.018	0.020	10.0
gamma-Chlordane	15.81	15.73	15.87	0.017	0.020	15.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.020	0.020	0.0
Decachlorobiphenyl	35.32	35.21	35.41	0.036	0.040	10.0

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKZ8 Date Analyzed: 12/09/93 ✓

Lab Sample No. (PIBLK): PIBLKZ8 Time Analyzed: 0547 ✓

EPA Sample No. (INDA): INDAMU2 Date Analyzed: 12/09/93 ✓

Lab Sample No. (INDA): INDAMU2 Time Analyzed: 0640 ✓

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.11	8.05	8.15	0.019	0.020	5.0
gamma-BHC (Lindane)	9.45	9.39	9.49	0.019	0.020	5.0
Heptachlor	10.11	10.05	10.15	0.018	0.020	10.0
Endosulfan I	15.32	15.23	15.37	0.018	0.020	10.0
Dieldrin	17.84	17.75	17.89	0.036	0.040	10.0
Endrin	19.37	19.27	19.41	0.038	0.040	5.0
4,4'-DDD	24.11	24.03	24.17	0.039	0.040	2.5
4,4'-DDT	25.26	25.18	25.32	0.036	0.040	10.0
Methoxychlor	29.60	29.51	29.65	0.196	0.200	2.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.019	0.020	5.0
Decachlorobiphenyl	35.33	35.21	35.41	0.032	0.040	20.0

EPA Sample No. (INDB): INDBMU2 Date Analyzed: 12/09/93

Lab Sample No. (INDB): INDBMU2 Time Analyzed: 0733

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	12.30	12.24	12.34	0.019	0.020	5.0
delta-BHC	13.28	13.21	13.31	0.019	0.020	5.0
Aldrin	11.03	10.96	11.06	0.019	0.020	5.0
Heptachlor Epoxide	13.91	13.82	13.96	0.018	0.020	10.0
4,4'-DDE	17.12	17.02	17.16	0.039	0.040	2.5
Endosulfan II	23.91	23.82	23.96	0.036	0.040	10.0
Endosulfan Sulfate	28.89	28.80	28.94	0.035	0.040	12.5
Endrin Ketone	30.95	30.86	31.00	0.035	0.040	12.5
Endrin Aldehyde	26.87	26.78	26.92	0.038	0.040	5.0
alpha-Chlordane	16.18	16.09	16.23	0.018	0.020	10.0
gamma-Chlordane	15.83	15.73	15.87	0.017	0.020	15.0
Tetrachloro-m-xylene	5.22	5.16	5.26	0.021	0.020	5.0
Decachlorobiphenyl	35.33	35.21	35.41	0.035	0.040	12.5

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKA1 Date Analyzed: 12/10/93 ✓

Lab Sample No. (PIELK): PIBLKA1 Time Analyzed: 0452 ✓

EPA Sample No. (INDA): INDAMU3 Date Analyzed: 12/10/93 ✓

Lab Sample No. (INDA): INDAMU3 Time Analyzed: 0546 ✓

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.10	8.05	8.15	0.020	0.020	0.0
gamma-BHC (Lindane)	9.45	9.39	9.49	0.020	0.020	0.0
Heptachlor	10.11	10.05	10.15	0.018	0.020	10.0
Endosulfan I	15.30	15.23	15.37	0.018	0.020	10.0
Dieldrin	17.83	17.75	17.89	0.037	0.040	7.5
Endrin	19.36	19.27	19.41	0.039	0.040	2.5
4,4'-DDD	24.10	24.03	24.17	0.042	0.040	5.0
4,4'-DDT	25.25	25.18	25.32	0.041	0.040	2.5
Methoxychlor	29.59	29.51	29.65	0.192	0.200	4.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.019	0.020	5.0
Decachlorobiphenyl	35.32	35.21	35.41	0.036	0.040	10.0

EPA Sample No. (INDB): INDBMU3 Date Analyzed: 12/10/93 ✓

Lab Sample No. (INDB): INDBMU3 Time Analyzed: 0827 ✓

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	12.29	12.24	12.34	0.023	0.020	15.0
delta-BHC	13.27	13.21	13.31	0.021	0.020	5.0
Aldrin	11.01	10.96	11.06	0.021	0.020	5.0
Heptachlor Epoxide	13.89	13.82	13.96	0.018	0.020	10.0
4,4'-DDE	17.09	17.02	17.16	0.040	0.040	0.0
Endosulfan II	23.89	23.82	23.96	0.036	0.040	10.0
Endosulfan Sulfate	28.87	28.80	28.94	0.035	0.040	12.5
Endrin Ketone	30.93	30.86	31.00	0.037	0.040	7.5
Endrin Aldehyde	26.85	26.78	26.92	0.039	0.040	2.5
alpha-Chlordane	16.16	16.09	16.23	0.018	0.020	10.0
gamma-Chlordane	15.81	15.73	15.87	0.017	0.020	15.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.022	0.020	10.0
Decachlorobiphenyl	35.32	35.21	35.41	0.035	0.040	12.5

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: .53 (mm) Init: Calib Date(s): 12/07/93 12/08/93

EPA Sample No. (PIBLK): PIBLKA3 Date Analyzed: 12/11/93

Lab Sample No. (PIBLK): PIBLKA3 Time Analyzed: 0352

EPA Sample No. (INDA): INDAMU4 Date Analyzed: 12/11/93

Lab Sample No. (INDA): INDAMU4 Time Analyzed: 0445

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.10	8.05	8.15	0.022	0.020	10.0
gamma-BHC (Lindane)	9.45	9.39	9.49	0.022	0.020	10.0
Heptachlor	10.11	10.05	10.15	0.018	0.020	10.0
Endosulfan I	15.31	15.23	15.37	0.019	0.020	5.0
Dieldrin	17.83	17.75	17.89	0.040	0.040	0.0
Endrin	19.35	19.27	19.41	0.041	0.040	2.5
4,4'-DDD	24.10	24.03	24.17	0.045	0.040	12.5
4,4'-DDT	25.25	25.18	25.32	0.044	0.040	10.0
Methoxychlor	29.59	29.51	29.65	0.197	0.200	1.5
Tetrachloro-m-xylene	5.21	5.16	5.26	0.021	0.020	5.0
Decachlorobiphenyl	35.33	35.21	35.41	0.042	0.040	5.0

EPA Sample No. (INDB): INDBMU4 Date Analyzed: 12/11/93

Lab Sample No. (INDB): INDBMU4 Time Analyzed: 0538

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	12.30	12.24	12.34	0.024	0.020	20.0
delta-BHC	13.27	13.21	13.31	0.023	0.020	15.0
Aldrin	11.02	10.96	11.06	0.022	0.020	10.0
Heptachlor Epoxide	13.90	13.82	13.96	0.019	0.020	5.0
4,4'-DDE	17.11	17.02	17.16	0.043	0.040	7.5
Endosulfan II	23.91	23.82	23.96	0.038	0.040	5.0
Endosulfan Sulfate	28.88	28.80	28.94	0.037	0.040	7.5
Endrin Ketone	30.94	30.86	31.00	0.040	0.040	0.0
Endrin Aldehyde	26.86	26.78	26.92	0.041	0.040	2.5
alpha-Chlordane	16.18	16.09	16.23	0.019	0.020	5.0
gamma-Chlordane	15.82	15.73	15.87	0.018	0.020	10.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.024	0.020	20.0
Decachlorobiphenyl	35.33	35.21	35.41	0.042	0.040	5.0

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325GC Column: DB-1701 ID: .53 (mm) Init. Calib Date(s): 12/07/93 12/08/93EPA Sample No.(PIBLK): PIBLKA5 Date Analyzed : 12/11/93 /Lab Sample No.(PIBLK): PIBLKA5 Time Analyzed : 2039 /EPA Sample No.(INDA): INDAMU5 Date Analyzed : 12/11/93 /Lab Sample No.(INDA): INDAMU5 Time Analyzed : 2132 /

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	8.10	8.05	8.15	0.022	0.020	10.0
gamma-BHC (Lindane)	9.45	9.39	9.49	0.022	0.020	10.0
Heptachlor	10.11	10.05	10.15	0.019	0.020	5.0
Endosulfan I	15.31	15.23	15.37	0.020	0.020	0.0
Dieldrin	17.83	17.75	17.89	0.040	0.040	0.0
Endrin	19.36	19.27	19.41	0.042	0.040	5.0
4,4'-DDD	24.10	24.03	24.17	0.043	0.040	7.5
4,4'-DDT	25.26	25.18	25.32	0.041	0.040	2.5
Methoxychlor	29.59	29.51	29.65	0.191	0.200	4.5
Tetrachloro-m-xylene	5.21	5.16	5.26	0.021	0.020	5.0
Decachlorobiphenyl	35.32	35.21	35.41	0.037	0.040	7.5

EPA Sample No.(INDB): INDBMU5 Date Analyzed : 12/11/93 /Lab Sample No.(INDB): INDBMU5 Time Analyzed : 2225 /

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	12.30	12.24	12.34	0.024	0.020	20.0
delta-BHC	13.27	13.21	13.31	0.022	0.020	10.0
Aldrin	11.02	10.96	11.06	0.022	0.020	10.0
Heptachlor Epoxide	13.90	13.82	13.96	0.019	0.020	5.0
4,4'-DDE	17.11	17.02	17.16	0.043	0.040	7.5
Endosulfan II	23.91	23.82	23.96	0.039	0.040	2.5
Endosulfan Sulfate	28.88	28.80	28.94	0.037	0.040	7.5
Endrin Ketone	30.94	30.86	31.00	0.040	0.040	0.0
Endrin Aldehyde	26.86	26.78	26.92	0.041	0.040	2.5
alpha-Chlordane	16.17	16.09	16.23	0.020	0.020	0.0
gamma-Chlordane	15.82	15.73	15.87	0.019	0.020	5.0
Tetrachloro-m-xylene	5.21	5.16	5.26	0.024	0.020	20.0
Decachlorobiphenyl	35.32	35.21	35.41	0.038	0.040	5.0

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

1401

Lab Name: IEA-CT Contract: _____
Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK37 Date Analyzed: 12/13/93 /

Lab Sample No. (PIBLK): PIBLK37 Time Analyzed: 2312 /

EPA Sample No. (INDA): INDAM89 Date Analyzed: 12/14/93 /

Lab Sample No. (INDA): INDAM89 Time Analyzed: 0059 /

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	16.26	16.20	16.30	0.020	0.020	0.0
gamma-BHC (Lindane)	18.64	18.58	18.68	0.020	0.020	0.0
Heptachlor	20.92	20.86	20.96	0.020	0.020	0.0
Endosulfan I	25.82	25.74	25.88	0.020	0.020	0.0
Dieldrin	26.75	26.66	26.80	0.043	0.040	7.5
Endrin	27.73	27.64	27.78	0.043	0.040	7.5
4,4'-DDD	28.07	27.98	28.12	0.040	0.040	0.0
4,4'-DDT	28.91	28.82	28.96	0.040	0.040	0.0
Methoxychlor	31.50	31.41	31.55	0.197	0.200	1.5
Tetrachloro-m-xylene	12.18	12.12	12.22	0.021	0.020	5.0
Decachlorobiphenyl	39.44	39.29	39.49	0.041	0.040	2.5

EPA Sample No. (INDB): INDBM89 Date Analyzed: 12/14/93 /

Lab Sample No. (INDB): INDBM89 Time Analyzed: 0152 /

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	19.21	19.14	19.24	0.020	0.020	0.0
delta-BHC	21.21	21.15	21.25	0.021	0.020	5.0
Aldrin	22.47	22.40	22.50	0.021	0.020	5.0
Heptachlor Epoxide	24.62	24.54	24.68	0.020	0.020	0.0
4,4'-DDE	26.52	26.44	26.58	0.042	0.040	5.0
Endosulfan II	28.23	28.14	28.28	0.035	0.040	12.5
Endosulfan Sulfate	29.55	29.46	29.60	0.042	0.040	5.0
Endrin Ketone	32.04	31.94	32.08	0.035	0.040	12.5
Endrin Aldehyde	29.06	28.97	29.11	0.038	0.040	5.0
alpha-Chlordane	25.79	25.70	25.84	0.021	0.020	5.0
gamma-Chlordane	25.29	25.20	25.34	0.021	0.020	5.0
Tetrachloro-m-xylene	12.18	12.12	12.22	0.024	0.020	20.0
Decachlorobiphenyl	39.43	39.29	39.49	0.041	0.040	2.5

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: RTX-35 ID: .53 (mm) Init. Calib Date(s): 12/09/93 12/10/93

EPA Sample No. (PIBLK): PIBLK43 Date Analyzed: 12/15/93 ✓

Lab Sample No. (PIBLK): PIBLK43 Time Analyzed: 2223 ✓

EPA Sample No. (INDA): INDAM91 Date Analyzed: 12/16/93 ✓

Lab Sample No. (INDA): INDAM91 Time Analyzed: 0103 ✓

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
alpha-BHC	16.26	16.20	16.30	0.023	0.020	15.0
gamma-BHC (Lindane)	18.64	18.58	18.68	0.023	0.020	15.0
Heptachlor	✓ 20.92	20.86	20.96	✓ 0.022	0.020	10.0
Endosulfan I	25.83	25.74	25.88	0.024	0.020	20.0
Dieldrin	✓ 26.75	26.66	26.80	✓ 0.042	0.040	5.0
Endrin	27.73	27.64	27.78	0.033	0.040	17.5
4,4'-DDD	28.07	27.98	28.12	0.041	0.040	2.5
4,4'-DDT	28.91	28.82	28.96	0.031	0.040	22.5
Methoxychlor	✓ 31.50	31.41	31.55	✓ 0.164	0.200	18.0
Tetrachloro-m-xylene	12.18	12.12	12.22	0.022	0.020	10.0
Decachlorobiphenyl	39.44	39.29	39.49	0.038	0.040	5.0

EPA Sample No. (INDB): INDBM91 Date Analyzed: 12/16/93 ✓

Lab Sample No. (INDB): INDBM91 Time Analyzed: 0156 ✓

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
beta-BHC	19.21	19.14	19.24	0.022	0.020	10.0
delta-BHC	✓ 21.22	21.15	21.25	✓ 0.021	0.020	5.0
Aldrin	22.47	22.40	22.50	0.021	0.020	5.0
Heptachlor Epoxide	24.63	24.54	24.68	0.023	0.020	15.0
4,4'-DDE	26.53	26.44	26.58	0.039	0.040	2.5
Endosulfan II	✓ 28.23	28.14	28.28	✓ 0.045	0.040	12.5
Endosulfan Sulfate	29.55	29.46	29.60	0.036	0.040	10.0
Endrin Ketone	32.04	31.94	32.08	0.042	0.040	5.0
Endrin Aldehyde	29.07	28.97	29.11	0.047	0.040	17.5
alpha-Chlordane	25.80	25.70	25.84	0.020	0.020	0.0
gamma-Chlordane	✓ 25.30	25.20	25.34	✓ 0.021	0.020	5.0
Tetrachloro-m-xylene	12.18	12.12	12.22	0.024	0.020	20.0
Decachlorobiphenyl	39.44	39.29	39.49	0.038	0.040	5.0

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

3D
PESTICIDE ANALYTICAL SEQUENCE

1403

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: 0.53(mm) Init. Calib. Date(s): 12/07/93 12/08/93

Instrument ID: HP58905B

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION TCX: <u>5.21</u> DCB: <u>35.31</u>						
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT	#	DCB RT
01	RESCH3	RESCH3	12/07/93 1140 ✓	5.21		35.32
02	PEML6	PEML6	12/07/93 1233 ✓	5.21		35.32
03	AR1660L2	AR1660L2	12/07/93 1326 ✓	5.21		35.32
04	AR1221K5	AR1221K5	12/07/93 1419 ✓	5.21		35.32
05	AR1232K5	AR1232K5	12/07/93 1512 ✓	5.21		35.32
06	AR1242L2	AR1242L2	12/07/93 1605 ✓	5.21		35.31
07	AR1248L2	AR1248L2	12/07/93 1658 ✓	5.21		35.31
08	AR1254L2	AR1254L2	12/07/93 1751 ✓	5.21		35.32
09	TOXAPHH1	TOXAPHH1	12/07/93 1844 ✓	5.21		35.31
10	INDALH1	INDALH1	12/07/93 1937 ✓	5.21		35.31
11	INDBLH1	INDBLH1	12/07/93 2030 ✓	5.21		35.31
12	INDAMT9	INDAMT9	12/07/93 2123 ✓	5.21		35.31
13	INDBMT9	INDBMT9	12/07/93 2217 ✓	5.21		35.31
14	INDAHK3	INDAHK3	12/07/93 2310 ✓	5.21		35.32
15	INDBHK3	INDBHK3	12/08/93 0003 ✓	5.21		35.32
16	PIBLKZ5	PIBLKZ5	12/08/93 0056 ✓	5.21		35.32
17	PEML7	PEML7	12/08/93 0149 ✓	5.21		35.32
18	PBLK64	1130-B09	12/08/93 0335 ✓	5.22		35.33
19	F.B. 112493	1325012	12/08/93 0428	5.22		35.33
20	PBLK66	1201-B03	12/08/93 0521 ✓	5.22		35.33
21	EB-3MSB	1325003MSB	12/08/93 0614	5.22		35.33
22	EB-1	1325001	12/08/93 0707	5.22		*
23	EB-2	1325002	12/08/93 0800	5.22		*
24	EB-3	1325003	12/08/93 0853 ✓	5.22		35.35
25	EB-3MS	1325003MS	12/08/93 0946 ✓	5.21		*
26	PIBLKZ6	PIBLKZ6	12/08/93 1132 ✓	5.21		35.32
27	INDAMU1	INDAMU1	12/08/93 1432 ✓	5.21		35.32
28	INDBMU1	INDBMU1	12/08/93 1525 ✓	5.21		35.32
29	EB-3MSD	1325003MSD	12/08/93 1619	5.21		*
30	EB-4	1325004	12/08/93 1714	5.21		35.32
31	CB-1	1325005	12/08/93 1807	5.22		*
32	CB-2	1325006	12/08/93 1902	5.21		*

QC LIMITS
TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)
DCB = Decachlorobiphenyl (+ 0.10 MINUTES)

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

8D
PESTICIDE ANALYTICAL SEQUENCE

1404

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: 0.53(mm) Init. Calib. Date(s): 12/07/93 12/08/93

Instrument ID: HP58905B

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION TCX: <u>5.21</u> DCB: <u>35.31</u>						
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT	#	DCB RT
01	CB-3	1325007	12/08/93	1955		*
02	PIBLKZ7	PIBLKZ7	12/08/93	2143	✓	35.32
03	PEML8	PEML8	12/08/93	2237	✓	35.31
04	CB-4	1325008	12/08/93	2331		*
05	WB-1	1325009	12/09/93	0024		*
06	WB-2	1325010	12/09/93	0118		*
07	SDG-2 DUP	1325011	12/09/93	0212		*
08	EB-2DL	1325002DL	12/09/93	0306		*
09	PIBLKZ8	PIBLKZ8	12/09/93	0547	✓	35.33
10	INDAMU2	INDAMU2	12/09/93	0640	✓	35.33
11	INDBMU2	INDBMU2	12/09/93	0733	✓	35.33
12	PIBLKZ9	PIBLKZ9	12/09/93	1709		35.31
13	PEMLP9	PEMLP9	12/09/93	1804	✓	35.32
14	PIBLKA1	PIBLKA1	12/10/93	0452	✓	35.32
15	INDAMU3	INDAMU3	12/10/93	0546	✓	35.32
16	INDBMU3	INDBMU3	12/10/93	0827	✓	35.32
17	ZZZZZ	1350001MSD	12/10/93	0929		
18	ZZZZZ	1350002	12/10/93	1022		
19	ZZZZZ	1350003	12/10/93	1123		
20	ZZZZZ	1350004	12/10/93	1217		
21	AR1660L3	AR1660L3	12/10/93	1311	✓	35.32
22	AR1242L3	AR1242L3	12/10/93	1404	✓	35.32
23	AR1248L3	AR1248L3	12/10/93	1458	✓	35.32
24	PIBLKA2	PIBLKA2	12/10/93	1551	✓	35.32
25	PEMQ1	PEMQ1	12/10/93	1748	✓	35.32
26	AR1254L3	AR1254L3	12/10/93	1852	✓	35.32
27	ZZZZZ	1312007	12/10/93	1955		
28	ZZZZZ	1312011	12/10/93	2048		
29	ZZZZZ	1312010	12/10/93	2141		
30	ZZZZZ	1350006	12/10/93	2234		
31	ZZZZZ	1350007	12/10/93	2327		
32	ZZZZZ	1208-B01	12/11/93	0020		

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)
DCB = Decachlorobiphenyl- (+ 0.10 MINUTES)

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

8D
PESTICIDE ANALYTICAL SEQUENCE

1405

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

GC Column: DB-1701 ID: 0.53(mm) Init. Calib. Date(s): 12/07/93 12/08/93

Instrument ID: HP58905B

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION TCX: <u>5.21</u> DCB: <u>35.31</u>					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	ZZZZZ	1350009	12/11/93	0113	
02	ZZZZZ	1350010	12/11/93	0206	
03	ZZZZZ	1350011	12/11/93	0259	
04	PIBLKA3	PIBLKA3	12/11/93	0352 ✓	5.21 35.32
05	INDAMU4	INDAMU4	12/11/93	0445 ✓	5.21 35.33
06	INDBMU4	INDBMU4	12/11/93	0538 ✓	5.21 35.33
07	ZZZZZ	1360001MSB	12/11/93	0817	
08	ZZZZZ	1360001MS	12/11/93	0910	
09	ZZZZZ	1360001MSD	12/11/93	1003	
10	CB-1DL	1325005DL	12/11/93	1056	5.22 *
11	CB-2DL	1325006DL	12/11/93	1149	5.22 *
12	PIBLKA4	PIBLKA4	12/11/93	1335 ✓	5.21 35.33
13	PEMQ2	PEMQ2	12/11/93	1428 ✓	5.21 35.32
14	CB-4DL	1325008DL	12/11/93	1521	5.22 *
15	WB-1DL	1325009DL	12/11/93	1614	5.22 *
16	WB-2DL	1325010DL	12/11/93	1707	5.22 *
17	SDG-2 DUPDL	1325011DL	12/11/93	1800	5.22 *
18	CB-3DL	1325007DL	12/11/93	1853	5.22 *
19	PIBLKA5	PIBLKA5	12/11/93	2039 ✓	5.22 35.33
20	INDAMU5	INDAMU5	12/11/93 ✓	2132 ✓	5.21 35.32
21	INDBMU5	INDBMU5	12/11/93 ✓	2225 ✓	5.21 35.32
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)
DCB = Decachlorobiphenyl - (+ 0.10 MINUTES)

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

8D
PESTICIDE ANALYTICAL SEQUENCE

1406

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GC Column: RTX-35 ID: 0.53(mm) Init. Calib. Date(s): 12/09/93 12/10/93
 Instrument ID: HP58901A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION TCX: <u>12.17</u> DCB: <u>39.39</u>						
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT	#	DCB RT
01	RESC21	RESC21	12/09/93 1750 ✓	12.17		39.39
02	PEM05	PEM05	12/09/93 1843 ✓	12.17		39.39
03	AR166097	AR166097	12/09/93 1937 ✓	12.17		39.39
04	AR122167	AR122167	12/09/93 2030 ✓	12.17		39.39
05	AR123267	AR123267	12/09/93 2124 ✓	12.17		39.40
06	AR124297	AR124297	12/09/93 2217 ✓	12.17		39.39
07	AR124897	AR124897	12/09/93 2311 ✓	12.17		39.39
08	AR125497	AR125497	12/10/93 0005 ✓	12.17		39.40
09	TOXAPH67	TOXAPH67	12/10/93 0058 ✓	12.17		39.39
10	INDAL23	INDAL23	12/10/93 0151 ✓	12.17		39.39
11	INDBL23	INDBL23	12/10/93 0245 ✓	12.17		39.40
12	INDAM83	INDAM83	12/10/93 0338 ✓	12.17		39.39
13	INDBM83	INDBM83	12/10/93 0431 ✓	12.17		39.39
14	INDAH17	INDAH17	12/10/93 0525 ✓	12.17		39.39
15	INDBH17	INDBH17	12/10/93 0618 ✓	12.17		39.39
16	PIBLK27	PIBLK27	12/10/93 0712 ✓	12.17		39.39
17	PEM07	PEM07	12/10/93 0805 ✓	12.17		39.39
18	PIBLK35	PIBLK35	12/13/93 1050 ✓	12.19		39.44
19	PEM11	PEM11	12/13/93 1143 ✓	12.18		39.44
20	PBLK64	1130-B09	12/13/93 1328 ✓	12.20		39.46
21	F.B. 112493	1325012	12/13/93 1447 ✓	12.20		39.45
22	PBLK66	1201-B03	12/13/93 1540 ✓	12.18		39.45
23	EB-3MSB	1325003MSB	12/13/93 1635	12.19		39.45
24	ZZZZZ	1312011	12/13/93 1844			
25	AR166099	AR166099	12/13/93 1937 ✓	12.18		39.45
26	AR124299	AR124299	12/13/93 2031 ✓	12.18		39.46
27	AR124899	AR124899	12/13/93 2124 ✓	12.18		39.46
28	AR125499	AR125499	12/13/93 2218 ✓	12.18		39.44
29	PIBLK37	PIBLK37	12/13/93 2312 ✓	12.18		39.45
30	INDAM89	INDAM89	12/14/93 0059 ✓	12.18		39.44
31	INDBM89	INDBM89	12/14/93 0152 ✓	12.18		39.43
32	EB-1	1325001	12/14/93 0246	12.18		39.38

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)
 DCB = Decachlorobiphenyl (+ 0.10 MINUTES)

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

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GC Column: RTX-35 ID: 0.53(mm) Init. Calib. Date(s): 12/09/93 12/10/93
 Instrument ID: HP58901A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION TCX: <u>12.17</u> DCB: <u>39.39</u>					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	EB-2DL	1325002DL	12/14/93	0339	12.18 39.35
02	EB-2	1325002	12/14/93	0432	12.18 39.37
03	EB-3	1325003	12/14/93	0526	12.18 39.39
04	EB-4	1325004	12/14/93	0619	12.18 39.43
05	CB-1	1325005	12/14/93	0712	12.18 39.38
06	CB-2	1325006	12/14/93	0806	12.18 39.37
07	CB-3	1325007	12/14/93	0859	12.18 39.38
08	CB-4	1325008	12/14/93	0952	12.18 39.39
09	PIBLK39	PIBLK39	12/14/93	1142 ✓	12.19 39.44
10	PEM13	PEM13	12/14/93	1335 ✓	12.19 39.44
11	PIBLK41	PIBLK41	12/15/93	0825 ✓	12.19 39.45
12	PEM15	PEM15	12/15/93	1209 ✓	12.20 39.44
13	WB-1	1325009	12/15/93	1302	12.19 39.39
14	WB-2	1325010	12/15/93	1401	12.20 39.38
15	SDG-2 DUP	1325011	12/15/93	1455	12.19 39.37
16	EB-3MS	1325003MS	12/15/93	1702	12.20 *
17	EB-3MSD	1325003MSD	12/15/93	1756	12.18 39.37
18	CB-1DL	1325005DL	12/15/93	1849	12.19 39.42
19	CB-2DL	1325006DL	12/15/93	1942	12.18 39.36
20	CB-3DL	1325007DL	12/15/93	2036	* 39.36
21	PIBLK43	PIBLK43	12/15/93	2223 ✓	12.18 39.43
22	INDAM91	INDAM91	12/16/93	0103 ✓	12.18 39.44
23	INDBM91	INDBM91	12/16/93	0156 ✓	12.18 39.44
24	CB-4DL	1325008DL	12/16/93	0250	12.18 39.42
25	WB-1DL	1325009DL	12/16/93	0343	* 39.37
26	WB-2DL	1325010DL	12/16/93	0436	* 39.35
27	SDG-2 DUPDL	1325011DL	12/16/93	0530	* 39.35
28	PIBLK45	PIBLK45	12/16/93	0716 ✓	12.18 39.44
29	PEM17	PEM17	12/16/93	1058 ✓	12.18 39.44
30					
31					
32					

TCX = Tetrachloro-m-xylene (+ 0.05 MINUTES)
 DCB = Decachlorobiphenyl - (+ 0.10 MINUTES)

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

9A
PESTICIDE FLORISIL CARTRIDGE CHECK

1408

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Florisil Cartridge Lot Number: FLOF12501 Date of Analysis: 06/18/92
 GC Column(1): DB-1701 ID: 0.53(mm) GC Column (2): RTX-35 ID: 0.53(mm)

COMPOUND	SPIKE ADDED (ng)	SPIKE RECOVERED (ng)	% REC	QC # LIMITS
alpha-BHC	10.000	9.300	93	80-120
gamma-BHC (Lindane)	10.000	8.300	83	80-120
Heptachlor	10.000	9.200	92	80-120
Endosulfan I	10.000	9.600	96	80-120
Dieldrin	20.000	20.000	100	80-120
Endrin	20.000	19.000	95	80-120
4,4'-DDD	20.000	19.000	95	80-120
4,4'-DDT	20.000	18.000	90	80-120
Methoxychlor	100.000	90.000	90	80-120
Tetrachloro-m-xylene	10.000	9.300	93	80-120
Decachlorobiphenyl	20.000	20.000	100	80-120

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

THIS CARTRIDGE LOT APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBLK64	1130-B03	12/08/93	12/13/93
02	F.B. 112493	1325012	12/08/93	12/13/93
03	PBLK66	1201-B03	12/08/93	12/13/93
04	EB-3MSB	1325003MSB	12/08/93	12/13/93
05	EB-1	1325001	12/08/93	12/14/93
06	EB-2	1325002	12/08/93	12/14/93
07	EB-3	1325003	12/08/93	12/14/93
08	EB-3MS	1325003MS	12/08/93	12/15/93
09	EB-3MSD	1325003MSD	12/08/93	12/15/93
10	EB-4	1325004	12/08/93	12/14/93
11	CB-1	1325005	12/08/93	12/14/93
12	CB-2	1325006	12/08/93	12/14/93
13	CB-3	1325007	12/08/93	12/14/93
14	CB-4	1325008	12/08/93	12/14/93
15	WB-1	1325009	12/09/93	12/15/93
16	WB-2	1325010	12/09/93	12/15/93
17	SDG-2 DUP	1325011	12/09/93	12/15/93
18	EB-2DL	1325002DL	12/09/93	12/14/93
19	CB-1DL	1325005DL	12/11/93	12/15/93
20	CB-2DL	1325006DL	12/11/93	12/15/93
21	CB-4DL	1325008DL	12/11/93	12/16/93
22	WB-1DL	1325009DL	12/11/93	12/16/93
23	WB-2DL	1325010DL	12/11/93	12/16/93

9A
PESTICIDE FLORISIL CARTRIDGE CHECK

1409

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Florisil Cartridge Lot Number: FLOF12501 Date of Analysis: 06/18/92

GC Column(1): DB-1701 ID: 0.53(mm) GC Column (2): RTX-35 ID: 0.53(mm)

COMPOUND	SPIKE ADDED (ng)	SPIKE RECOVERED (ng)	% REC ✓/ #	QC LIMITS
alpha-BHC	10.000	✓ 9.300	93	80-120
gamma-BHC (Lindane)	10.000	✓ 8.300	83	80-120
Heptachlor	10.000	✓ 9.200	92	80-120
Endosulfan I	10.000	✓ 9.600	96	80-120
Dieldrin	20.000	✓ 20.000	100	80-120
Endrin	20.000	✓ 19.000	95	80-120
4,4'-DDO	20.000	✓ 19.000	95	80-120
4,4'-DDT	20.000	✓ 18.000	90	80-120
Methoxychlor	100.000	✓ 90.000	90	80-120
Tetrachloro-m-xylene	10.000	✓ 9.300	93	80-120
Decachlorobiphenyl	20.000	✓ 20.000	100	80-120

Column to be used to flag recovery values with an asterisk

* Values outside of QC limits

THIS CARTRIDGE LOT APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	SDG-2 DUPDL	1325011DL	12/11/93	12/16/93
02	CB-3DL	1325007DL	12/11/93	12/15/93
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

1410

9B
PESTICIDE GPC CALIBRATION

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 GPC Column: SX-3 Calibration Date: 12/10/93
 GC Column(1): DB-1701 ID: 0.53(mm) GC Column (2): RTX-35 ID: 0.53(mm)

COMPOUND	SPIKE ADDED (ng)	SPIKE RECOVERED (ng)	% REC	QC LIMITS
gamma-BHC (Lindane)	1000.000	1041.060	104.11	80-110
Heptachlor	1000.000	1025.100	102.51	80-110
Aldrin	1000.000	1041.550	104.16	80-110
Dieldrin	2000.000	2069.380	103.47	80-110
Endrin	2000.000	2059.680	102.98	80-110
4,4'-DDT	2000.000	2011.600	100.58	80-110

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

THIS GPC CALIBRATION APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBLK66	1201-B03	12/08/93	12/13/93
02	EB-3MSB	1325003MSB	12/08/93	12/13/93
03	EB-1	1325001	12/08/93	12/14/93
04	EB-2	1325002	12/08/93	12/14/93
05	EB-3	1325003	12/08/93	12/14/93
06	EB-3MS	1325003MS	12/08/93	12/15/93
07	EB-3MSD	1325003MSD	12/08/93	12/15/93
08	EB-4	1325004	12/08/93	12/14/93
09	CB-1	1325005	12/08/93	12/14/93
10	CB-2	1325006	12/08/93	12/14/93
11	CB-3	1325007	12/08/93	12/14/93
12	CB-4	1325008	12/08/93	12/14/93
13	WB-1	1325009	12/09/93	12/15/93
14	WB-2	1325010	12/09/93	12/15/93
15	SDG-2 DUP	1325011	12/09/93	12/15/93
16	EB-2DL	1325002DL	12/09/93	12/14/93
17	CB-1DL	1325005DL	12/11/93	12/15/93
18	CB-2DL	1325006DL	12/11/93	12/15/93
19	CB-4DL	1325008DL	12/11/93	12/16/93
20	WB-1DL	1325009DL	12/11/93	12/16/93
21	WB-2DL	1325010DL	12/11/93	12/16/93
22	SDG-2 DUPDL	1325011DL	12/11/93	12/16/93
23	CB-3DL	1325007DL	12/11/93	12/15/93
24				
25				
26				

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-3MS

Lab Name: IEA-CT

Contract: _____

Lab Code: IEACT

Case No.: 1325

SAS No.: _____

SDG No.: Z1325

Lab Sample ID : 1325003MS

Date(s) Analyzed: 12/08/93 12/15/93

Instrument ID (1): HP58905B

Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm)

GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Dieldrin <i>spike compd</i>	1	17.84	17.75	17.89	30	106.7
	2	26.76	26.66	26.80	62	
Endrin <i>spike compd</i>	1	19.53	19.27	19.41	97	11.5
	2	27.74	27.64	27.78	87	
4,4'-DDD	1	24.11	24.03	24.17	34	32.4
	2	28.08	27.98	28.12	45	
4,4'-DDT <i>spike compd</i>	1	25.26	25.18	25.32	41	75.6
	2	28.92	28.82	28.96	72	
gamma-Chlordane	1	15.83	15.73	15.87	3.0	60.0
	2	25.29	25.20	25.34	4.8	
gamma-BHC (Lindane) <i>spike compd</i>	1	9.45	9.39	9.49	14	7.1
	2	18.67	18.58	18.68	15	
Heptachlor <i>spike compd</i>	1	10.11	10.05	10.15	18	88.9
	2	20.93	20.86	20.96	34	
Aldrin <i>spike compd</i>	1	11.03	10.96	11.06	46	0.0
	2	22.48	22.40	22.50	46	

max 25%

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-3MSD

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325003MSD Date(s) Analyzed: 12/08/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
Dieldrin <i>spike comp</i>	1	17.83	17.75	17.89	/ 28	189.3
	2	26.75	26.66	26.80	/ 81	
Endrin <i>spike comp</i>	1	19.53	19.27	19.41	/ 180	12.5
	2	27.73	27.64	27.78	/ 160	
4,4'-DDD	1	24.09	24.03	24.17	/ 79	64.6
	2	28.07	27.98	28.12	/ 130	
4,4'-DDT <i>spike comp</i>	1	25.26	25.18	25.32	/ 60	116.7
	2	28.91	28.82	28.96	/ 130	
gamma-Chlordane	1	15.83	15.73	15.87	/ 6.5	100.0
	2	25.28	25.20	25.34	/ 13	
gamma-BHC (Lindane) <i>spike comp</i>	1	9.45	9.39	9.49	/ 14	14.3
	2	18.64	18.58	18.68	/ 16	
Heptachlor <i>spike comp</i>	1	10.11	10.05	10.15	/ 16	156.2
	2	20.91	20.86	20.96	/ 41	
Aldrin <i>spike comp</i>	1	11.03	10.96	11.06	/ 67	1.5
	2	22.46	22.40	22.50	/ 68	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

EB-3MSD

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325003MSD Date(s) Analyzed: 12/08/93 12/15/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.90	9.81	9.95	✓ 170	✓410	29.3
	2	11.92	11.85	11.99	✓ 560		
	3	13.69	13.62	13.76	✓ 490		
COLUMN 1	4						
	5						
	1	20.91	20.76	20.90	✓ 330	✓ 530	
2	22.64	22.56	22.70	✓ 550			
COLUMN 2	3	23.63	23.55	23.69	✓ 720		
	4						
	5						
Aroclor-1254	1	17.49	17.42	17.56	✓ 350	✓340	8.8
	2	20.81	20.74	20.88	✓ 420		
	3	21.83	21.77	21.91	✓ 250		
COLUMN 1	4						
	5						
	1	25.11	25.02	25.16	✓ 370	✓370	
2	25.47	25.38	25.52	✓ 420			
COLUMN 2	3	27.43	27.33	27.47	✓ 310		
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-3MSB

1430

Lab Name: IEA-CT

Contract:

Lab Code: IEACT

Case No.: 1325

SAS No.:

SDG No.: Z1325

Lab Sample ID : 1325003MSB

Date(s) Analyzed: 12/08/93 12/13/93

Instrument ID (1): HP58905B

Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm)

GC Column(2): RTX-35 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
Dieldrin	1	17.84	17.75	17.89	✓ 32	14.3
	2	26.75	26.66	26.80	✓ 28	
4,4'-DDE	1	17.11	17.02	17.16	✓ 0.96	54.8
	2	26.53	26.44	26.58	✓ 0.62	
Endrin	1	19.37	19.27	19.41	✓ 31	10.7
	2	27.73	27.64	27.78	✓ 28	
4,4'-DDT	1	25.27	25.18	25.32	✓ 33	17.8
	2	28.91	28.82	28.96	✓ 28	
gamma-BHC (Lindane)	1	9.45	9.39	9.49	✓ 13	31.3
	2	18.65	18.58	18.68	✓ 9.9	
Heptachlor	1	10.11	10.05	10.15	✓ 15	50.0
	2	20.93	20.86	20.96	✓ 10	
Aldrin	1	11.03	10.96	11.06	✓ 15	25.0
	2	22.48	22.40	22.50	✓ 12	

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FORM X PEST-1

3/90

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-1

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325001 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

MAX 25%

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
4,4'-DDE	1	17.11	17.02	17.16	✓ 26	
	2	26.52	26.44	26.58	✓ 61	134.6 J
4,4'-DDD	1	24.12	24.03	24.17	✓ 68	
	2	28.07	27.98	28.12	✓ 120	76.5 J
4,4'-DDT	1	25.28	25.18	25.32	✓ 16	
	2	28.94	28.82	28.96	✓ 60	275.0 J
gamma-Chlordane	1	15.83	15.73	15.87	✓ 11	
	2	25.28	25.20	25.34	✓ 25	127.3 J

EPA SAMPLE NO.

Lab Name: IEA-CT

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325 **1433**

Lab Sample ID : 1325001 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

[illegible]

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-2

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325002 Date(s) Analyzed: 12/08/93 12/14/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.11	17.02	17.16	✓ 67	168.6 J
	2	26.52	26.44	26.58	✓ 180	
4,4'-DDD	1	24.12	24.03	24.17	✓ 140	85.7 J
	2	28.07	27.98	28.12	✓ 260	
4,4'-DDT	1	25.29	25.18	25.32	✓ 35	2.9
	2	28.85	28.82	28.96	✓ 34	
gamma-Chlordane	1	15.83	15.73	15.87	✓ 23	143.5 J
	2	25.28	25.20	25.34	✓ 56	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

EB-2

Lab Name: IEA-CT

Contract: _____

1434

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325002 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.90	9.81	9.95	✓ 650	890	
	2	11.93	11.85	11.99	✓ 930		
	3	13.73	13.62	13.76	✓ 1100		
	4						
	5						
COLUMN 1	1	20.87	20.76	20.90	✓ 770	1000	12.4
	2	22.64	22.56	22.70	✓ 1100		
	3	23.63	23.55	23.69	✓ 1200		
	4						
	5						
COLUMN 2	1	17.50	17.42	17.56	✓ 880	950	
	2	20.83	20.74	20.88	✓ 1200		
	3	21.86	21.77	21.91	✓ 800		
	4						
	5						
Aroclor-1254	1	25.11	25.02	25.16	✓ 730	940	2.1
	2	26.64	26.56	26.70	✓ 880		
	3	26.96	26.87	27.01	✓ 1200		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

1415

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-2DL

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325002DL Date(s) Analyzed: 12/09/93 12/14/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.11	17.02	17.16	✓ 73	78.1 J
	2	26.52	26.44	26.58	✓ 130	
4,4'-DDD	1	24.12	24.03	24.17	✓ 160	31.2 J
	2	28.07	27.98	28.12	✓ 210	
4,4'-DDT	1	25.29	25.18	25.32	✓ 36	2.8
	2	28.84	28.82	28.96	✓ 35	
gamma-Chlordane	1	15.83	15.73	15.87	✓ 29	55.2 J
	2	25.28	25.20	25.34	✓ 45	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

EB-2DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325002DL Date(s) Analyzed: 12/09/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

143

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	8.35	8.27	8.41	✓ 850	1000	10.0
	2	9.90	9.81	9.95	✓ 880		
	3	11.93	11.85	11.99	✓ 1300		
	4						
	5						
COLUMN 1	1	20.87	20.76	20.90	✓ 900	1100	10.0
	2	22.65	22.56	22.70	✓ 1100		
	3	23.63	23.55	23.69	✓ 1300		
	4						
	5						
COLUMN 2	1	17.51	17.42	17.56	✓ 1200	1300	39.8
	2	20.82	20.74	20.88	✓ 1800		
	3	21.85	21.77	21.91	✓ 1000		
	4						
	5						
Aroclor-1254	1	25.48	25.38	25.52	✓ 950	930	39.8
	2	26.96	26.87	27.01	✓ 920		
	3	27.43	27.33	27.47	✓ 920		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

EPA SAMPLE NO.

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

Contract:

EB - 3

SAS No.: _____ SDG No.: Z1325

Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (2): HP58901A

GC Column (2): RTX-35 0.53 (mm)

[illegible]

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

EB-3

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325003 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

1430

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	8.35	8.27	8.41	✓ 9.9	87	19.2
	2	9.90	9.81	9.95	✓ 71		
	3	11.93	11.85	11.99	✓ 180		
	4						
	5						
COLUMN 1	1	18.45	18.38	18.52	✓ 11	73	
	2	20.86	20.76	20.90	✓ 49		
	3	22.64	22.56	22.70	✓ 160		
	4						
	5						
COLUMN 2	1	17.50	17.42	17.56	✓ 120	87	
	2	21.84	21.77	21.91	✓ 81		
	3	22.59	22.54	22.68	✓ 59		
	4						
	5						
Aroclor-1254	1	25.47	25.38	25.52	✓ 89	94	8.0
	2	26.64	26.56	26.70	✓ 93		
	3	26.96	26.87	27.01	✓ 100		
	4						
	5						
COLUMN 1							
COLUMN 2							

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB-4

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325004 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

[illegible]

1416

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CB-1

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325005 Date(s) Analyzed: 12/08/93 12/14/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.10	17.02	17.16	✓ 80	150.0 J
	2	26.52	26.44	26.58	✓ 200	
4,4'-DDD	1	24.11	24.03	24.17	✓ 320	56.2 J
	2	28.07	27.98	28.12	✓ 500	
4,4'-DDT	1	25.27	25.18	25.32	✓ 44	377.3 J
	2	28.94	28.82	28.96	✓ 210	
gamma-Chlordane	1	15.83	15.73	15.87	✓ 35	157.1
	2	25.28	25.20	25.34	✓ 90	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

CB-1

1437

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325005 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.90	9.81	9.95	✓ 1000	1400	0.0
	2	11.93	11.85	11.99	✓ 1500		
	3	13.71	13.62	13.76	✓ 1600		
	4						
	5						
COLUMN 1	1	15.81	15.75	15.89	✓ 1300	1400	0.0
	2	20.87	20.76	20.90	✓ 1000		
	3	23.63	23.55	23.69	✓ 1900		
	4						
	5						
COLUMN 2	1	17.50	17.42	17.56	✓ 1300	✓ 1500	0.0
	2	20.82	20.74	20.88	✓ 1800		
	3	21.84	21.77	21.91	✓ 1300		
	4						
	5						
Aroclor-1254	1	25.11	25.02	25.16	✓ 1100	✓ 1500	0.0
	2	25.47	25.38	25.52	✓ 1800		
	3	26.64	26.56	26.70	✓ 1600		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1417
EPA SAMPLE NO.

CB-1DL

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Lab Sample ID : 1325005DL Date(s) Analyzed: 12/11/93 12/15/93
 Instrument ID (1): HP58905B Instrument ID (2): HP58901A
 GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
4,4'-DDE	1	17.10	17.02	17.16	✓ 100	130.0 J
	2	26.52	26.44	26.58	✓ 230	
4,4'-DDD	1	24.12	24.03	24.17	✓ 420	90.5 J
	2	28.07	27.98	28.12	✓ 800	
4,4'-DDT	1	25.27	25.18	25.32	✓ 110	163.6 J
	2	28.94	28.82	28.96	✓ 290	
Methoxychlor	1	29.62	29.51	29.65	✓ 200	0.0
	2	31.50	31.41	31.55	✓ 200	
gamma-Chlordane	1	15.83	15.73	15.87	✓ 49	46.9 J
	2	25.29	25.20	25.34	✓ 72	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

CB-1DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325005DL Date(s) Analyzed: 12/11/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

1438

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.90	9.81	9.95	✓ 1600	2300	0.0
	2	11.93	11.85	11.99	✓ 2600		
	3	13.70	13.62	13.76	✓ 2600		
	4						
	5						
COLUMN 1	1	15.82	15.75	15.89	✓ 1900	2300	0.0
	2	22.65	22.56	22.70	✓ 2700		
	3	23.64	23.55	23.69	✓ 2200		
	4						
	5						
COLUMN 2	1	17.51	17.42	17.56	✓ 2000	2700	8.0
	2	20.82	20.74	20.88	✓ 3400		
	3	21.85	21.77	21.91	✓ 2700		
	4						
	5						
Aroclor-1254	1	26.65	26.56	26.70	✓ 2300	2500	8.0
	2	26.96	26.87	27.01	✓ 2300		
	3	27.43	27.33	27.47	✓ 3000		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

1418

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CB-2

Lab Name: IEA-CT

Contract: _____

Lab Code: IEACT

Case No.: 1325

SAS No.: _____

SDG No.: Z1325

Lab Sample ID : 1325006

Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B

Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm)

GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.09	17.02	17.16	/ 37	132.4
	2	26.52	26.44	26.58	/ 86	
4,4'-DDD	1	24.09	24.03	24.17	/ 230	4.5
	2	28.07	27.98	28.12	/ 220	
4,4'-DDT	1	25.25	25.18	25.32	/ 14	557.1
	2	28.94	28.82	28.96	/ 92	
gamma-Chlordane	1	15.81	15.73	15.87	/ 13	123.1
	2	25.28	25.20	25.34	/ 29	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

CB-2

1439

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325006 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	8.34	8.27	8.41	✓ 100	290	62.1
COLUMN 1	2	9.89	9.81	9.95	✓ 180		
	3	13.69	13.62	13.76	✓ 580		
	4						
	5						
	1	15.80	15.75	15.89	✓ 620	470	
COLUMN 2	2	20.87	20.76	20.90	✓ 190		
	3	22.65	22.56	22.70	✓ 600		
	4						
	5						
	Aroclor-1254	1	20.79	20.74	20.88	✓ 610	
COLUMN 1	2	21.82	21.77	21.91	✓ 500		
	3	22.59	22.54	22.68	✓ 480		
	4						
	5						
	1	25.11	25.02	25.16	✓ 460	630	
COLUMN 2	2	25.47	25.38	25.52	✓ 760		
	3	26.64	26.56	26.70	✓ 660		
	4						
	5						
	Aroclor-1260	1	23.81	23.72	23.86	✓ 210	250
COLUMN 1	2	30.21	30.16	30.30	✓ 280		
	3	33.45	33.39	33.53	✓ 250		
	4						
	5						
	1	27.79	27.77	27.91	✓ 430	460	
COLUMN 2	2	30.74	30.65	30.79	✓ 460		
	3	32.43	32.33	32.47	✓ 490		
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

14'9
EPA SAMPLE NO.

CB-2DL

Lab Name: IEA-CT

Contract: _____

Lab Code: IEACT

Case No.: 1325

SAS No.: _____

SDG No.: Z1325

Lab Sample ID : 1325006DL

Date(s) Analyzed: 12/11/93 12/15/93

Instrument ID (1): HP58905B

Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm)

GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.10	17.02	17.16	✓ 47	66.0
	2	26.52	26.44	26.58	✓ 78	
4,4'-DDD	1	24.11	24.03	24.17	✓ 280	50.0
	2	28.07	27.98	28.12	✓ 420	
4,4'-DDT	1	25.26	25.18	25.32	✓ 33	42.4
	2	28.84	28.82	28.96	✓ 47	
gamma-Chlordane	1	15.82	15.73	15.87	✓ 19	0.0
	2	25.29	25.20	25.34	✓ 19	

J
J
J
J

EPA SAMPLE NO.

CB-2DL

GC Column (1) : DB-1701 0.53 (mm) GC Column (2) : RTX-35 0.53 (mm)

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10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1420
EPA SAMPLE NO.

CB-3

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Lab Sample ID : 1325007 Date(s) Analyzed: 12/08/93 12/14/93
 Instrument ID (1): HP58905B Instrument ID (2): HP58901A
 GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.07	17.02	17.16	- 120	
	2	26.51	26.44	26.58	✓ 420	(250.0) J
4,4'-DDD	1	24.09	24.03	24.17	- 920	
	2	28.07	27.98	28.12	- 1600	(73.9) J
4,4'-DDT	1	25.25	25.18	25.32	- 47	
	2	28.84	28.82	28.96	- 76	(61.7) J
gamma-Chlordane	1	15.82	15.73	15.87	- 55	
	2	25.28	25.20	25.34	- 110	(100.0) J

144i

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

CB-3

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325007 Date(s) Analyzed: 12/08/93 12/14/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.89	9.81	9.95	✓ 2200	✓ 4400	
	2	11.92	11.85	11.99	✓ 4800		
	3	13.69	13.62	13.76	✓ 6100		
	4						
	5						
COLUMN 1	1	18.46	18.38	18.52	✓ 580	✓ 2400	83.3
	2	20.86	20.76	20.90	✓ 1800		
	3	22.64	22.56	22.70	✓ 4800		
	4						
	5						
COLUMN 2	1	17.48	17.42	17.56	✓ 3900	✓ 4300	
	2	20.78	20.74	20.88	✓ 3600		
	3	22.58	22.54	22.68	✓ 5400		
	4						
	5						
Aroclor-1254	1	25.11	25.02	25.16	✓ 3400	✓ 4300	0.0
	2	25.48	25.38	25.52	✓ 4600		
	3	26.65	26.56	26.70	✓ 4800		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

EPA SAMPLE NO. 1421

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325007DL Date(s) Analyzed: 12/11/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

[illegible]

The results for 4,4'-DDT and gamma-chlordane were reported from the DB-1701 column because the RTX-35 analysis was beyond the 12 hour time limit from the instrument blank.

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

1442
EPA SAMPLE NO.

CB-3DL

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Lab Sample ID : 1325007DL Date(s) Analyzed: 12/11/93 12/15/93
 Instrument ID (1): HP58905B Instrument ID (2): HP58901A
 GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	8.35	8.27	8.41	✓ 2600	✓ 5000	
	2	9.89	9.81	9.95	✓ 3800		
	3	11.93	11.85	11.99	✓ 8600		
	4						
	5						
COLUMN 1	1	20.86	20.76	20.90	✓ 2500	✓ 5200	4.0
	2	22.65	22.56	22.70	✓ 6700		
	3	23.63	23.55	23.69	✓ 6400		
	4						
	5						
COLUMN 2	1	17.49	17.42	17.56	✓ 7100	Reported 7000	
	2	20.79	20.74	20.88	✓ 8700		
	3	21.83	21.77	21.91	✓ 5100		
	4						
	5						
Aroclor-1254	1	25.47	25.38	25.52	✓ 4900	✓ 4700	48.9 J
	2	26.64	26.56	26.70	✓ 4100		
	3	26.96	26.87	27.01	✓ 5100		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

RTX-35 analysis beyond 12-hour time limit
from instrument blank.

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CB-4

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325008 Date(s) Analyzed: 12/08/93 12/14/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.08	17.02	17.16	✓ 11	
	2	26.52	26.44	26.58	✓ 27	145.4
4,4'-DDD	1	24.10	24.03	24.17	✓ 78	
	2	28.07	27.98	28.12	✓ 91	16.7
4,4'-DDT	1	25.26	25.18	25.32	✓ 9.3	
	2	28.94	28.82	28.96	✓ 30	222.6
gamma-Chlordane	1	15.81	15.73	15.87	✓ 4.0	
	2	25.28	25.20	25.34	✓ 5.2	30.0

1443

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

CB-4

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325008 Date(s) Analyzed: 12/08/93 12/14/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1254	1	17.49	17.42	17.56	/ 210	/ 190	
	2	21.83	21.77	21.91	/ 200		
	3	22.58	22.54	22.68	/ 160		
	4						
	5						
COLUMN 1	1	25.48	25.38	25.52	/ 240	/ 210	10.5
	2	26.64	26.56	26.70	/ 170		
	3	26.96	26.87	27.01	/ 230		
	4						
	5						
COLUMN 2	1	23.80	23.72	23.86	/ 82	/ 100	
	2	30.21	30.16	30.30	/ 110		
	3	33.46	33.39	33.53	/ 120		
	4						
	5						
Aroclor-1260	1	27.79	27.77	27.91	/ 300	/ 190	90.0 J
	2	30.74	30.65	30.79	/ 120		
	3	32.43	32.33	32.47	/ 150		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CB-4DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

1423

Lab Sample ID : 1325008DL Date(s) Analyzed: 12/11/93 12/16/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.09	17.02	17.16	/ 17	76.5
	2	26.51	26.44	26.58	- 30	
4,4'-DDD	1	24.11	24.03	24.17	/ 100	14.9
	2	28.07	27.98	28.12	/ 87	
4,4'-DDT	1	25.26	25.18	25.32	/ 37	18.9
	2	28.94	28.82	28.96	/ 44	
gamma-Chlordane	1	15.82	15.73	15.87	/ 8.7	10.1
	2	25.28	25.20	25.34	/ 7.9	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

1444
EPA SAMPLE NO.

CB-4DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325008DL Date(s) Analyzed: 12/11/93 12/16/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1254	1	17.50	17.42	17.56	✓ 340		
	2	21.84	21.77	21.91	✓ 420		
	3	22.59	22.54	22.68	✓ 320		
COLUMN 1	4					✓ 360	
	5						
COLUMN 2	1	25.11	25.02	25.16	✓ 190	✓ 240	
	2	26.96	26.87	27.01	✓ 280		
	3	27.42	27.33	27.47	✓ 250		
	4						
	5						
Aroclor-1260	1	23.83	23.72	23.86	✓ 160		(50.0)
	2	28.25	28.17	28.31	✓ 130		
	3	30.22	30.16	30.30	✓ 180		
COLUMN 1	4					✓ 160	
	5						
COLUMN 2	1	27.79	27.77	27.91	✓ 260	✓ 160	
	2	30.74	30.65	30.79	✓ 100		
	3	32.43	32.33	32.47	✓ 110		
	4						
	5						
							0.0

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

WB-1

Lab Name: IEA-CT

Contract: _____

Lab Code: IEACT

Case No.: 1325

SAS No.: _____

SDG No.: Z1325

Lab Sample ID : 1325009

Date(s) Analyzed: 12/09/93 12/15/93

Instrument ID (1): HP58905B

Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm)

GC Column(2): RTX-35 0.53 (mm)

1424

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.10	17.02	17.16	220	86.4
	2	26.53	26.44	26.58	410	
4,4'-DDD	1	24.10	24.03	24.17	1400	14.3
	2	28.08	27.98	28.12	1600	
4,4'-DDT	1	25.26	25.18	25.32	58	262.1
	2	28.94	28.82	28.96	210	
gamma-Chlordane	1	15.82	15.73	15.87	46	71.7
	2	25.29	25.20	25.34	79	

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

WB-1DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325009DL Date(s) Analyzed: 12/11/93 12/16/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.10	17.02	17.16	320	12.5
	2	26.52	26.44	26.58	360	
4,4'-DDD	1	24.10	24.03	24.17	1700	13.3
	2	28.07	27.98	28.12	1500	
4,4'-DDT	1	25.25	25.18	25.32	300	3.3
	2	28.94	28.82	28.96	310	
gamma-Chlordane	1	15.82	15.73	15.87	130	71.0
	2	25.28	25.20	25.34	76	

EPA SAMPLE NO.

WB-1DL

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

3/90

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

WB-2

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325 **1420**

Lab Sample ID : 1325010 Date(s) Analyzed: 12/09/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
4,4'-DDE	1	17.10	17.02	17.16	✓ 150	
	2	26.53	26.44	26.58	✓ 290	93.3 J
4,4'-DDD	1	24.11	24.03	24.17	✓ 910	
	2	28.07	27.98	28.12	✓ 1100	20.9
4,4'-DDT	1	25.26	25.18	25.32	✓ 35	
	2	28.94	28.82	28.96	✓ 150	328.6 J
gamma-Chlordane	1	15.82	15.73	15.87	✓ 37	
	2	25.29	25.20	25.34	✓ 81	118.9 J

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO. 1447

WB-2

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325010 Date(s) Analyzed: 12/09/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	PEAK	RT	RT WINDOW FROM TO		CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1248	1	9.90	9.81	9.95	✓ 970	1600	
	2	11.93	11.85	11.99	✓ 1700		
	3	13.71	13.62	13.76	✓ 2100		
	4						
	5						
COLUMN 1	1	18.48	18.38	18.52	✓ 440	1400	14.3 ✓
	2	22.66	22.56	22.70	✓ 1800		
	3	23.64	23.55	23.69	✓ 2000		
	4						
	5						
COLUMN 2	1	17.50	17.42	17.56	✓ 1300	1300	
	2	20.81	20.74	20.88	✓ 1500		
	3	21.85	21.77	21.91	✓ 1000		
	4						
	5						
Aroclor-1254	1	26.65	26.56	26.70	✓ 1100	1300	0.0 ✓
	2	26.96	26.87	27.01	✓ 1400		
	3	27.43	27.33	27.47	✓ 1300		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

WB-2DL

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325010DL Date(s) Analyzed: 12/11/93 12/16/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	17.10	17.02	17.16	✓ 350	20.7
	2	26.52	26.44	26.58	✓ 290	
4,4'-DDD	1	24.10	24.03	24.17	✓ 1800	63.6
	2	28.07	27.98	28.12	✓ 1100	
4,4'-DDT	1	25.26	25.18	25.32	✓ 110	209.1
	2	28.94	28.82	28.96	✓ 340	
gamma-Chlordane	1	15.82	15.73	15.87	✓ 120	87.5
	2	25.28	25.20	25.34	✓ 64	

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

1448
EPA SAMPLE NO.

WB-2DL

Lab Name: IEA-CT Contract: _____
 Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325
 Lab Sample ID : 1325010DL Date(s) Analyzed: 12/11/93 12/16/93
 Instrument ID (1): HP58905B Instrument ID (2): HP58901A
 GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%D
			FROM	TO			
Aroclor-1254	1	17.50	17.42	17.56	✓ 3100	3100	
	2	20.80	20.74	20.88	✓ 4300		
	3	21.83	21.77	21.91	✓ 1800		
	4						
	5						
COLUMN 1	1	25.47	25.38	25.52	✓ 2300	2300	34.8
	2	26.96	26.87	27.01	✓ 2100		
	3	27.42	27.33	27.47	✓ 2500		
	4						
	5						
COLUMN 2	1	28.25	28.17	28.31	✓ 770	2100	
	2	30.21	30.16	30.30	✓ 1400		
	3	33.49	33.39	33.53	✓ 4200		
	4						
	5						
Aroclor-1260	1	27.79	27.77	27.91	✓ 3300	2100	0.0
	2	30.65	30.65	30.79	✓ 2100		
	3	32.42	32.33	32.47	✓ 860		
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SDG-2 DUP

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

1425

Lab Sample ID : 1325011 Date(s) Analyzed: 12/09/93 12/15/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
4,4'-DDE	1	17.11	17.02	17.16	✓ 300	
	2	26.52	26.44	26.58	✓ 720	140.0
4,4'-DDD	1	24.11	24.03	24.17	✓ 1800	
	2	28.07	27.98	28.12	✓ 2600	44.4
4,4'-DDT	1	25.27	25.18	25.32	✓ 77	
	2	28.94	28.82	28.96	✓ 410	432.5
gamma-Chlordane	1	15.83	15.73	15.87	✓ 65	
	2	25.29	25.20	25.34	✓ 150	130.8

J
J
J
J
J

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

SDG-2 DUP

Lab Name: IEA-CT Contract: _____Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325Lab Sample ID : 1325011 Date(s) Analyzed: 12/09/93 12/15/93Instrument ID (1): HP58905B Instrument ID (2): HP58901AGC Column(1): DB-1701 0.53(mm) GC Column(2): RTX-35 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%D	
Aroclor-1248	1	9.90	9.81	9.95	✓ 2100		3.6	
	2	11.93	11.85	11.99	✓ 3000			
	3	13.71	13.62	13.76	✓ 3500			
	4							
	5							
COLUMN 1	1	20.87	20.76	20.90	✓ 1700			
	2	22.65	22.56	22.70	✓ 3200			
	3	23.64	23.55	23.69	✓ 3400			
	4							
	5							
COLUMN 2						✓ 2800		
	1	17.50	17.42	17.56	✓ 2400		6.7	
	2	20.81	20.74	20.88	✓ 2900			
	3	22.61	22.54	22.68	✓ 3800			
	4							
5								
Aroclor-1254	1	25.48	25.38	25.52	✓ 3300			
	2	26.65	26.56	26.70	✓ 2900			
	3	26.96	26.87	27.01	✓ 3500			
	4							
	5							
COLUMN 1						✓ 3000		
COLUMN 2						✓ 3200		
</								

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SDG-2 DUPDL

Lab Name: IEA-CT Contract: _____

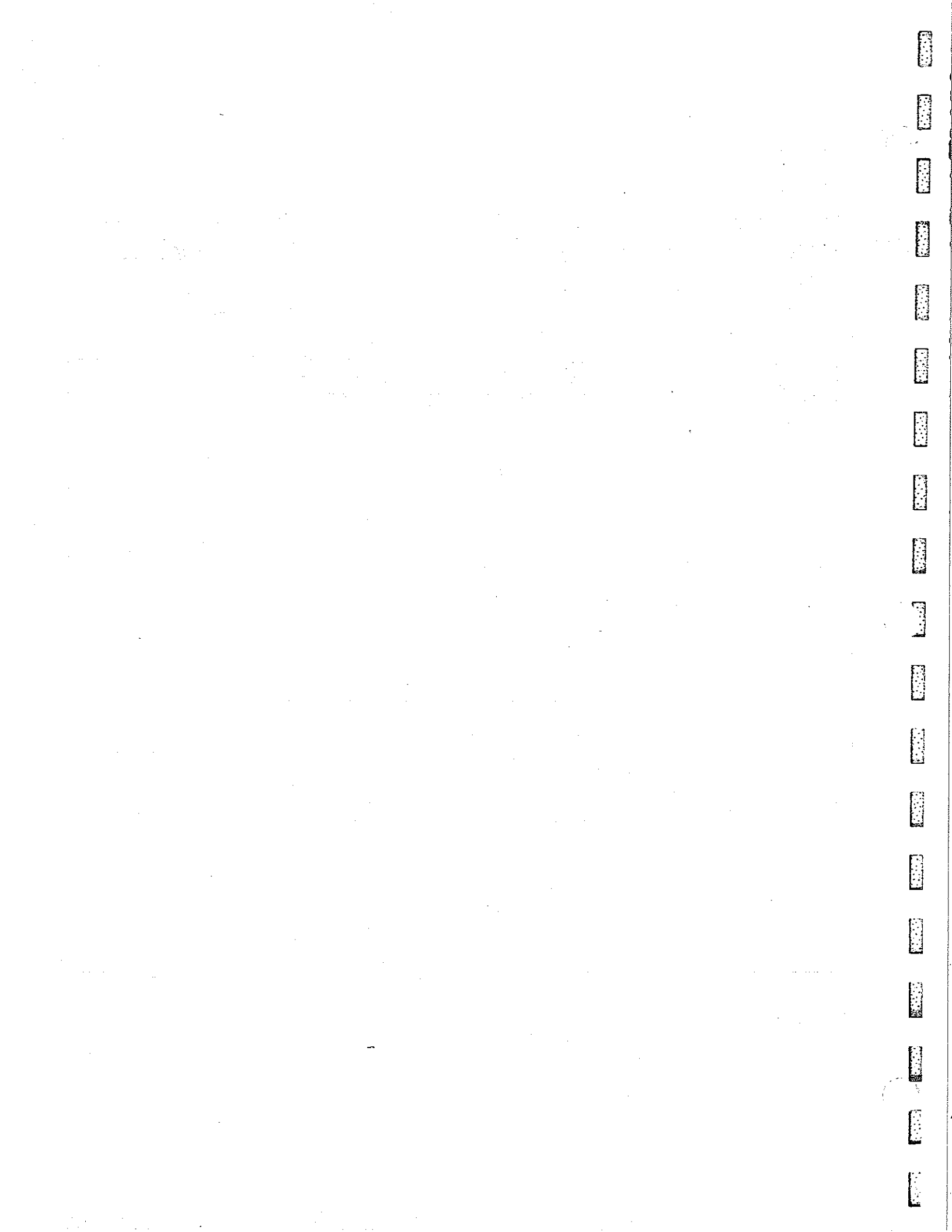
Lab Code: IEACT Case No.: 1325 SAS No.: _____ SDG No.: Z1325

Lab Sample ID : 1325011DL Date(s) Analyzed: 12/11/93 12/16/93

Instrument ID (1): HP58905B Instrument ID (2): HP58901A

GC Column(1): DB-1701 0.53 (mm) GC Column(2): RTX-35 0.53 (mm)

ANALYTE	COL	RT	RT WINDOW FROM TO		CONCENTRATION	%D
4,4'-DDE	1	17.10	17.02	17.16	380	
	2	26.51	26.44	26.58	500	31.0 J
4,4'-DDD	1	24.11	24.03	24.17	2000	
	2	28.07	27.98	28.12	2000	0.0
4,4'-DDT	1	25.25	25.18	25.32	140	
	2	28.94	28.82	28.96	340	142.8 J
gamma-Chlordane	1	15.82	15.73	15.87	140	
	2	25.28	25.20	25.34	110	27.3 J



SECTION 4

INORGANIC DATA SUPPORT DOCUMENTATION

Inorganic Analyses Support Documentation

ESI Project Name: Unsys/Great Neck
 Sample Collection Dates: 11/24/93
 Job Number: 9169-532
 Project Manager: STZ
 Laboratory: IEA

Reviewed By: Laurel Vinciguerra
 Approved By: Stephen A. Zim
 Completion Date: 2/94

Applicable Sample No's.: ☒ Refer to Attached Table

Deliverables: GLP ☒ NYSDEP
 Tier I ☐
 Tier II ☐
 Limited ☐
 Other ☐

Sample No. SDG 21325 Lab Control No. _____

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

	Criteria Examined in Detail					Problems Identified					Support Documentation Attachments				
	ICP or AA Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method	ICP or AA Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method	ICP or AA Metals	Furnace Metals	Cold Vapor Mercury	Cyanide	Other Method
Holding Times	/	/	/	/	/										
Blank Analysis Results	/	/	/	/	/						/	/	/	/	/
Matrix Spike (Predigestion) Results	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Duplicate Analysis Results <input checked="" type="checkbox"/> Field <input checked="" type="checkbox"/> 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 Burns	/	/	/	/	/						/	/	/	/	/
GFAA Standard Additions	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
CRDL Standards	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Others:	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Comments: Date acceptable for use with qualitative data in report.

Environmental Standards, Inc.



[illegible]

History: _____

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IFA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	5000.0	✓5268.75	105.4	5000.0	✓5317.45	106.3	✓5310.15	106.2	P
Antimony	5000.0	✓4895.31	97.9	5000.0	✓4882.04	97.6	✓4960.49	99.2	P
Arsenic	50.0	✓53.70	107.4	50.0	✓53.20	106.4	✓48.80	97.6	F
Barium	5000.0	✓5109.31	102.2	5000.0	✓5164.64	103.3	✓5208.03	104.2	P
Beryllium	125.0	✓125.03	100.0	125.0	✓125.02	100.0	✓126.31	101.0	P
Cadmium	1250.0	✓1266.09	101.3	1250.0	✓1278.86	102.3	✓1299.87	104.0	P
Calcium	12500.0	✓11912.51	95.3	12500.0	✓11953.53	95.6	✓12104.04	96.8	P
Chromium	500.0	✓492.81	98.6	500.0	✓498.13	99.6	✓508.76	101.8	P
Cobalt	1250.0	✓1268.18	101.5	1250.0	✓1269.64	101.6	✓1276.38	102.1	P
Copper	625.0	✓617.78	98.8	625.0	✓620.34	99.3	✓628.05	100.5	P
Iron	2500.0	✓2683.83	107.4	2500.0	✓2695.53	107.8	✓2702.90	108.1	P
Lead	2500.0	✓2492.45	99.7	2500.0	✓2523.57	100.9	✓2546.02	101.8	P
Magnesium	12500.0	✓12138.31	97.1	12500.0	✓12283.53	98.3	✓12395.60	99.2	P
Manganese	1250.0	✓1277.50	102.2	1250.0	✓1284.02	102.7	✓1297.06	103.8	P
Mercury	5.0	✓4.96	99.2	5.0	✓4.95	99.2	✓5.07	101.4	CV
Nickel	1250.0	✓1259.00	100.7	1250.0	✓1258.64	100.7	✓1282.92	102.6	P
Potassium	12500.0	✓12612.49	102.5	12500.0	✓12957.75	103.7	✓12618.80	102.6	P
Selenium	50.0	✓53.70	107.4	50.0	✓53.00	106.0	✓49.00	98.0	F
Silver	625.0	✓631.63	101.1	625.0	✓636.19	101.8	✓641.32	102.6	P
Sodium	12500.0	✓12661.07	102.9	12500.0	✓12966.64	103.7	✓13127.91	105.0	P
Thallium	50.0	✓52.60	105.2	50.0	✓50.90	101.8	✓51.00	102.0	F
Vanadium	1250.0	✓1269.88	101.6	1250.0	✓1270.00	101.6	✓1300.46	104.0	P
Zinc	1250.0	✓1288.20	103.1	1250.0	✓1287.30	103.0	✓1302.78	104.2	P
Cyanide	94.0	✓96.17	102.3	100.0	✓100.50	100.5	✓95.71	95.7	AS

(1) Control Limits: Mercury 80-120; Other Metals 80-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				5000.0	✓5259.64	105.2			P
Antimony				5000.0	✓4983.30	99.7			P
Arsenic				50.0	✓47.70	95.4	✓49.10	98.2	F
Barium				5000.0	✓5158.99	103.2			P
Beryllium				125.0	✓125.03	100.0			P
Cadmium				1250.0	✓1294.38	103.6			P
Calcium				12500.0	✓12018.33	96.1			P
Chromium				500.0	✓498.54	99.7			P
Cobalt				1250.0	✓1259.84	100.8			P
Copper				625.0	✓622.54	99.6			P
Iron				2500.0	✓2683.41	107.3			P
Lead				2500.0	✓2509.88	100.4			P
Magnesium				12500.0	✓12247.58	98.0			P
Manganese				1250.0	✓1284.75	102.8			P
Mercury				5.0	✓4.96	99.2	✓4.96	99.2	CV
Nickel				1250.0	✓1264.35	101.1			P
Potassium				12500.0	✓12758.19	102.1			P
Selenium				50.0	✓49.80	99.6	✓47.90	95.8	F
Silver				625.0	✓630.32	100.9			P
Sodium				12500.0	✓12998.85	103.9			P
Thallium				50.0	✓50.70	101.4	✓47.80	95.6	F
Vanadium				1250.0	✓1278.54	102.3			P
Zinc				1250.0	✓1288.24	103.1			P
Cyanide				100.0	✓100.05	100.0			AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: TEA

Contract:

Lab Code: TEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	5000.0	✓ 5193.63	103.9	5000.0	✓ 5300.06	106.0	✓ 5185.46	103.7	P
Antimony	5000.0	✓ 5208.31	104.2	5000.0	✓ 4918.98	98.4	✓ 4868.53	97.4	P
Arsenic	50.0	✓ 53.80	107.6	50.0	✓ 52.80	105.6	✓ 50.80	101.6	F
Barium	5000.0	✓ 4858.93	97.2	5000.0	✓ 4935.96	98.7	✓ 4830.37	96.6	P
Beryllium	125.0	✓ 124.59	99.7	125.0	✓ 126.92	101.5	✓ 124.77	99.8	P
Cadmium	1250.0	✓ 1197.95	95.8	1250.0	✓ 1228.33	98.3	✓ 1223.07	97.8	P
Calcium	12500.0	✓ 11656.34	93.3	12500.0	✓ 11899.24	95.2	✓ 11639.96	93.1	P
Chromium	500.0	✓ 476.75	95.4	500.0	✓ 485.73	97.1	✓ 468.41	93.7	P
Cobalt	1250.0	✓ 1224.37	97.9	1250.0	✓ 1244.51	99.6	✓ 1211.96	97.0	P
Copper	625.0	✓ 597.08	95.5	625.0	✓ 600.14	96.0	✓ 585.78	93.7	P
Iron	2500.0	✓ 2532.59	101.3	2500.0	✓ 2553.01	102.1	✓ 2497.53	99.9	P
Lead	50.0	✓ 52.50	105.0	50.0	✓ 51.30	102.6	✓ 53.10	106.2	F
Magnesium	12500.0	✓ 12006.47	96.1	12500.0	✓ 12231.78	97.9	✓ 12083.14	96.7	P
Manganese	1250.0	✓ 1223.49	97.9	1250.0	✓ 1246.75	99.7	✓ 1219.52	97.6	P
Mercury				5.0	✓ 4.96	99.2	✓ 4.90	98.0	CV
Nickel	1250.0	✓ 1219.76	97.6	1250.0	✓ 1228.05	98.2	✓ 1219.19	97.5	P
Potassium	12500.0	✓ 12405.23	99.2	12500.0	✓ 12507.66	100.1	✓ 12281.59	98.3	P
Selenium	50.0	✓ 51.50	103.0	50.0	✓ 51.80	103.6	✓ 50.80	101.6	F
Silver	625.0	✓ 603.52	96.6	625.0	✓ 612.97	98.1	✓ 601.28	96.2	P
Sodium	12500.0	✓ 12395.32	99.2	12500.0	✓ 12626.06	101.0	✓ 12577.49	100.6	P
Thallium	50.0	✓ 51.40	102.8	50.0	✓ 50.90	101.8	✓ 49.40	98.8	F
Vanadium	1250.0	✓ 1209.35	96.7	1250.0	✓ 1223.81	97.9	✓ 1193.45	95.5	P
Zinc	1250.0	✓ 1237.20	99.0	1250.0	✓ 1258.27	100.7	✓ 1235.40	98.8	P
Cyanide	94.0	✓ 98.01	104.3	100.0	✓ 98.84	98.8	✓ 92.01	92.0	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				5000.0	✓5198.36	104.0			P
Antimony				5000.0	✓4831.56	96.6			P
Arsenic				50.0	✓50.70	101.4			F
Barium				5000.0	✓4830.37	96.6			P
Beryllium				125.0	✓123.88	99.1			P
Cadmium				1250.0	✓1209.37	96.7			P
Calcium				12500.0	✓11574.41	92.6			P
Chromium				500.0	✓465.85	93.2			P
Cobalt				1250.0	✓1203.29	96.3			P
Copper				625.0	✓584.86	93.6			P
Iron				2500.0	✓2485.61	99.4			P
Lead				50.0	✓53.00	106.0	✓54.20	108.4	F
Magnesium				12500.0	✓12056.34	96.5			P
Manganese				1250.0	✓1212.71	97.0			P
Mercury	5.0	✓4.89	97.8	5.0	✓4.95	99.0	✓5.12	102.4	CV
Nickel				1250.0	✓1210.92	96.9			P
Potassium				12500.0	✓12496.72	100.0			P
Selenium	50.0	✓51.50	103.0	50.0	✓50.60	101.2	✓47.70	95.4	F
Silver				625.0	✓599.80	96.0			P
Sodium				12500.0	✓12545.66	100.4			P
Thallium	50.0	✓52.90	105.8	50.0	✓53.30	106.6	✓51.60	103.2	F
Vanadium				1250.0	✓1193.08	95.4			P
Zinc				1250.0	✓1226.49	98.1			P
Cyanide				100.0	✓94.69	94.7	✓95.32	95.3	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic	50.0	✓ 53.70	107.4	50.0	✓ 53.70	107.4	✓ 48.20	96.4	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	50.0	✓ 51.40	102.8	50.0	✓ 51.00	102.0	✓ 52.70	105.4	F
Magnesium									NR
Manganese									NR
Mercury				5.0	✓ 5.01	100.2	✓ 4.95	99.0	CV
Nickel									NR
Potassium									NR
Selenium				50.0	✓ 48.00	96.0	✓ 48.40	96.8	F
Silver									NR
Sodium									NR
Thallium				50.0	✓ 53.60	107.2	✓ 52.70	105.4	F
Vanadium									NR
Zinc									NR
Cyanide				100.0	✓ 97.70	97.7			AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic	50.0	✓ 51.80	103.6	50.0	✓ 52.50	105.0	✓ 48.70	97.4	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				50.0	✓ 52.00	104.0			F
Magnesium									NR
Manganese									NR
Mercury				5.0	✓ 5.12	102.4	✓ 5.06	101.2	CV
Nickel									NR
Potassium									NR
Selenium	50.0	✓ 51.80	103.6	50.0	✓ 53.10	106.2	✓ 47.90	95.8	F
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic				50.0	47.90	95.8	50.50	101.0	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	50.0	52.00	104.0	50.0	52.70	105.4	52.40	104.8	F
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium				50.0	49.10	98.2	47.20	94.4	F
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic				50.0	50.30	100.6			F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				50.0	54.90	109.8			F
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Initial Calibration Source: INORG. VENT.

Continuing Calibration Source: INORG. VENT.

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	50.0	/ 50.10	100.2	50.0	/ 50.40	100.8	/ 51.10	102.2	F
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 80-110; Cyanide 85-115

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U.S. EPA - CLP

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z

AA CRDL Standard Source: INORG. VENT.

ICP CRDL Standard Source: INORG. VENT.

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum				400.0	/ 426.89	106.7	/ 435.16	108.8
Antimony				120.0	/ 127.15	106.0	/ 125.43	104.5
Arsenic	10.0	/ 10.00	100.0					
Barium				400.0	/ 406.85	101.7	/ 413.77	103.4
Beryllium				10.0	/ 8.86	88.6	/ 9.28	92.8
Cadmium				10.0	/ 10.53	105.3	/ 10.88	108.8
Calcium					/ 16.10		/ 11.53	
Chromium				20.0	/ 19.60	98.0	/ 22.46	112.3
Cobalt				100.0	/ 100.66	100.7	/ 101.41	101.4
Copper				50.0	/ 45.09	90.2	/ 52.78	105.6
Iron				200.0	/ 235.98	118.0	/ 265.73	132.9
Lead	3.0	3.30	110.0	48.0	/ 39.66	82.6	/ 27.98	58.3
Magnesium					/ 8.78		/ 12.86	
Manganese				30.0	/ 31.13	103.8	/ 32.58	108.6
Mercury								
Nickel				80.0	/ 94.96	118.7	/ 91.74	114.7
Potassium					/ 411.16		/ 96.75	
Selenium	5.0	/ 4.70	94.0					
Silver				20.0	/ 18.47	92.4	/ 19.23	96.2
Sodium					/ 40.55		/ 40.14	
Thallium	10.0	/ 9.70	97.0					
Vanadium				100.0	/ 97.51	97.5	/ 87.52	87.5
Zinc				40.0	/ 39.52	98.9	/ 40.86	102.2

laboratory did not report value for CRDL standard analyzed
 12/13/93 at 2:23 on instrument 5100 for lead.

1983

1 : CRA

Replicate 1
 Peak Area (A-s): 0.01
 Background PK Area (A-s): 0.00
 Blank Corrected PK Area (A-s): 0.007
 Concentration (ug/L): 3.3

Time: 02:11
 Peak Height (A): 0.007
 Background PK Height (A): 0.000

Replicate 2
 Peak Area (A-s): 0.01
 Background PK Area (A-s): 0.00
 Blank Corrected PK Area (A-s): 0.002
 Concentration (ug/L): 3.3

Time: 02:12
 Peak Height (A): 0.007
 Background PK Height (A): 0.000

Mean Conc (ug/L):

3.3

SD: 0.00

RSD(%): 0.00

All sample is within range

Pb ID: LCV(50)

Seq. No.: 00125

A/S Pos.: 37

Date: 12/13/93

Replicate 1
 Peak Area (A-s): 0.313
 Background PK Area (A-s): 0.118
 Blank Corrected PK Area (A-s): 0.312
 Concentration (ug/L): 51.4

Time: 02:28
 Peak Height (A): 0.463
 Background PK Height (A): 0.160

Replicate 2
 Peak Area (A-s): 0.312
 Background PK Area (A-s): 0.121
 Blank Corrected PK Area (A-s): 0.312
 Concentration (ug/L): 51.3

Time: 02:30
 Peak Height (A): 0.467
 Background PK Height (A): 0.161

Mean Conc (ug/L):

51.3

SD: 0.11

RSD(%): 0.22

All sample is within range 44.8 - 55.2

Pb ID: DCE

Seq. No.: 00170

A/S Pos.: 38

Date: 12/13/93

Replicate 1
 Peak Area (A-s): 0.000
 Background PK Area (A-s): 0.017
 Blank Corrected PK Area (A-s): -0.001
 Concentration (ug/L): 0.0

Time: 02:33
 Peak Height (A): 0.004
 Background PK Height (A): 0.020

Replicate 2
 Peak Area (A-s): 0.000
 Background PK Area (A-s): 0.017
 Blank Corrected PK Area (A-s): 0.001
 Concentration (ug/L): 0.0

Time: 02:35
 Peak Height (A): 0.005
 Background PK Height (A): 0.024

Mean Conc (ug/L):

0.0

SD: 0.16

RSD(%): 551.21

All sample is within range

1778 avg
12/71
1779

U.S. EPA - CLP

28

CRDL STANDARD FOR AA AND ICP

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

AA CRDL Standard Source: INORG. VENT.

ICP CRDL Standard Source: INORG. VENT.

Concentration Units: ug/L

85-115%

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum				400.0	✓ 398.98	99.7	✓ 400.29	100.1
Antimony				120.0	✓ 111.72	93.1	✓ 117.29	97.7
Arsenic	10.0	✓ 9.90	99.0					
Barium				400.0	✓ 368.31	92.1	✓ 376.98	94.2
Beryllium				10.0	✓ 9.13	91.3	✓ 9.30	93.0
Cadmium				10.0	✓ 10.67	106.7	✓ 9.61	96.1
Calcium					✓ 21.79		✓ 19.64	
Chromium				20.0	✓ 20.18	100.9	✓ 20.19	101.0
Cobalt				100.0	✓ 95.03	95.0	✓ 94.58	94.6
Copper				50.0	✓ 46.75	93.5	✓ 43.08	86.2
Iron				200.0	✓ 194.02	97.0	✓ 193.68	96.8
Lead	3.0	✓ 2.30	76.7					
Magnesium					✓ -5.46		✓ -1.92	
Manganese				30.0	✓ 28.92	96.4	✓ 28.92	96.4
Mercury								
Nickel				80.0	✓ 73.43	91.8	✓ 69.57	87.0
Potassium					✓ 161.36		✓ 26.89	
Selenium	5.0	✓ 5.40	108.0					
Silver				20.0	✓ 19.98	99.9	✓ 19.23	96.2
Sodium					✓ 60.83		✓ 60.80	
Thallium	10.0	✓ 10.10	101.0					
Vanadium				100.0	✓ 103.90	103.9	✓ 84.80	84.8
Zinc				40.0	✓ 33.77	84.4	✓ 35.35	88.4

Pb: NT (no ⊕ results within α limits)

1780

U.S. EPA - CLP

2B

CRDL STANDARD FOR AA AND ICP

Contract:

o Name: IEA

SAS No.:

SDG No.: Z

o Code: IEA

Case No.: 1325

CRDL Standard Source: INORG. VENT.

P CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Ar. ic	10.0	✓ 10.10	101.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	3.0	✓ 2.80	93.3					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	5.0	✓ 4.90	98.0					
Silver								
Sodium								
Thallium	10.0	✓ 10.60	106.0					
Vanadium								
Zinc								

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U.S. EPA - CLP

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

AA CRDL Standard Source: INORG. VENT.

ICP CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic	10.0	✓ 9.60	96.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	3.0	✓ 2.20	73.3					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	5.0	✓ 5.20	104.0					
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

Pb: 45

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum	✓ 37.0	U	✓ 37.0	U	✓ 37.0	U	✓ 37.0	U	✓ 7.400	U	P
Antimony	✓ 21.0	U	✓ 21.0	U	✓ 21.0	U	✓ 21.0	U	✓ 4.200	U	P
Arsenic	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 0.200	U	F
Barium	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 0.400	U	P
Beryllium	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 0.200	U	P
Cadmium	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 0.400	U	P
Calcium	✓ 15.0	U	✓ 15.0	U	✓ 15.0	U	✓ 15.0	U	✓ 3.000	U	P
Chromium	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 0.600	U	P
Cobalt	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 0.600	U	P
Copper	✓ 7.0	U	✓ 7.0	U	✓ 7.0	U	✓ 7.0	U	✓ 1.464	B	P
Iron	✓ 87.0	U	✓ 87.0	U	✓ 87.0	U	✓ 87.0	U	✓ 17.400	U	P
Lead	✓ 14.0	U	✓ 21.4	U	✓ 14.0	U	✓ 14.0	U	✓ 2.800	U	P
Magnesium	✓ 18.0	U	✓ 18.0	U	✓ 18.0	U	✓ 20.8	B	✓ 3.884	B	P
Manganese	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 0.400	U	P
Mercury	✓ 0.2	U	✓ 0.2	U	✓ 0.2	U	✓ 0.2	U	✓ 0.100	U	CV
Nickel	✓ 11.4	B	✓ 11.0	U	✓ 11.0	U	✓ 11.0	U	✓ 2.210	B	P
Potassium	✓ 473.0	U	✓ 473.0	U	✓ 473.0	U	✓ 473.0	U	✓ 94.600	U	P
Selenium	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 0.400	U	F
Silver	✓ 2.0	U	✓ 2.0	U	✓ 2.0	B	✓ 2.0	U	✓ 0.400	U	P
Sodium	✓ 121.0	U	✓ 121.0	U	✓ 121.0	U	✓ 121.0	U	✓ 24.200	U	P
Thallium	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 0.200	U	F
Vanadium	✓ 16.0	U	✓ 16.0	U	✓ 16.0	U	✓ 16.0	U	✓ 3.200	U	P
Zinc	✓ 4.0	U	✓ 4.0	U	✓ 4.0	U	✓ 4.0	U	✓ 0.800	U	P
Cyanide	✓ 20.0	U	✓ 20.0	U	✓ 20.0	U	✓ 20.0	U	✓ 2.500	U	AS

U.S. EPA - CLP

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BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum	✓ 37.0	U	✓ 37.0	U	✓ 37.0	U	✓ 37.0	U			P
Antimony	✓ 21.0	U	✓ 21.0	U	✓ 21.0	U	✓ 21.0	U			P
Arsenic			✓ 1.0	U							F
Barium	✓ 2.0	U	✓ 2.0	B	✓ 2.0	U	✓ 2.0	U			P
Beryllium	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U			P
Cadmium	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U			P
Calcium	✓ 15.0	U	✓ 15.0	U	✓ 15.0	U	✓ 15.0	U			P
Chromium	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U			P
Cobalt	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U	✓ 3.0	U			P
Copper	✓ 7.0	U	✓ 7.0	U	✓ 7.0	U	✓ 7.0	U			P
Iron	✓ 87.0	U	✓ 87.0	U	✓ 87.0	U	✓ 87.0	U			P
Lead	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 0.400	U	F
Magnesium	✓ 18.0	U	✓ 18.0	U	✓ 18.0	U	✓ 18.0	U			P
Manganese	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U			P
Mercury			✓ 0.2	U	✓ 0.2	U	✓ 0.2	U			CV
Nickel	✓ 11.0	U	✓ 11.0	U	✓ 11.0	U	✓ 11.0	U			P
Potassium	✓ 473.0	U	✓ 473.0	U	✓ 473.0	U	✓ 473.0	U			P
Selenium			✓ 2.0	U							F
Silver	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U			P
Sodium	✓ 121.0	U	✓ 121.0	U	✓ 121.0	U	✓ 121.0	U			P
Thallium			✓ 1.0	U							F
Vanadium	✓ 16.0	U	✓ 16.0	U	✓ 16.0	U	✓ 16.0	U			P
Zinc	✓ 4.0	U	✓ 4.0	U	✓ 4.0	U	✓ 4.0	U			P
Cyanide	✓ 20.0	U	✓ 20.0	U	✓ 20.0	U	✓ 20.0	U			AS

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum									✓ 36.963	U	P
Antimony									✓ 20.979	U	P
Arsenic	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.000	U	F
Barium									✓ 1.998	U	P
Beryllium									✓ 0.999	U	P
Cadmium									✓ 1.998	U	P
Calcium									✓ 14.985	U	P
Chromium									✓ 2.997	U	P
Cobalt									✓ 2.997	U	P
Copper									✓ 6.993	U	P
Iron									✓ 86.913	U	P
Lead			✓ 2.0	U					✓ 2.000	U	F
Magnesium									✓ 17.982	U	P
Manganese									✓ 1.998	U	P
Mercury	✓ 0.2	U	✓ 0.2	U	✓ 0.2	U	✓ 0.2	U	✓ 0.200	U	CV
Nickel									✓ 10.989	U	P
Potassium									✓ 472.527	U	P
Selenium	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U			✓ 2.000	U	F
Silver									✓ 1.998	U	P
Sodium									✓ 120.872	U	P
Thallium	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U			✓ 1.000	U	F
Vanadium									✓ 15.984	U	P
Zinc									✓ 3.996	U	P
Cyanide			✓ 20.0	U	✓ 20.0	U			✓ 10.000	U	AS

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum											NR
Antimony											NR
Arsenic	/ 1.0	U	/ 1.0	U	/ 1.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	/ 2.0	U	/ 2.0	U	/ 2.0	U	/ 2.0	U			F
Magnesium											NR
Manganese											NR
Mercury			/ 0.2	U	/ 0.2	U	/ 0.2	U			CV
Nickel											NR
Potassium											NR
Selenium	/ 2.0	U	/ 2.0	U	/ 2.0	U	/ 2.0	U			F
Silver											NR
Sodium											NR
Thallium	/ 1.0	U	/ 1.0	U	/ 1.0	U	/ 1.0	U			F
Vanadium											NR
Zinc											NR
Cyanide											NR

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum											NR
Antimony											NR
Arsenic	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U	✓ 1.0	U			F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U	✓ 2.0	U			F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium			✓ 2.0	U							F
Silver											NR
Sodium											NR
Thallium			✓ 1.0	U							F
Vanadium											NR
Zinc											NR
Cyanide											NR

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum											NR
Antimony											NR
Arsenic			/ 1.0	U	/ 1.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	/ 2.0	U	/ 2.0	U	/ 2.0	U					F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium	/ 2.0	U	/ 2.0	U	/ 2.0	U	/ 2.0	U			F
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

3
BLANKS

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
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			/ 2.0 U								NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number: JA61

ICS Source: EPA-LV87

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found			
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R	
Aluminum	500000	500000	✓ 507730	✓ 531982.2	106.4	✓ 505096	✓ 527922.8	105.6	352, 54
Antimony			✓ 25	✓ -15.5		✓ 29	✓ 67.1		
Arsenic									
Barium		500	✓ -5	✓ 497.3	99.5	✓ -4	✓ 504.2	100.8	IDL 20
Beryllium		500	✓ -15	✓ 477.2	95.4	✓ -5	✓ 486.8	97.4	IDL 1.
Cadmium		1000	✓ -8	✓ 960.0	96.0	✓ -7	✓ 975.0	97.5	IDL 2.
Calcium	500000	500000	✓ 443392	✓ 462970.2	92.6	✓ 447223	✓ 465260.9	93.1	33, 67
Chromium		500	✓ -10	✓ 463.9	92.8	✓ -4	✓ 458.6	91.7	IDL 3.0
Cobalt		500	✓ 0	✓ 450.7	90.1	✓ 0	✓ 450.5	90.1	
Copper		500	✓ -14	✓ 469.0	93.8	✓ -9	✓ 473.0	94.6	IDL 7.0
Iron	200000	200000	✓ 185151	✓ 192781.2	96.4	✓ 186892	✓ 193233.5	96.6	72, 57
Lead		1000	✓ -80	✓ 853.0	85.2	✓ -86	✓ 865.2	86.5	IDL 74.
Magnesium	500000	500000	✓ 463342	✓ 484411.0	96.0	✓ 465259	✓ 485169.6	97.0	33, 67
Manganese		500	✓ 4	✓ 478.8	95.8	✓ 3	✓ 478.8	95.8	IDL 2.0
Mercury									
Nickel		1000	✓ 1	✓ 908.4	90.8	✓ 2	✓ 887.3	88.7	
Potassium			✓ 1910	✓ 438.0		✓ 1550	✓ 493.2		IDL 43.
Selenium									
Silver		1000	✓ -2	✓ 968.0	96.8	✓ -1	✓ 962.1	96.2	
Sodium			✓ 46	✓ -5.5		✓ 58	✓ -19.4		
Thallium									
Vanadium		500	✓ 5	✓ 482.8	96.6	✓ 5	✓ 490.5	98.1	
Zinc		1000	✓ 9	✓ 954.0	95.4	✓ 9	✓ 958.5	95.8	IDL 4.

plus < 20 ug/L in KCH / T

No impact for associated samples

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

1790

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number: JA61

ICS Source: EPA-LV87

Concentration Units: ug/L

ON 12/31/87

Analyte	True		Initial Found			Final Found			
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R	
Aluminum	500000	500000	(512791)	542403.6	108.5	(500153)	481891.2	96.4	(250.8)
Antimony			(57)	93.7		(81)	65.1		(104.2)
Arsenic									
Barium		500	3	490.7	98.1	2	502.4	100.5	
Beryllium		500	(119)	495.4	124.6	(122)	502.9	129.5	(101.5)
Cadmium		1000	(-18)	937.2	93.7	(-17)	950.9	95.1	(104.2)
Calcium	500000	500000	439536	464895.9	93.0	(430847)	416718.0	83.3	(215.4)
Chromium		500	-2	456.8	91.4	-5	469.0	93.8	
Cobalt		500	(10)	460.2	92.0	(8)	463.5	92.7	(104.3)
Copper		500	3	474.1	94.8	-2	478.4	95.7	
Iron	200000	200000	180544	188556.0	94.3	(475709)	169437.3	84.7	(87.8)
Lead									
Magnesium	500000	500000	466481	492908.2	98.6	(457653)	441360.5	88.3	(128.8)
Manganese		500	3	467.1	93.4	1	474.9	95.0	
Mercury									
Nickel		1000	-5	889.6	89.0	-6	897.3	89.7	
Potassium			0	37.7		191	105.5		
Selenium									
Silver		1000	-2	979.8	98.0	0	971.3	97.1	
Sodium			-5	11.8		-7	36.7		
Thallium									
Vanadium		500	19	485.0	97.0	16	485.4	97.1	
Zinc		1000	(17)	961.1	96.1	(16)	1074.7	107.5	(104.4)

76: impact on associated sample (FB 112413)

1791

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

EB-35
1325025
24/11/11

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 73.7

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony	75-125	/ 90.2204	/ 5.5273 B	128.00	66.2	N	P w/J
Arsenic	75-125	/ 13.8952	/ 4.1986	10.05	96.5	F	P
Barium	75-125	/ 570.6792	/ 53.5880	512.02	101.0	P	P
Beryllium	75-125	/ 12.7365	/ 0.2560 U	12.80	99.5	P	P
Cadmium	75-125	/ 12.3166	/ 1.0650 B	12.80	87.9	P	P
Calcium							NR
Chromium	75-125	/ 94.8260	/ 42.4797	51.20	102.2	P	P
Cobalt	75-125	/ 132.7974	/ 8.3050 B	128.00	97.3	P	P
Copper		/ 325.4602	/ 265.4976	64.00	93.7	P	P
Iron							NR
Lead		/ 77.8934	/ 84.2272	5.03	-125.9	F	P w/J
Magnesium							NR
Manganese	75-125	/ 283.9917	/ 160.2826	128.00	96.6	P	P
Mercury	75-125	0.4572 0.1178	/ 0.2282	0.62	98.0	N	CV w/J
Nickel	75-125	/ 158.4496	/ 31.1103	128.00	99.5	P	P
Potassium							NR
Selenium	75-125	/ 1.7840	/ 0.5120 U	2.51	71.1	N	P w/J
Silver	75-125	/ 9.7156	/ 26.8478	12.80	-133.8	N	P w/J
Sodium							NR
Thallium	75-125	/ 12.5634	/ 0.2560 U	12.56	100.0	F	P
Vanadium	75-125	/ 168.0705	/ 44.9016	128.00	96.2	P	P
Zinc	75-125	/ 426.4842	/ 312.3115	128.00	89.2	P	P
Cyanide	75-125	/ 33.3801	/ 3.3921 U	33.75	98.9	AS	P

Comments:

- Result for lead acceptable; sample result is 74X amount spike added.

1792

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

E8.3J
132503S
04/12/10

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 73.7

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	217.9412		88.5512		128.00	101.1	P	NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

1793

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: IEA

Contract:

EB-3A

132503A

01/12/91

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix (soil/water): SOIL

Level (low/med): LOW

Concentration Units: ug/L

01/12/91

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA) C	%R	Q	M
Aluminum							
Antimony		35.5277	5.5298	30.72	97.8		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							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide							NR

Comments:

1794

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

E8-30

1325030

04/12/00

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 73.7

% Solids for Duplicate: 74.1

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

CEBL (7.5/102)

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
51.2 Aluminum		8273.4031		7829.9563		5.5		P
15.34 Antimony		5.5273	B	5.2766	U	200.0		P
3.56 Arsenic	2.6	4.1986		4.1962		0.1		F
51.2 Barium	51.2	53.5880		48.7914	B	9.4		P
1.28 Beryllium		0.2560	U	0.2513	U			P
1.28 Cadmium	1.3	1.0650	B	1.2639		17.1		P
1280 Calcium	1280	1184.3271	B	1129.3382	B	4.8		P
Chromium		42.4797		47.0375		10.2		P
12.4 Cobalt		8.3050	B	7.8597	B	5.5		P
6.4 Copper		265.4976		261.3021		1.6		P
25.6 Iron		15263.5460		15327.4430		0.4		P
0.768 Lead		84.2272		85.6827		1.7		F
1280 Magnesium	1280.0	2443.0967		2444.6279		0.1		P
3.84 Manganese		160.2826		155.1359		3.3		P
0.0512 Mercury	0.1	0.2282		0.1789		24.2		CV
10.24 Nickel	10.2	31.1103		29.2804		6.1		P
1280 Potassium		479.2197	B	515.9707	B	7.4		P
1.28 Selenium		0.5120	U	0.5025	U			F
3.56 Silver		26.8478		25.8003		4.0		P
1280 Sodium		106.9788	B	101.4197	B	5.3		P
2.56 Thallium		0.2560	U	0.2513	U			F
12.8 Vanadium	12.8	44.9016		40.4216		10.5		P
5.12 Zinc		312.3115		310.9930		0.4		P
Cyanide	1.7	3.3921	U	3.3921	U			HS

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

E3-3D

1325030

D.P. 12/21/91

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 73.7

% Solids for Duplicate: 74.1

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead		88.5512		91.2408		3.0		P
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Cyanide								NR

EVALUATION OF DUPLICATE/REPLICATE/TRIPPLICATE ANALYSIS PRECISION				
PRECISION OBJECTIVES	AQUEOUS		SOLID/OTHER	
	Duplicates	Triplicates	Duplicates	Triplicates
	All Parameters	Within 20% RPD (1)	Within 20% RSD (2)	Within 40% RPD (1)

ANALYSIS #1 SAMPLE IDENTIFICATION: WB-1 Matrix (circle one): Aqueous or Solid Other _____

ANALYSIS #2 SAMPLE IDENTIFICATION: SDG-2 DUP Units (circle one): ug/L, ug/Kg, mg/Kg

ANALYSIS #3 SAMPLE IDENTIFICATION: _____ other unit: _____

PARAMETER	ANALYSIS #1	ANALYSIS #2	ANALYSIS #3	RPD (#1 and #2)	RSD (#1, #2 and #3)	FOOTNOTES
	SAMPLE CONCENTRATION	SAMPLE CONCENTRATION	SAMPLE CONCENTRATION			
aluminum	5220	10100		63.7		B
antimony						
arsenic	8.8	16		58.1		A
barium						
beryllium						
cadmium	2.7	7.2		80.9		B
calcium	1300	5880		127.6		B
chromium	42.6	156		114.2		B
cobalt						
copper	682	2060		100.5		B
iron	15100	22400		38.9		A
lead	383	1820		130.5		B
magnesium	1510	4450		98.7		A
manganese	53.3	97.4		58.5		B
mercury	1.4	2		35.3		A
nickel	40	90.1		77.0		B
potassium						
selenium						
silver	199	446		76.6		B
sodium						
thallium						
vanadium	69.3	250		113.2		B
zinc	404	982		84.2		B
cyanide						

NOTES:

1 - The RPD acceptance limits are used when the concentrations in both samples exceed 5 X the CRDL/CRQL/QL. If any sample concentration is less than 5X the CRDL/CRQL/QL, the acceptance limit is +/- the CRDL/CRQL/QL for aqueous samples and +/- 2X CRDL/CRQL/QL for solids. When the result is not-detected, the IDL/MDL will be used when provided or half the CRQL/QL will be used as the result for evaluation.

2 - The RSD acceptance limits are used when the concentrations in all samples exceed 6 X the CRDL/CRQL/QL. If any sample concentration is less than 6X the CRDL/CRQL/QL, the acceptance limit range is +/- the CRDL/CRQL/QL for aqueous samples and +/- 2X CRDL/CRQL/QL for solids. When the result is non-detected, half the CRDL/CRQL/QL will be used as the result for evaluation.

FOOTNOTE:

A - Results acceptable

B - Results unacceptable

7
LABORATORY CONTROL SAMPLE

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Solid LCS Source: EPA-LV87

Aqueous LCS Source: INORG. VENT.

No qualification: true
value is < 3XIDL

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	3750.0	✓3994.25	106.5	6000.0	✓4447.9	3600.0	8400.0	74.1
Antimony	500.0	✓505.76	101.2	27.8	✓90.5	14.0	117.0	325.5
Arsenic	50.0	✓48.70	97.4	67.7	✓76.8	41.0	105.0	113.4
Barium	300.0	✓294.84	98.3	187.0	✓183.4	131.0	243.0	98.1
Beryllium	100.0	✓99.59	99.6	57.5	✓55.2	35.0	81.0	96.0
Cadmium	300.0	✓297.15	99.0	110.0	✓114.7	55.0	166.0	104.3
Calcium	18750.0	✓17743.95	94.6	2040.0	✓1753.7	1220.0	2860.0	86.0
Chromium	300.0	✓300.61	100.2	189.0	✓151.8	95.0	265.0	80.3
Cobalt	300.0	✓302.70	100.9	87.0	✓85.6	43.0	130.0	98.4
Copper	300.0	✓309.44	103.1	141.0	✓135.5	84.0	200.0	96.1
Iron	15625.0	✓16007.08	102.4	10800.0	✓13502.5	7020.0	15100.0	125.0
Lead	50.0	✓51.20	102.4	100.0	✓91.1	55.0	140.0	91.1
Magnesium	9375.0	✓9050.93	96.5	2050.0	✓1464.6	1200.0	3080.0	71.4
Manganese	200.0	✓200.06	100.0	294.0	✓269.7	206.0	383.0	91.7
Mercury				12.7	✓11.4	8.5	17.0	89.8
Nickel	300.0	✓295.82	98.6	79.6	✓81.3	40.0	112.0	102.1
Potassium	20000.0	✓20626.73	103.1	2130.0	✓1947.2	1280.0	2770.0	91.4
Selenium	25.0	✓23.60	94.4	99.1	✓108.4	54.0	149.0	109.4
Silver	300.0	✓298.25	99.4	124.0	✓105.8	62.0	186.0	85.3
Sodium	3125.0	✓3328.59	106.5	527.0	✓547.7	316.0	738.0	103.9
Thallium	50.0	✓50.20	100.4	67.9	✓67.6	34.0	102.0	99.6
Vanadium	300.0	✓301.52	100.5	84.8	✓64.7	59.0	115.0	76.3
Zinc	300.0	✓332.24	110.7	197.0	✓185.6	98.0	280.0	94.2
Cyanide								

7
LABORATORY CONTROL SAMPLE

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Solid LCS Source: EPA-LV87

Aqueous LCS Source: INORG. VENT.

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead				100.0	✓ 90.4		55.0 140.0	90.4
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

IEA
200 Monroe Turnpike
Monroe, CT 06468 (203) 452-8200
CLASSICAL CHEMISTRY QA/QC SUMMARY

Analyte: Cyan-ClPDate: 12/04/93Ref: 93120400-E

LABORATORY CONTROL SAMPLE

Reference	True Value	Value Found	% Recovery
CPR-LV ICV6 (0789)	94.00 $\mu\text{g/L}$	96.17 $\mu\text{g/L}$	102.3%

SAMPLE SPIKE

Lab Sample ID	Spike Result	Sample Result	Amount Added	% Recovery
1314014	177.0728 $\mu\text{g/L}$	71.2790 $\mu\text{g/L}$	108.70 $\mu\text{g/L}$	97.3%

DUPLICATES

Lab Sample ID	Result 1	Result 2	Mean	CPO
1314013	<10.0 $\mu\text{g/L}$	<10.5 $\mu\text{g/L}$	-	NC

PREP BLANK

Blank ID	Result
PBW	<10.0 $\mu\text{g/L}$

Samples in Batch:	Comments:
1314013-014	
1325012	
1321001	

2168

IEA
200 Monroe Turnpike
Monroe, CT 06468 (203) 452-8200
CLASSICAL CHEMISTRY QA/QC SUMMARY

Analyte: Cyan-CLPDate: 12/07/93Ref: 93120708

LABORATORY CONTROL SAMPLE

Reference	True Value	Value Found	% Recovery
EPA-LV ICVW(0789)	94.00 $\mu\text{g/L}$	98.01 $\mu\text{g/L}$	104.3%

SAMPLE SPIKE

Lab Sample ID	Spike Conc	Sample Result	Amount Added	% Recovery
1325003	33.3801 mg/kg	< 3.4 mg/kg	33.75 mg/kg	98.9%

DUPLICATES

Lab Sample ID	Result 1	Result 2	Mean	CPO
1325003	< 3.4 mg/kg	< 3.4 mg/kg	< 3.4 mg/kg	NC

PREP BLANK

Blank ID	Result
PBS	< 2.5 mg/kg

Samples in Batch:	Comments:
1325001-011	
1322001-009	

STANDARD ADDITION RESULTS

Contract:

SAS No. :

SDG No. : Z1325

Concentration Units: ug/l.

[illegible]

1799

U.S. EPA - CLP

9
ICP SERIAL DILUTIONS

EPA SAMPLE NO.

E8.3L

132503L

04/12/81

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: 71325

Matrix (soil/water): SOIL

Level (low/med): LOW

Concentration Units: ug/L

	Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ- ence	Q	M
1250	Aluminum	32316.74	-	34559.10	-	6.9	✓	P
	Antimony	21.59	B	105.00	U	100.0		P
	Arsenic							F
100	Barium	209.32	-	183.35	B	12.4	✓	P
	Beryllium	1.00	U	5.00	U			P
	Cadmium	4.16	B	10.00	U	100.0		P
750	Calcium	4626.10	B	5055.25	B	9.3	✓	P
150	Chromium	165.93	-	183.85	-	0.8	✓	P
	Cobalt	32.44	B	33.05	B	1.9		P
350	Copper	1037.06	-	1139.75	-	9.9	✓	P
4350	Iron	59620.94	-	64457.05	-	8.1	✓	P
	Lead	345.89	-	388.95	-	12.4	✓	P
900	Magnesium	9542.98	-	10390.00	B	8.9	✓	P
100	Manganese	626.08	-	666.65	-	6.5	✓	P
	Mercury							CV
	Nickel	121.52	-	179.00	B	47.3		P
	Potassium	1871.88	B	2549.90	B	36.2		P
	Selenium							F
100	Silver	104.87	-	114.95	-	9.6	✓	P
	Sodium	417.87	B	706.45	B	69.1		P
	Thallium							F
	Vanadium	175.39	-	219.15	B	25.0		P
200	Zinc	1219.92	-	1383.65	-	13.4	✓	P

J+ all soil

J+ all soil

P=ICP

J+ "

Method for lead is incorrectly listed as "F" for furnace; however,
this should be listed with a "P" for ICP method.

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number:

Date: 10/15/93

Flame AA ID Number:

Furnace AA ID Number: 5100

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.70	BZ	10.0	1.0	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	1.0	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium	196.00	BZ	5.0	2.0	F
Silver			10.0		
Sodium			5000.0		
Thallium	276.80	BZ	10.0	1.0	F
Vanadium			50.0		
Zinc			20.0		

Comments:

U. S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: TEA

Contract:

Lab Code: TEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number:

Date: 10/15/93

Flame AA ID Number:

Furnace AA ID Number: 5100N

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.70	RZ	10.0	1.0	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	1.0	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium	196.00	RZ	5.0	2.0	F
Silver			10.0		
Sodium			5000.0		
Thallium	278.80	RZ	10.0	1.0	F
Vanadium			50.0		
Zinc			20.0		

Comments:

U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: 71325

ICP ID Number: JA61

Date: 10/15/93

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.21		200.0	37.0	P
Antimony	206.83		60.0	21.0	P
Arsenic	193.60		10.0	32.0	P
Barium	493.40		200.0	2.0	P
Beryllium	234.86		5.0	1.0	P
Cadmium	228.80		5.0	2.0	P
Calcium	317.93		5000.0	15.0	P
Chromium	267.70		10.0	3.0	P
Cobalt	228.61		50.0	3.0	P
Copper	324.75		25.0	7.0	P
Iron	271.44		100.0	87.0	P
Lead	220.35		3.0	14.0	P
Magnesium	279.07		5000.0	18.0	P
Manganese	257.61		15.0	2.0	P
Mercury			0.2		
Nickel	231.60		40.0	11.0	P
Potassium	766.49		5000.0	473.0	P
Selenium	196.02		5.0	53.0	P
Silver	328.06		10.0	2.0	P
Sodium	589.59		5000.0	121.0	P
Thallium			10.0		
Vanadium	292.40		50.0	16.0	P
Zinc	213.85		20.0	4.0	P

Comments:

11303

U.S. EPA - CLP

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: TEA

Contract:

Lab Code: TFA

Case No.: 1325

SAS No.:

SDG No.: Z1325

TCP ID Number:

Date: 10/15/93

Flame AA ID Number: HQ4

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			50.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury	253.70		0.2	0.2	CV
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number:

Date: 10/15/93

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number:

Date: 10/15/93

Flame AA ID Number:

Furnace AA ID Number: 3030

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	2.0	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			10.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium	276.80	BZ	10.0	1.0	F
Vanadium			50.0		
Zinc			20.0		

Comments:

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number: JA61

Date: 10/15/93

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	AS
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0043692
Antimony	206.80	0.0000000	0.0002125	0.0000000	0.0000000	0.0002609
Arsenic						
Barium	493.40	0.0000000	0.0001065	0.0000000	0.0000000	0.0000000
Beryllium	234.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0003637
Cadmium	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000137	0.0000000	0.0000000	0.0000740	0.0000000
Chromium	267.70	-0.0000500	0.0006192	0.0048207	-0.0009110	0.0015046
Cobalt	228.60	-0.0093620	0.0004280	0.0886160	-0.0018060	0.0004774
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0001135	0.0000000	0.0003658	0.0005056
Lead	220.30	0.0000000	0.0000853	0.0000000	0.0000000	0.0000000
Magnesium	279.00	0.0000000	0.0000167	0.0000000	0.0000000	0.0000000
Manganese	257.60	0.0010337	0.0001842	0.0000000	-0.0065040	0.0001778
Mercury						
Nickel	231.60	0.0000000	0.0002940	0.0000000	0.0000000	0.0007547
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.00	0.0000000	0.0001647	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000000	0.0000133	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	-0.0293900	0.0005782	0.1299630	0.0000000	0.0151567
Zinc	213.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

1807

Lab Name: IEA

Contract:

Lab Code: IEA

Case No : 1325

SAS No.:

SOG No.: Z1325

ICP ID Number: JA61

Date: 10/15/93

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		NT	CO	CD	MN	CR
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000100	0.0000000
Antimony	206.80	0.0002631	0.0000000	0.0000000	0.0000200	0.0000000
Arsenic						
Barium	493.40	0.0000000	0.0007612	0.0000000	0.0000120	0.0000000
Beryllium	234.80	0.0000619	0.0000000	0.0062204	0.0000000	0.0001735
Cadmium	223.80	0.0000000	0.0000882	0.0000000	0.0000000	0.0000524
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000049
Chromium	267.70	0.0001348	0.0002854	0.0000000	0.0000215	0.0000000
Cobalt	228.60	-0.0010400	0.0000000	-0.0059020	0.0000178	0.0000687
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	-0.0000110	0.0000510	-0.0000590	-0.0000110	0.0000000
Lead	220.30	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.00	0.0000000	0.0000000	0.0000000	0.0000175	0.0000000
Manganese	257.60	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Mercury						
Nickel	331.60	0.0000000	0.0003488	-0.0004890	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	0.0000000	0.0003358	0.0000000	0.0004363
Zinc	213.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

11B

TCP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: IFA

Contract:

Lab Code: IFA

Case No.: 1325

SAS No.:

SDG No.: Z1325

TCP ID Number: JA61

Date: 10/15/93

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		EA	MO	TT	V	CU
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic						
Barium	492.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.80	0.0000900	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.70	0.0000000	0.0001000	0.0002727	-0.0040160	0.0000000
Cobalt	228.60	0.0000000	0.0000296	0.0000301	0.0000000	0.0000000
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000330	-0.0000840	0.0000000	0.0000000	0.0000622
Lead	220.30	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.00	0.0000000	0.0000000	0.0000587	0.0000000	0.0000000
Manganese	257.60	0.0000000	0.0000000	0.0000000	-0.0001030	0.0000000
Mercury						
Nickel	231.60	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silicon	328.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	0.0007328	0.0000000	0.0000000	-0.0003100
Zinc	213.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

11B

TCP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: IFA

Contract:

Lab Code: IFA

Case No.: 1325

SAS No.:

SOG No.: 71325

TCP ID Number: IAA1

Date: 10/15/93

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		ZN	SN	PB	SB	AG
Aluminum	308.20	0.0000000	-0.0000240	0.0008419	0.0000321	0.0000000
Antimony	206.80	0.0000917	-0.0028620	-0.0003090	0.0000000	0.0000000
Arsenic						
Barium	493.40	0.0000329	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.80	0.0000000	0.0001207	0.0000000	-0.0004830	0.0000000
Cadmium	228.80	0.0000181	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000407	0.0000000
Chromium	267.70	0.0000000	-0.0000700	-0.0003260	0.0111425	0.0000000
Cobalt	228.60	0.0001712	0.0000442	-0.0111250	0.0000000	0.0000000
Copper	324.70	0.0036296	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000780	-0.0001090	0.0001530	0.0002426	0.0000000
Lead	220.30	0.0000000	-0.0002550	0.0000000	0.0000000	0.0000000
Magnesium	279.00	0.0000000	-0.0000240	0.0000282	0.0001961	0.0000000
Manganese	257.60	0.0002572	0.0009730	0.0000000	0.0000000	0.0001163
Mercury						
Nickel	231.60	0.0039690	-0.0001500	0.0003939	-0.0018120	0.0001087
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.00	0.0002484	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000183	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	-0.0086950	0.0000657	0.0000000	-0.0026250	0.0052588
Zinc	213.80	0.0000000	0.0000000	0.0000000	0.0004341	0.0000000

Comments:

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDS No.: 71325

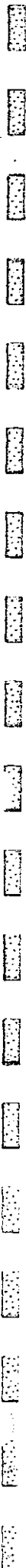
ICP ID Number: JA61

Date: 10/15/93

Interelement Correction Factors for:

Analyte	Wave-length (nm)	BE	NA	SE	K
Aluminum	308.20	0.0000000	0.0000000	0.0000690	0.0000000
Antimony	206.80	0.0000000	0.0003550	0.0000000	0.0000000
Arsenic					
Barium	493.40	0.0000247	0.0000000	0.0000000	0.0000000
Beryllium	234.80	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000087	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0001027	-0.0000390	0.0000000
Chromium	267.70	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.60	0.0000340	0.0000000	0.0012407	0.0000000
Copper	324.70	0.0000000	0.0000000	0.0005270	0.0000000
Iron	271.40	0.0006640	0.0000000	-0.0010570	0.0000000
Lead	220.30	0.0000000	0.0000000	0.0006565	0.0000000
Magnesium	279.00	0.0000000	0.0000000	-0.0000450	-0.0010040
Manganese	257.60	0.0000000	0.0000000	0.0000000	0.0000000
Mercury					
Nickel	231.60	0.0000256	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0004939	-0.0000530	0.0000000
Selenium					
Silver	328.00	0.0000000	0.0000000	-0.0003010	0.0000000
Sodium	589.50	0.0000000	0.0000000	-0.0000290	0.0000000
Thallium					
Vanadium	292.40	0.0000000	0.0000000	0.0003517	0.0000000
Zinc	213.80	0.0000000	0.0000000	-0.0005750	0.0000000

Comments:



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ICP LINEAR RANGES (QUARTERLY)

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

ICP ID Number: JA61

Date: 10/15/93

Analyte	Integ Time (Sec.)	Concentration (ug/L)	M
Aluminum	6.00	1000000.0	
Antimony	6.00	100000.0	
Arsenic	6.00	100000.0	
Barium	6.00	100000.0	
Beryllium	6.00	100000.0	
Cadmium	6.00	100000.0	
Calcium	6.00	1000000.0	
Chromium	6.00	200000.0	
Cobalt	6.00	100000.0	
Copper	6.00	100000.0	
Iron	6.00	1000000.0	
Lead	6.00	100000.0	
Magnesium	6.00	1000000.0	
Manganese	6.00	100000.0	
Mercury			NR
Nickel	6.00	100000.0	
Potassium	6.00	1000000.0	
Selenium	6.00	100000.0	
Silver	6.00	100000.0	
Sodium	6.00	1000000.0	
Thallium			NR
Vanadium	6.00	100000.0	
Zinc	6.00	100000.0	

mmont:

PREPARATION LOG

Contract:

SDG No. : Z1325

Method: F

ILMO2.0

13

Contract:

Case No : 1375

SAS No.:

SDG No. : Z1325

Method: p

ILMO2.0

13

Lab Name: TEA

Contract:

<p> Lab Code: TEA </p>

Case No. : 1325.

SAS No. :

SDG No. : 71325

Method

FORM VIII - IN

1812

13

PREPARATION LOG

Contract :

SAS No :

SPR No : 71325

Method: AS

[illegible]

13
PREPARATION LOG

Lab Name: IEA

Contract:

Lab Code: TFA

Case No. : 1375

SAS No. :

DOC No : 71325

Method: AS

[illegible]

13
PREPARATION LOG

1814

Contract:

SAS No. :

SDG No.: Z1325

Method: CV

[illegible]

PREPARATION LOG

Contract:

SAS No :

SDC No. - Z1325

Method: CV

ILMO2.0

Lab Name: IEA

Lab Code: IEA

Instrument ID Number: 1A61

Start Date: 12/24/92

Case No.: 1325

Contract:

SAS No.:

Method:

End Date: 12/24/92

SDS No.: 71325

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C P	C O	C U	F E	P P	M G	M N	H I	N I	K I	S F	A G	N A	T A	V I	Z N	C N
S	1.00	1312		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
S	1.00	1316		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
S	1.00	1320		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
S	1.00	1324		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
S	1.00	1327		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
S	1.00	1331		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
SO	1.00	1334		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ICV1	1.00	1442		X			X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ICV1	1.00	1448			X																						
ICR	1.00	1453		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
CRI	1.00	1459		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ICSA	1.00	1504		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ICSAB	1.00	1510		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
V1	1.00	1516			X																						
ICV1	1.00	1521		X			X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
CCB1	1.00	1527		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
PBS	1.00	1532		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132501	1.00	1538		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132502	1.00	1543		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132504	1.00	1549		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132505	1.00	1554		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132503	1.00	1600		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132503D	1.00	1605		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132503S	1.00	1611		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
LCSS	1.00	1616		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132503A	1.00	1622			X																						
CCV2	1.00	1627			X																						
CCV2	1.00	1633		X			X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
CCB2	1.00	1638		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132506	1.00	1644		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132507	1.00	1649		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
132508	1.00	1655		X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		

End Date: 12/31/99

[illegible]

ANALYSTS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: 71325

Instrument ID Number: JA61

Method: P

Start Date: 12/29/93

End Date: 12/29/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	B D	C A	C R	C O	C U	C F	P B	M G	M N	H G	N I	K S	S E	A G	A L	T A	V L	Z N	C N
S	1.00	0830		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0833		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0837		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0841		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0844		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0848		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
SO	1.00	0851		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICV3	1.00	1230		X			X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICV3	1.00	1234			X											X	X		X	X		X	X		X	X	
ICV3	1.00	1239																									
ICB2	1.00	1244		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRI	1.00	1249		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSA	1.00	1253		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICAB	1.00	1258		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV5	1.00	1303														X	X		X	X		X	X		X	X	
CCV5	1.00	1308			X																						
CCV5	1.00	1313		X			X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB4	1.00	1317		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBW	1.00	1322		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
132512	1.00	1327		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LC5W	1.00	1332		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCSS	1.00	1342												X		X	X		X	X		X	X		X	X	
ZZZZZZ	1.00	1351																									
ZZZZZZ	1.00	1356																									
ZZZZZZ	1.00	1401																									
ZZZZZZ	1.00	1405																									
ZZZZZZ	1.00	1410																									
ZZZZZZ	1.00	1415																									
CCV6	1.00	1420																									
CCV6	1.00	1424			X																						
CCV6	1.00	1429		X			X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB5	1.00	1434		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	

14

Contrast +

Case No. : 1325

SAS No. 1

SDG No. : 71325

Method: p

End Date: 12/29/93

Analytes

14
ANALYTES RUN LOG

Lab Name: TEA

Contract:

Lab Code: TEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100

Method: F

Start Date: 12/12/93

End Date: 12/12/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S R	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S A	A G	N A	T L	V A	Z N	
50	1.00	1418				X																					
510	1.00	1424				X																					
550	1.00	1429				X																					
S100	1.00	1434				X																					
ICV1	1.00	1440				X																					
ICB	1.00	1445				X																					
CRA	1.00	1451				X																					
CCV1	1.00	1456				X																					
CCR1	1.00	1502				X																					
PBW	1.00	1507				X																					
PBWA	1.00	1513	✓ 98.0			X																					
LCSW	1.00	1518				X																					
LCSWA	1.00	1524	65.5			X																					
ZZZZZ	1.00	1529																									
ZZZZZ	1.00	1535																									
ZZZZZZ	1.00	1541																									
ZZZZZZ	1.00	1546																									
ZZZZZZ	1.00	1552																									
ZZZZZZ	1.00	1558																									
CCV2	1.00	1604				X																					
CCB2	1.00	1609				X																					
ZZZZZZ	1.00	1615																									
ZZZZZZ	1.00	1620																									
ZZZZZZ	1.00	1626																									
ZZZZZZ	1.00	1631																									
ZZZZZZ	1.00	1637																									
ZZZZZZ	1.00	1643																									
ZZZZZZ	1.00	1648																									
ZZZZZZ	1.00	1654																									
ZZZZZZ	1.00	1700																									
ZZZZZZ	1.00	1705																									
CCV3	1.00	1711				X																					

Contract:
SAS No.: SDG No.: Z1325
Method: F
End Date: 12/12/93

THE MAN

14
ANALYSIS RUN LOG

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID Number: S100

Method: F

Start Date: 12/12/93

End Date: 12/12/93

EPA Sample No.	D/E	Time	% R	Analytes																							
				A	S	A	B	R	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C	
				L	B	S	A	E	D	A	P	O	U	F	R	G	N	G	I	E	G	A	L	N			
SO	1.00	1807																		X							
S5	1.00	1812																		X							
S50	1.00	1819																		X							
S100	1.00	1824																		X							
ICV1	1.00	1830																		X							
ICB	1.00	1836																		X							
CRA	1.00	1842																		X							
CCV1	1.00	1847																		X							
CCB1	1.00	1853																		X							
PBW	1.00	1859																		X							
PBWA	1.00	1905	✓ 101.0																	X							
LCSW	1.00	1911																		X							
LCSWA	1.00	1917	✓ 104.0																	X							
ZZZZZ	1.00	1923																									
ZZZZZ	1.00	1929																									
ZZZZZ	1.00	1935																									
ZZZZZ	1.00	1941																									
ZZZZZ	1.00	1947																									
ZZZZZ	1.00	1953																									
CCV2	1.00	1959																		X							
CCB2	1.00	2005																		X							
ZZZZZ	1.00	2010																									
ZZZZZ	1.00	2016																									
ZZZZZ	1.00	2022																									
ZZZZZ	1.00	2028																									
ZZZZZ	1.00	2034																									
ZZZZZ	1.00	2040																									
ZZZZZ	1.00	2046																									
ZZZZZ	1.00	2052																									
ZZZZZ	1.00	2058																									
ZZZZZ	1.00	2104																									
CCV3	1.00	2110																		X							

14

Contract :

Case No. : 1325

SAS No. 1

SDG No. : Z1325

Method: F

End Date: 12/12/93

[illegible]

14
ANALYSTS RUN LOG

Lab Name: IEA

Contract:

Lab Code: IEA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100

Method: F

Start Date: 12/12/93

End Date: 12/12/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A	S	A	R	R	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z		
				L	B	S	A	F	D	A	R	O	U	E	R	G	N	G	T	E	G	A	L	N			
S0	1.00	2214																									
S10	1.00	2219																									
S50	1.00	2224																									
S100	1.00	2230																									
ICV1	1.00	2235																									
ICB	1.00	2240																									
CRA	1.00	2245																									
CCV1	1.00	2251																									
CCB1	1.00	2256																									
PRW	1.00	2301																									
PRWA	1.00	2307	✓ 95.0																								
LCSW	1.00	2312																									
LCSWA	1.00	2318	✓ 97.5																								
ZZZZZ	1.00	2324																									
ZZZZZ	1.00	2329																									
ZZZZZ	1.00	2335																									
ZZZZZ	1.00	2341																									
ZZZZZ	1.00	2346																									
ZZZZZ	1.00	2352																									
CCV2	1.00	2358																									
CCB2	1.00	0003																									
ZZZZZ	1.00	0008																									
ZZZZZ	1.00	0013																									
ZZZZZ	1.00	0019																									
ZZZZZ	1.00	0024																									
ZZZZZ	1.00	0030																									
ZZZZZ	1.00	0035																									
ZZZZZ	1.00	0041																									
ZZZZZ	1.00	0047																									
ZZZZZ	1.00	0052																									
ZZZZZ	1.00	0058																									
CCV2	1.00	0103																									

Contract:

SAS No. :

Method

End Date: 12/13/93

7: 14, 15

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Instrument ID Number: 5100

Start Date: 12/13/93

Case No.: 1325

Contract:

SAS No.:

SOG No.: 71325

Method: F

End Date: 12/13/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L	N	N		
S0	1.00	0152													X												
S3	1.00	0157													X												
S50	1.00	0202													X												
S100	1.00	0207													X												
ICV3	1.00	0212													X												
ICB2	1.00	0218													X												
CRA2	1.00	0223													X												
CCV5	1.00	0228													X												
CCB4	1.00	0233													X												
PRW2	1.00	0238													X												
PRW2A	1.00	0244	✓110.0												X												
LCSW2	1.00	0250													X												
LCSW2A	1.00	0256	✓91.5												X												
ZZZZZ	1.00	0301													X												
ZZZZZ	1.00	0307																									
ZZZZZ	1.00	0313																									
ZZZZZ	1.00	0319																									
ZZZZZ	1.00	0324																									
ZZZZZ	1.00	0330																									
CCV6	1.00	0336																									
CCB5	1.00	0341													X												
ZZZZZ	1.00	0346													X												
ZZZZZ	1.00	0352																									
ZZZZZ	1.00	0357																									
ZZZZZ	1.00	0403																									
ZZZZZ	1.00	0409																									
ZZZZZ	1.00	0414																									
ZZZZZ	1.00	0420																									
ZZZZZ	1.00	0425																									
ZZZZZ	1.00	0431																									
ZZZZZ	1.00	0436																									
CCV7	1.00	0442																									

14

Contract -

Case No. : 1325

SAS No. :

SPG No : 71,325

Method: F

End Date: 12/12/03

[illegible]

14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100

Method: F

Start Date: 12/13/93

End Date: 12/13/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V I	Z N	
S0	1.00	1513				X																					
S10	1.00	1519				X																					
S50	1.00	1524				X																					
S100	1.00	1529				X																					
ICV3	1.00	1534				X																					
ICB3	1.00	1540				X																					
CRA2	1.00	1545				X																					
CCV5	1.00	1550				X																					
CCB7	1.00	1556				X																					
132501	1.00	1601				X																					
132501A	1.00	1607	✓ 89.0			X																					
132502	1.00	1612																									
132502A	1.00	1618	41.0																								
132503	1.00	1623				X																					
132503A	1.00	1629	✓ 100.5			X																					
132503D	1.00	1634				X																					
132503DA	1.00	1640	- 104.0			X																					
132503S	1.00	1645				X																					
ZZZZZZ	1.00	1651																									
CCV6	1.00	1657				X																					
CCB8	1.00	1702				X																					
132504	1.00	1707				X																					
132504A	1.00	1713	✓ 104.0			X																					
132505	1.00	1718				X																					
132505A	1.00	1724	- 89.0			X																					
132506	1.00	1729				X																					
132506A	1.00	1735	✓ 90.0			X																					
132507	1.00	1740																									
132507A	1.00	1746	66.5																								
132508	1.00	1751				X																					
132508A	1.00	1757	✓ 104.0			X																					
CCVZ	1.00	1802				X																					

ANALYSIS RUN LOG

End Date: 12/13/93

71-10000

ANALYSIS RUN LOG

End Date: 12/13/93

71 MAY 5

End Date: 12/13/93

Y. M. C.

14

End Date: 12/14/93

TLMQ2

14
ANALYSIS RUN LOG

Lab Name: TEA

Contract:

Lab Code: IFA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100

Method: F

Start Date: 12/14/93

End Date: 12/14/93

EPA Sample No.	D/F	Time	% R	Analytes															
				A	S	B	B	C	C	C	C	F	P	M	M	H	N	K	S
				I	R	S	A	E	D	A	R	O	U	E	R	G	N	G	I
S0	1.00	0958				X													
S10	1.00	1004				X													
S50	1.00	1009				X													
S100	1.00	1015				X													
TCV6	1.00	1020				X													
ICB5	1.00	1026				X													
CRA4	1.00	1031				X													
CCV11	1.00	1037				X													
CCB13	1.00	1042				X													
ZZZZZZ	1.00	1048																	
ZZZZZZ	1.00	1053																	
ZZZZZZ	1.00	1059																	
ZZZZZZ	1.00	1104																	
ZZZZ	1.00	1110																	
ZZZZ	1.00	1115																	
ZZZZZZ	1.00	1121																	
ZZZZZZ	1.00	1126																	
CCV12	1.00	1132				X													
CCB14	1.00	1137				X													
ZZZZZZ	1.00	1143																	
ZZZZZZ	1.00	1148																	
ZZZZZZ	1.00	1154																	
ZZZZZZ	1.00	1159																	
1325020	2.00	1205				X													
1325021	2.00	1210				X													
1325022	2.00	1215				X													
1325023	2.00	1221				X													
CCV13	1.00	1226				X													
CCB15	1.00	1232				X													
1325070	2.00	1239				X													
1325071	2.00	1243				X													
1325072	2.00	1249				X													

14
ANALYSTS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No. : 1325

Contract:

SAS No. :

SDG No.: Z1325

Instrument ID Number: 5100

Method: F

Start Date: 12/14/93

End Date: 12/14/93

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14

ANALYSTS RUN LOG

Lab Name: TEA

Contract:

Lab Code: TFA

Case No.: 1325

SAS No.:

SDG No.: Z1325

Instrument ID Number: 3030

Method: F

Start Date: 12/14/93

End Date: 12/14/93

EPA Sample No.	D/F	Time	% R	Analytes															
				A	S	B	B	C	C	C	C	C	F	P	M	M	H	N	K
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I
S0	1.00	1000												X					
S3	1.00	1005												X					
S50	1.00	1010												X					
S100	1.00	1015												X					
ICV5	1.00	1020												X					
ICB4	1.00	1025												X					
CRA2	1.00	1030												X					
CCV9	1.00	1035												X					
CCB10	1.00	1040												X					
ZZZZZZ	1.00	1045																	
ZZZZZZ	1.00	1050																	
ZZZZZZ	1.00	1055																	
ZZZZ	1.00	1100																	
ZZZZ	1.00	1105																	
ZZZZ	1.00	1110																	
ZZZZZZ	1.00	1115																	
ZZZZZZ	1.00	1120																	
ZZZZZZ	1.00	1125																	
ZZZZZZ	1.00	1130																	
CCV10	1.00	1135												X					
CCB11	1.00	1140												X					
ZZZZZZ	1.00	1145																	
ZZZZZZ	1.00	1150																	
ZZZZZZ	1.00	1155																	
ZZZZZZ	1.00	1200																	
ZZZZZZ	1.00	1205																	
ZZZZZZ	1.00	1210																	
PBS2	1.00	1215												X					
PBS2A	1.00	1220	97.0											X					
LCSS2	20.00	1225												X					
LCSS2A	20.00	1230	100.5											X					
CCV11	1.00	1235												X					

End Date: 12/14/93

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	A L	N T	V A	Z N	C N		
CCB12	1.00	1240											X																

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14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Instrument ID Number: 5100N

Start Date: 12/14/93

Case No.: 1325

Contract:

SAS No.:

Method: F

End Date: 12/14/93

SDG No.: Z1325

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	V N	Z N	C N
S0	1.00	1026																		X							
S5	1.00	1032																		X							
S50	1.00	1038																		X							
S100	1.00	1043																		X							
ICV4	1.00	1049																		X							
ICB4	1.00	1055																		X							
CRA3	1.00	1100																		X							
CCV7	1.00	1106																		X							
CCB10	1.00	1112																		X							
132501	1.00	1117																		X							
132501A	1.00	1123	✓ 85.0																	X							
132502	1.00	1129																		X							
132502A	1.00	1134	73.0																	X							
132503	1.00	1140																		X							
132503A	1.00	1146	✓ 103.0																	X							
132503D	1.00	1151																		X							
132503DA	1.00	1157	✓ 106.0																	X							
132503S	1.00	1203																		X							
ZZZZZZ	1.00	1208																		X							
CCV8	1.00	1214																		X							
CCB11	1.00	1220																		X							
132504	1.00	1226																		X							
132504A	1.00	1231	✓ 92.0																	X							
132505	1.00	1237																		X							
132505A	1.00	1243	✓ 90.0																	X							
132506	1.00	1248																		X							
132506A	1.00	1254	✓ 91.0																	X							
132507	1.00	1300																		X							
132507A	1.00	1305	84.0																	X							
132508	1.00	1311																		X							
132508A	1.00	1317	✓ 109.0																	X							
CCV9	1.00	1323																		X							

ANALYSIS RUN LOG

Contract:

Case No. : 1325

SAS No. :

SDG No. : Z1325

Instrument ID Number: 5100N

Method: F

Start Date: 12/14/93

End Date: 12/14/93

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14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100N

Method: F

Start Date: 12/14/93

End Date: 12/14/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	A L	N T	V L	Z N	C N
S0	1.00	1431																					X				
S10	1.00	1436																					X				
S50	1.00	1441																					X				
S100	1.00	1447																					X				
ICV4	1.00	1452																					X				
ICB4	1.00	1457																					X				
CRA3	1.00	1502																					X				
CCV7	1.00	1508																					X				
CCB10	1.00	1513																					X				
132501	1.00	1518																					X				
132501A	1.00	1523	✓ 98.5																				X				
132502	1.00	1528																					X				
132502A	1.00	1533	✓ 104.0																				X				
132503	1.00	1538																					X				
132503A	1.00	1543	✓ 107.5																				X				
132503D	1.00	1548																					X				
132503DA	1.00	1553	✓ 109.0																				X				
132503S	1.00	1557																					X				
ZZZZZZ	1.00	1602																					X				
CCV8	1.00	1607																					X				
CCB11	1.00	1612																					X				
132504	1.00	1617																					X				
132504A	1.00	1622	✓ 105.0																				X				
132505	1.00	1628																					X				
132505A	1.00	1633	✓ 106.0																				X				
132506	1.00	1638																					X				
132506A	1.00	1643	✓ 108.5																				X				
132507	1.00	1648																					X				
132507A	1.00	1653	✓ 109.5																				X				
132508	1.00	1659																					X				
132508A	1.00	1704	✓ 104.5																				X				
CCV9	1.00	1709																					X				

ANALYSIS RUN LOG

End Date: 12/14/93

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ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Instrument ID Number: 5100N

Start Date: 12/14/93

Case No.: 1325

Contract:

SAS No.:

Method: F

End Date: 12/14/93

SDG No.: Z1325

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B A	C E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V N	Z N
S0	1.00	1819														X											
S3	1.00	1824														X											
S50	1.00	1829														X											
S100	1.00	1835														X											
ICV7	1.00	1840														X											
ICB5	1.00	1845														X											
CRA3	1.00	1850														X											
CCV13	1.00	1855														X											
CCB13	1.00	1900														X											
132501	1.00	1905														X											
132501A	1.00	1911	0.0																								
132502	1.00	1916																									
132502A	1.00	1921	0.0																								
132503	1.00	1927																									
132503A	1.00	1932	0.0																								
132503D	1.00	1937																									
132503DA	1.00	1942	0.0																								
132503S	1.00	1947																									
ZZZZZZ	1.00	1952																									
CCV14	1.00	1957														X											
CCB14	1.00	2002														X											
132504	1.00	2007														X											
132504A	1.00	2012	96.5													X											
132505	1.00	2017														X											
132505A	1.00	2022	0.0																								
132506	1.00	2027																									
132506A	1.00	2032	0.0																								
132507	1.00	2037																									
132507A	1.00	2042	0.0																								
132508	1.00	2048																									
132508A	1.00	2053	0.0																								
CCV15	1.00	2058														X											

ANALYSIS RUN LOG

End Date: 12/14/93

11 May

14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: 5100N

Method: F

Start Date: 12/15/93

End Date: 12/15/93

EPA Sample No.	D/F	Time	% R	Analytes																	
				A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	N	K	S
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G
50	1.00	0932																		X	
55	1.00	0938																		X	
550	1.00	0943																		X	
S100	1.00	0949																		X	
ICV6	1.00	0955																		X	
ICB6	1.00	1000																		X	
CRA4	1.00	1006																		X	
CCV11	1.00	1012																		X	
CCB16	1.00	1017																		X	
1325020	2.00	1023																			
1325021	2.00	1029																			
1325022	2.00	1035																			
1325023	2.00	1040																			
ZZZZ	1.00	1046																			
ZZZZ	1.00	1051																			
ZZZZZZ	1.00	1057																			
ZZZZZZ	1.00	1103																			
CCV12	1.00	1109																		X	
CCB17	1.00	1114																		X	
ZZZZZZ	1.00	1120																			
ZZZZZZ	1.00	1126																			
ZZZZZZ	1.00	1131																			
ZZZZZZ	1.00	1137																			
ZZZZZZ	1.00	1143																			
ZZZZZZ	1.00	1148																			
CCV13	1.00	1155																		X	
CCB18	1.00	1200																		X	
1325020	2.00	1206																		X	
1325021	2.00	1212																		X	
1325022	2.00	1217																		X	
1325023	2.00	1223																		X	
CCV14	1.00	1229																		X	

14

End Date: 12/15/93

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14

Contract:

SAS No. :

Method: *F*

End Date: 12/24/93

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14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: HG4

Method: CV

Start Date: 11/30/93

End Date: 11/30/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A	S	A	B	B	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L	N	N		
S0	1.00	1200															X										
S0.5	1.00	1201															X										
S1.0	1.00	1202															X										
S2.0	1.00	1203															X										
S5.0	1.00	1204															X										
S10.0	1.00	1205															X										
ICV1	1.00	1206															X										
ICB	1.00	1207															X										
CCV1	1.00	1208															X										
CCB1	1.00	1209															X										
ZZZZZZ	1.00	1210															X										
ZZZZZZ	1.00	1211																									
ZZZZZZ	1.00	1212																									
ZZZZ	1.00	1213																									
ZZZZZZ	1.00	1214																									
ZZZZZZ	1.00	1215																									
ZZZZZZ	1.00	1216																									
ZZZZZZ	1.00	1217																									
ZZZZZZ	1.00	1218																									
ZZZZZZ	1.00	1219																									
CCV2	1.00	1220															X										
CCB2	1.00	1221															X										
ZZZZZZ	1.00	1222																									
ZZZZZZ	1.00	1223																									
ZZZZZZ	1.00	1224																									
ZZZZZZ	1.00	1225																									
ZZZZZZ	1.00	1226																									
ZZZZZZ	1.00	1227																									
ZZZZZZ	1.00	1228																									
ZZZZZZ	1.00	1229																									
ZZZZZZ	1.00	1230																									
ZZZZZZ	1.00	1231																									

14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: HG4

Method: CV

Start Date: 11/30/93

End Date: 11/30/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L	N	N		
CCV3	1.00	1232																X									
CCB3	1.00	1233																X									
ZZZZZZ	1.00	1234																X									
ZZZZZZ	1.00	1235																									
ZZZZZZ	1.00	1236																									
PBW	1.00	1237																X									
ZZZZZZ	1.00	1238																X									
ZZZZZZ	1.00	1239																									
ZZZZZZ	1.00	1240																									
ZZZZZZ	1.00	1241																									
ZZZZZZ	1.00	1242																									
ZZZZZZ	1.00	1243																									
CCV4	1.00	1244																X									
44	1.00	1245																X									
ZZZZ	1.00	1246																X									
ZZZZZZ	1.00	1247																									
ZZZZZZ	1.00	1248																									
ZZZZZZ	1.00	1249																									
ZZZZZZ	1.00	1250																									
ZZZZZZ	1.00	1251																									
ZZZZZZ	1.00	1252																									
ZZZZZZ	1.00	1253																									
ZZZZZZ	1.00	1254																									
ZZZZZZ	1.00	1255																									
CCV5	1.00	1256																X									
CCB5	1.00	1257																X									
ZZZZZZ	1.00	1258																X									
132512	1.00	1259																X									
CCV6	1.00	1300																X									
CCB6	1.00	1301																X									

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ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Instrument ID Number: HG4

Start Date: 12/08/93

Contract:

SAS No.:

SDG No.: Z1325

Method: CV

End Date: 12/08/93

EPA Sample No.	D/F	Time	% R	Analytes																					
				A	S	A	B	B	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L	N	N
S0	1.00	1018															X								
S0.5	1.00	1019															X								
S1.0	1.00	1020															X								
S2.0	1.00	1021															X								
S5.0	1.00	1022															X								
S10.0	1.00	1023															X								
ICV4	1.00	1024															X								
ICB3	1.00	1025															X								
CCV7	1.00	1026															X								
CCB7	1.00	1027															X								
ZZZZZZ	1.00	1028																							
ZZZZZZ	1.00	1029																							
ZZZZZZ	1.00	1030																							
ZZZZ	1.00	1031																							
ZZZZZZ	1.00	1032																							
ZZZZZZ	1.00	1033																							
ZZZZZZ	1.00	1034																							
ZZZZZZ	1.00	1035																							
ZZZZZZ	1.00	1036																							
ZZZZZZ	1.00	1037																							
CCV8	1.00	1038															X								
CCB8	1.00	1039															X								
ZZZZZZ	1.00	1040																							
ZZZZZZ	1.00	1041																							
ZZZZZZ	1.00	1042																							
ZZZZZZ	1.00	1043																							
ZZZZZZ	1.00	1044																							
ZZZZZZ	1.00	1045																							
ZZZZZZ	1.00	1046																							
ZZZZZZ	1.00	1047																							
ZZZZZZ	1.00	1048																							
ZZZZZZ	1.00	1049																							

14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Case No.: 1325

Contract:

SAS No.:

SDG No.: Z1325

Instrument ID Number: HG4

Method: CV

Start Date: 12/08/93

End Date: 12/08/93

EPA Sample No.	D/F	Time	% R	Analytes																	
				A	S	A	B	B	C	C	C	C	F	P	M	M	H	N	K	S	A
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G
CCV9	1.00	1050															X				
CCB9	1.00	1051															X				
ZZZZZZ	1.00	1052																			
ZZZZZZ	1.00	1053																			
ZZZZZZ	1.00	1054																			
ZZZZZZ	1.00	1055																			
ZZZZZZ	1.00	1056																			
ZZZZZZ	1.00	1057																			
PBS	1.00	1058															X				
LCSS	1.00	1059															X				
132501	1.00	1100															X				
132502	1.00	1101															X				
132503	1.00	1102															X				
132503D	1.00	1103															X				
132503S	1.00	1104															X				
132504	1.00	1105															X				
132505	1.00	1106															X				
132506	1.00	1107															X				
132507	1.00	1108															X				
132508	1.00	1109															X				
132509	1.00	1110															X				
132510	1.00	1111															X				
CCV11	1.00	1112															X				
CCB11	1.00	1113															X				
132511	1.00	1114															X				
ZZZZZZ	1.00	1115															X				
ZZZZZZ	1.00	1116															X				
ZZZZZZ	1.00	1117															X				
ZZZZZZ	1.00	1118															X				
ZZZZZZ	1.00	1119															X				
ZZZZZZ	1.00	1120															X				
ZZZZZZ	1.00	1121															X				

ANALYSIS RUN LOG

End Date: 12/08/93

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Contract:

Case No.: 1325

SAS No.:

SDG No.: Z1325

Method: AS

End Date: 12/04/93

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14
ANALYSIS RUN LOG

Lab Name: IEA

Lab Code: IEA

Instrument ID Number: CN2

Start Date: 12/07/93

Case No.: 1325

Contract:

SAS No.:

Method: AS

End Date: 12/07/93

SDG No.: Z1325

EPA Sample No.	D/F	Time	% R	Analytes																							
				A	S	A	B	B	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L			N	N
S300	1.00	2053																								X	
S200	1.00	2054																								X	
S100	1.00	2054																								X	
S50	1.00	2055																								X	
S20	1.00	2056																								X	
S0	1.00	2057																								X	
ICV3	1.00	2059																								X	
ICB2	1.00	2100																								X	
CCV5	1.00	2101																								X	
CCB4	1.00	2102																								X	
S100	1.00	2103																								X	
ZZZZZZ	1.00	2104																								X	
ZZZZZZ	1.00	2104																								X	
ZZZZ	1.00	2105																								X	
ZZZZ	1.00	2106																								X	
CCV6	1.00	2107																								X	
CCB5	1.00	2109																								X	
ZZZZZZ	1.00	2110																								X	
ZZZZZZ	1.00	2111																								X	
ZZZZZZ	1.00	2112																								X	
ZZZZZZ	1.00	2112																								X	
ZZZZZZ	1.00	2113																								X	
ZZZZZZ	1.00	2114																								X	
PBS	1.00	2115																								X	
132501	1.00	2116																								X	
CCV7	1.00	2117																								X	
CCB6	1.00	2119																								X	
132502	1.00	2119																								X	
132503	1.00	2120																								X	
132503D	1.00	2121																								X	
132503S	1.00	2122																								X	
132504	1.00	2123																								X	

14

ab Name: IEA

Lab Code: IEA

Case No. : 1325

Contract:

SAS No. :

SDG No. : Z1325

Instrument ID Number: CN2

Method: AS

Start Date: 12/07/93

End Date: 12/07/93

11 MAY 2011

Mercury Preparation and Analysis Runlog
Instrument-SP-HG4

2140

Preparation Date	12/9/93	STD. & Spike ID.	MTL-W-1331	CCV & ICV ID.	MTL-W-1332
Preparation Analyst	H.M.	Instrumental Analysis Date	12/10/93		
Waterbath Temperature	240°	Instrument Analyst	H.M.		

BOD	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
1	S0.0		10.0ml H ₂ O		100ml	—		0940
2	S0.5		9.5			0.5ml		0941
3	S1.0		9.0			1.0		0942
4	S2.0		8.0			2.0		0943
5	S5.0		5.0			5.0		0944
6	S10.0		0.0			10.0		0945
7	ICV		5.0			5.0ml		0946
8	ICB		10.0			—		0947
9	CCV		5.0			5.0ml		0948
10	CCB		10.0			—		0949
11	PBS JAF1379		10.0ml H ₂ O			—		0950
12	LCSS		0.0212 0.0207 g			—		0951
13	1339 003		0.21			—		0952
14	004		0.24			—		0953
15	005		0.22			—		0954
16	006		0.21			—		0955
17	007		0.20			—		0956
18	008		0.21			—		0957
19	009		0.24			—		0958
20	010		0.21 g			—		0959
80	CVS		5.0ml H ₂ O			5.0ml		1000
90	CCB2		10.0ml H ₂ O			—		1001
21	1339 011		0.24 g			—		1002
22	012		0.25			—		1003
23	013		0.20			—		1004
24	0130		0.21			—		1005
25	0135		0.21			1.0ml		1006
26	014		0.28 g		100ml	—		1007

Secondary Review By: SD Bull Date: 12/13/93

Mercury Preparation and Analysis Runlog
Instrument-SP-HIG4

2141

Preparation Date	12/9/93	STD. & Spike ID.	MTL-W-1331	CCV & ICV ID.	MTL-W-1332
Preparation Analyst	H.M.	Instrumental Analysis Date	12/10/93		
Waterbath Temperature	240°	Instrumental Analyst	H.M.		

BOB	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
27	1339 017		0.20 g		100ml	—		1008
28	018		0.20 g			—		1009
29	019		0.23 g			—		1010
40	PBS J#1340 1340A 1212 1355		10.0ml H ₂ O			—		1011
81	CCV3		5.0 ↓			5.0ml		1012
91	CCB3		10.0ml H ₂ O			—		1013
41	LCSS		0.0207g			—		1014
42	1340 005		0.27			—		1015
43	0050		0.27			—		1016
44	0055		0.27			1.0ml		1017
45	015		0.20			—		1018
46	016		0.27			—		1019
47	017		0.21			—		1020
48	018		0.20			—		1021
49	019		0.27 ↓			—		1022
50	020		0.27 g			—		1023
52	CCV4		5.0ml H ₂ O			5.0ml		1024
52	CCB4		10.0ml H ₂ O			—		1025
51	1340 039		0.21 g			—		1026
52	040		0.21			—		1027
53	1312 007		0.21	1/5		—		1028
54	1325 0035		0.24			1.0ml		1029
55	1340 008		0.23 ↓			—		1030
56	009		0.22 g			—		1031
83	CCV5		5.0ml H ₂ O		↓	5.0ml		1032
93	CCB5		10.0ml H ₂ O		100ml	—		1033
						—		1
						—		

Secondary Review By J. H. D. Date: 12/12/92

ICAP Metals Digestion Log

IEA Sample #	EPA Sample #	Matrix	pH	Sample Volume/Weight	Final Volume	Filled	Color	Clarity	Texture/Artifacts/Comments
PBW		1	1	100	100		C	C1	C1
LCSW		1	1	100	100		C	C1	C1
1296-001	D1SS	1	1	100	100		C	C1	C1
002		1	1	100	100		C	C1	C1
003		1	1	100	100		C	C1	C1
004		1	1	100	100		C	C1	C1
005		1	1	100	100		C	C1	C1
005 DUP		1	1	100	100		C	C1	C1
005 SPK		1	1	100	100		C	C1	C1
006		1	1	100	100		C	C1	C1
008		1	1	100	100		C	C1	C1
009		1	1	100	100		C	C1	C1
010		1	1	100	100		C	C1	C1
011		1	1	100	100		C	C1	C1
012		1	1	100	100		C	C1	C1
013		1	1	100	100		C	C1	C1
015		1	1	100	100		C	C1	C1
016		1	1	100	100		C	C1	C1
1325-012	FB	1	1	100	100		C	C1	C1
1327-002	D1SS	1	1	100	100		C	C1	C1
1351-001		1	1	100	100		C	C1	C1
1355-009	FB	1	1	100	100		C	C1	C1
1359-001		1	1	100	100		C	C1	C1
002		1	1	100	100		C	C1	C1

Batch #	ICAP WATERS	Digestion Date	12/11/93	Matrix Spillover #1 Lot #	MTL-W-1297	QC Check Lot #	LSSW	MTL-W-1317
Method		IN03 Lot #	93022-6	MS #1 Spillover Volume	2.5 mL			5.0 mL
Dig. Analyst	J. Venezia	ICL Lot #	130B	Matrix Spillover #2 Lot #				
Applicable SOP		H202 Lot #		MS #2 Spillover Volume				

Secondary Review By: Diane Abate Date: 12/11/93

ICAP Metals Digestion Log

IEA Sample #	EPA Sample #	Matrix	pH	Sample Volume/Weight	Final Volume	Filtered	Color		Clarity		Treated/Artificial/Controls	
							Before	After	Before	After		
PBS		2			100							
LCSS				0.509								
1270 021				0.50								
0210				0.50								
0215				0.50								
022				0.53								
023				0.52								
024				0.50								
025				0.51								
026				0.54								
028				0.53								
029				0.55								
030				0.53								
1325 001				0.53								
002				0.51								
003				0.53								
0030				0.54								
0035				0.53								
004				0.53								
005				0.54								
006				0.55								
007				0.55								
008				0.55								
009				0.53								
010				0.52								
011				0.55								
Batch #	12-1313		Digestion Date	12-13-93		Matrix Spike #1 Lot #	MTL-W-1297		QC Check Lot #	LCSS		ERA-216
Method	ICAP Sails		IN03 Lot #	930222-6		MS #1 Spike Volume	2.5ml					
Dig. Analyst	[Signature]		ICL Lot #	-		Matrix Spike #2 Lot #						
Applicable SOP			1203 Lot #	-		MS #2 Spike Volume						

Secondary Review By: [Signature] Date: 12/13/93

Furnace Metals Digestion Log

[illegible]

Batch #		Digestion Date	12/11/93	Matrix Split #1 Lot #	MTL-WJ-1326	QC Check Lot #	MTL-W-1230
Method	FURNACE WATERS	IN03 Lot #	930222-6	MS #1 Split# Volume	2.0 mL		1.0 mL
Dig. Analyt	J. Venegia	HCL Lot #	—	Matrix Split# #2 Lot #			
Applicable SOP		H2O2 Lot #	47	MS #2 Split# Volume			

Secondary Review By: D. H. [Signature] Date: 12/13/92

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IEA Logbook# ME6.2

IEA, Inc. Form# MEF00400.CT

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Furnace Metals Digestion Log

IEA Sample #	EPA Sample #	Matrix	pH	Sample Volume/Weight	Final Volume	Filtered		Color		Clarity		Texture/Anomaly/Comments
						Before	After	Before	After	Before	After	
PBS		2			100 ml							
LCS				0.50 g								
1270 021				0.50 g								
0210				0.50								
0215				0.50								
022				0.53								
023				0.50								
024				0.50								
025				0.51								
026				0.54								
028				0.53								
029				0.55								
030				0.53								
1325 001				0.53								
002				0.51								
003				0.53								
003 D				0.54								
003 C				0.54								
004				0.53								
005				0.54								
006				0.55								
007				0.55								
008				0.55								
009				0.53								
010				0.53								
011				0.53								
Batch #	Furnace Soils		Digestion Date	12/13/93	Matrix Spillover #1 Loc #	MTL-W-1326	QC Check Loc	LCS	ERA-216			
Method			HNO3 Loc #	930222-6	MS #1 Spillover Volume	2.0 ml						
Dig. Analyt			HCL Loc #	-	Matrix Spillover #2 Loc #							
Applicable SOP			H2O2 Loc #	-	MS #2 Spillover Volume							

Date: 12/13/93

Secondary Review By: *[Signature]*

Mercury Preparation and Analysis Runlog
Instrument-SP-HG4

215

Preparation Date	11/29/93	STD. & Spike ID.	MTL-W-1320	CCV & ICV ID.	MTL-W-1321
Preparation Analyst	A.M.	Instrumental Analysis Date	11/30/93		
Waterbath Temperature	240°	Instrumental Analyst	A.M.		

BOD	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
1	S0.0		100.0 ml H ₂ O		100ml	-		1200
2	S0.5		99.5			0.5ml		1201
3	S1.0		99.0			1.0		1202
4	S2.0		98.0			2.0		1203
5	S5.0		95.0			5.0		1204
6	S10.0		90.0			10.0ml		1205
7	ICV		95.0			5.0ml		1206
8	ICB		100.0			-		1207
9	CCV2		95.0			5.0ml		1208
10	CCB2		100.0			-		1209
11	PBW		100.0 ml H ₂ O			-		1210
12	1233013		100ml			-		1211
13	1274002					-		1212
14	1294003					-		1213
15	013					-		1214
16	1233021					-		1215
17	022					-		1216
18	1312012					-		1217
19	013					-		1218
20	1314001		100ml			-		1219
80	CCV2		95.0 ml H ₂ O			5.0ml		1220
90	CCB2		100.0 ml H ₂ O			-		1221
21	1314002		100ml			-		1222
22	003					-		1223
23	004					-		1224
24	0040					-		1225
25	0045					1.0ml		1226
26	005		100ml		100ml	-		1227

Secondary Review By: Diane Bates Date: 11/30/93

Mercury Preparation and Analysis Runlog
Instrument-SP-HG4

2159

Preparation Date	11/29/93	STD. & Spike ID.	MTL-W-1220	CCV & ICV ID.	MTL-W-B21
Preparation Analyst	AKM	Instrumental Analysis Date	11/30/93		
Waterbath Temperature	240°	Instrumental Analyst	AKM		

BOD	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
27	1314 006		100ml		100ml	—		1228
28	007		↓			—		1229
29	008		↓			—		1230
40	010		100ml			—		1231
81	CCV3		95.0ml H ₂ O			5.0ml		1232
91	CCB3		100.0ml H ₂ O			—		1233
41	1314 011		100ml			—		1234
42	013		↓			—		1235
43	014		100ml			—		1236
44	PBW J#1325		100.0ml H ₂ O			—		1237
45	F1300 001		100ml			—		1238
46	002		↓			—		1239
47	003		↓			—		1240
48	004		↓			—		1241
49	005		↓			—		1242
50	T1300 001		100ml			—		1243
82	CCV4		95.0ml H ₂ O			5.0ml		1244
92	CCB4		100.0ml H ₂ O			—		1245
51	T1300 002		100ml			—		1246
52	003		↓			—		1247
53	004		↓			—		1248
54	005		↓			—		1249
55	1309 003		↓			—		1250
56	1310 003		↓			—		1251
57	0030		↓			—		1252
58	0035		↓			1.0ml		1253
59	1270 018		↓		↓	—		1254
60	031		100ml		100ml	—		1255

Secondary Review By: Diane Abate Date: 11/30/93

2160

Preparation Date	11/29/93	STD. & Spike ID.	MTL-W-1320	CCV & ICV ID.	MTL-W-1321
Preparation Analyst	H.M.	Instrumental Analysis Date	11.30.93		
Waterbath Temperature	240°	Instrumental Analyst	H.M.		

[illegible]

Secondary Review By:

Date: 11/30/93

Mercury Preparation and Analysis Runlog
Instrument-SP-HG4

2161

Preparation Date	12/7/93	STD. & Spike ID.	MTL-W-1327	CCV & ICV ID.	MTL-W-1328
Preparation Analyst	H.M.	Instrumental Analysis Date	12/8/93		
Waterbath Temperature	240°	Instrumental Analyst	H.M.		

BOD	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
1	SC.0		10.0ml H ₂ O		100ml	—		1018
2	SO.5		9.5			0.5ml		1019
3	SI.0		9.0			1.0		1020
4	S2.0		8.0			2.0		1021
5	SS.0		5.0			5.0		1022
6	S10.0		0.0			10.0 ↓		1023
7	ICV		5.0			5.0ml		1024
8	ICB		10.0			—		1025
9	CCV1		5.0			5.0ml		1026
10	CCB1		10.0 ↓			—		1027
11	PBS J#12704 1312		10.0ml H ₂ O			—		1028
12	LCSS		0.0206 g			—		1029
13	1270 021		0.25			—		1030
14	0210		0.27			—		1031
15	0215		0.25			1.0ml		1032
16	022		0.26			—		1033
17	023		0.23			—		1034
18	024		0.22			—		1035
19	025		0.26 ↓			—		1036
20	026		0.23 g			—		1037
80	CCV2		5.0ml H ₂ O			5.0ml		1038
90	CCB2		10.0ml H ₂ O			—		1039
21	1270 028		0.30 g			—		1040
22	029		0.21			—		1041
23	020		0.20			—		1042
24	1312 001		0.26			—		1043
25	002		0.20		↓	—		1044
26	0020		0.20 g		100ml	—		1045

Secondary Review By: J. H. H. Date: 12/14/93

Mercury Preparation and Analysis Runlog
Instrument-SP-HG4

Preparation Date	12/7/93	STD. & Spike ID.	MTL-W-1327	CCV & ICV ID.	MTL-W-1328
Preparation Analyst	<i>HMM</i>	Instrumental Analysis Date	12/8/93		
Waterbath Temperature	240°	Instrumental Analyst	<i>HMM</i>		

BOD	Sample ID	Client ID	Initial	Dilution	Final Volume	Standard B	Reported	Time
27	13120025		0.21 g		100ml	1.0ml		1046
28	003		0.22			—		1047
29	004		0.24			—		1048
40	005		0.22 g			—		1049
81	CCV3		5.0ml H ₂ O			5.0ml		1050
91	CCB3		10.0ml H ₂ O			—		1051
41	1312006		0.25 g			—		1052
42	007		0.25			—		1053
43	008		0.23			—		1054
44	009		0.22			—		1055
45	010		0.20			—		1056
46	011		0.23 g			—		1057
47	PBS J#1325 (1325, 1327)		10.0ml H ₂ O			—		1058
48	LCSS		0.0220g			—		1059
49	1325001		0.23 g			—		1100
50	002		0.21 g			—		1101
82	CCV4		5.0ml H ₂ O			5.0ml		1102
92	CCB4		10.0ml H ₂ O			—		1103
51	1325003		0.22 g			—		1104
52	0030		0.22			—		1105
53	0035		0.22			1.0ml		1106
54	004		0.25			—		1107
55	005		0.22			—		1108
56	006		0.20			—		1109
57	007		0.21			—		1110
58	008		0.23			—		1111
59	009		0.20			—		1112
60	010		0.24 g		100ml	—		1113

Secondary Review By: *J. H. H. O.* Date: *12/14/93*

2163

Preparation Date	12/7/93	STD. & Spike ID.	MTL-W-1327	CCV & ICV ID.	MTL-W-1328
Preparation Analyst	<i>AKM</i>	Instrumental Analysis Date	12/8/93		
Waterbath Temperature	240°	Instrumental Analyst	<i>AKM</i>		

[illegible]

Secondary Review By: 22. HUH:O Date: 12/8/92

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IEA Logbook# ME1.4

IEA
200 Monroe Turnpike
Monroe, CT 06468
(203) 452-8200
Lab Code IEA

Case #
SAS #
SDG #

CYANIDE DISTILLATION LOG

Page# 807

Batch No.	Client	Date	IEA Sample ID	EPA Sample ID	Dist. App. No.	Sample Volume or Weight	pH >12.0	Cl ₂ Present?	Volume Distillate	Sulfide Present?	Initials	Comments
CN1207	UNISYS	12/7/93	PB(1325,5)	PBS	3	2.00g	-	N	250ml	N	SJL	Colorless/clear
			DIST. STD.	Instrument Calibration	1	50 μl: 150 μl	Y					
			ICV-6(0789)	EPA-LV ISV6(0789)	4	1 ml → 100 μl	+					
			1325-001	EB-1	2	2.07g	-					Brown/Cloudy
			-002	EB-2	3	2.03g	-					Brown/Cloudy
			-003	EB-3	1	2.00g	-					
			-003 RP	EB-3	4	2.00g	-					
			-003 SPK	EB-3	8	2.01g	-					
			-004	EB-4	5	2.08g	-					
			-005	CB-1	6	2.01g	-					
			-006	CB-2	7	2.04g	-					

Dennis Marnett
Reviewed by Classical Chemistry Supervisor Section Leader

Date 12/09/93

2164

Case #	SAS #	SDG #
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
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37	37	37
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42	42	42
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74	74	74
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78	78	78
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80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

CYANIDE DISTILLATION LOG

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[illegible]

Reviewed by Classical Chemistry Supervisor

Section Leader

Date 12/09/93

2165

Case #	SAS #	SDG #
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
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88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

CYANIDE DISTILLATION LOG

Page# 804

[illegible]

Final Results
Reviewed by Classical Chemistry Superintend
Section leader

Date 12/06/93

2166

SECTION 5

PROJECT CASE NARRATIVES AND CHAINS-OF-CUSTODY

OUT 103

$$\% \text{ Solids} = \text{Dry Wt} / \text{Wet Wt} * 100$$

Prepared by: RAM Accepted by: 22/12/10

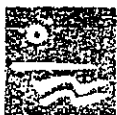
JOB NUMBER: 3093 - 136

CLIENT: UNISYS

CLIENT PROJECT:

[illegible]

~~2171~~



IEA
An Aquarion Company

200 Monroe Turnpike
Monroe, Connecticut 06468

Phone 203 281 4458
Fax 203 288 5348

17

30930-1325
UNISYS CORPORATION

SDG Narrative

Volatile Organics - No problems were encountered.

Extractions - All samples were extracted and concentrated without any apparent problems.

Semi-Volatile Organics - Sample EB-3 exhibited a matrix interference which resulted in perylene- d_{12} internal standard area suppression. The sample was analyzed 3 times confirming the perylene- d_{12} area suppression. A matrix spike and matrix spike duplicate was performed on this sample. The perylene- d_{12} internal standard area was suppressed in both analyses, however both areas were within the -50 percent recovery criteria. Two analyses for sample EB-3 have been reported with the reanalysis designated with the suffix "RE".

Pesticides/PCB's - Samples CB-1, EB-2, CB-2, CB-4, WB-1, WB-2, SDG-2 DUP and CB-3 required dilutions due to high concentrations of target compounds.

Due to the matrix of the sample, the percent difference of target compounds between both columns was greater than 25 percent in many samples.

Due to the sample matrix, surrogate recoveries were outside advisory QC limits or were diluted out in samples EB-1, EB-2, EB-3, EB-3 MS, EB-3 MSD, CB-1, CB-2, CB-3, CB-4, WB-1, WB-2, SDG-2 DUP, EB-2 DL, CB-1 DL, CB-2 DL, CB-4 DL, WB-1 DL, WB-2 DL, SDG-2 DUP DL and CB-3 DL.

Surrogate recoveries were below advisory QC limit in method blank PBLK64 and sample FB 112493.

Matrix Spike

Surrogate recoveries were outside QC limits for aldrin and endrin in samples EB-3 MS and EB-3 MSD due to interference with Aroclors. Percent RPD was outside of QC limits for endrin in samples EB-3 MS and EB-3 MSD. Endrin was outside of the RT window on column DB-1701 in samples EB-3 MS and EB-3 MSD due to interference with Aroclors.

Sample CB-3 DL was injected 9 minutes out of the 12-hour sequence on the RTX-35 column. Sample CB-3 was within the calibration curve for all compounds, therefore sample CB-3 DL serves as a secondary dilution only. All results reported are from the DB-1701 column.

The first peak for Aroclor 1242 on the RTX-35 column was outside of the RT window in samples EB-3 MS and EB-3 MSD due to interference with heptachlor.

Metals - IEC's are electronically employed by the TJA ICAP-61. However, the IC5A is utilized as a monitoring device to detect any additional adjustments that may be required. These modifications are calculated and applied manually. They are so noted in the raw data.

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

N. Billerica,
Massachusetts
617-272-5212

Whippany,
New Jersey
201-428-8181

Research Triangle Park,
North Carolina
919-677-0090

Essex Junction,
Vermont
802-378-5135

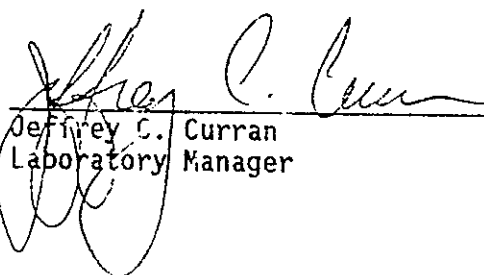
18
Three "E" flags resulted from serial dilution of sample ER-3 for barium, chromium and zinc. There is no apparent reason why this occurred; further study would be necessary to determine the cause.

Antimony, mercury, selenium and silver failed the control limits for spike recovery analysis of sample ER-3 resulting in "N" flags. A matrix effect may be the cause of the flags.

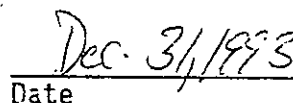
No other problems were encountered.

Classical Chemistry - No problems were encountered.

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



Jeffrey C. Curran
Laboratory Manager



Date

INSTRUMENT DETECTION LIMITS

Page 1 of 1

Instrument B
Date: 07/19/93

UNITS: UG/L

IDL

Chloromethane	2
Bromomethane	2
Vinyl Chloride	3
Chloroethane	3
Methylene Chloride	2
Acetone	4
Carbon Disulfide	2
1,1-Dichloroethene	2
1,1-Dichloroethane	2
1,2-Dichloroethene (total)	2
Chloroform	1
1,2-Dichloroethane	2
2-Butanone	1
1,1,1-Trichloroethane	2
Carbon Tetrachloride	2
Vinyl Acetate	2
Bromodichloromethane	2
1,2-Dichloropropane	3
cis-1,3-Dichloropropene	1
Trichloroethene	2
Dibromochloromethane	2
1,1,2-Trichloroethane	2
Benzene	2
trans-1,3-Dichloropropene	2
Bromoform	3
2-Methyl-2-Pentanone	1
2-Hexanone	3
Tetrachloroethene	1
1,1,2,2-Tetrachloroethane	3
Toluene	3
Chlorobenzene	2
Ethylbenzene	2
Styrene	1
Xylene (total)	5

18A

30930-1325
UNISYS CORPORATION
SAMPLE CALCULATION

Volatile Organics

Sample - CB-2
Compound - Tetrachloroethene

$$\frac{(8229)(250)}{(85551)(.382)(5)(.77)} = 16.4 \text{ ug/Kg}$$

Semi-Volatile Organics

Sample - EB-1
Compound - Phenanthrene

$$\frac{(81465)(40)(500)(2)(5.0)}{(120129)(1.103)(30.0)(2)(0.65)} = 3200 \text{ ug/Kg}$$

Pesticides/PCB's

Sample - EB-1
Compound - 4,4'-DDD

DB-1701

$$\frac{(1962222)(0.04)(10000)}{(592252)(30.0)(0.65)} = 68 \text{ ug/Kg}$$

RTX-35

$$\frac{(3388084)(0.04)(10000)}{(583972)(30)(0.65)} = 120 \text{ ug/Kg}$$

Professional Ground-Water and Environmental Services
72 Danbury Road
Wilton, CT 06897
(203) 762-1207

Job #:

Project Name/Location:
UNISYS GREAT NECK RI/FS

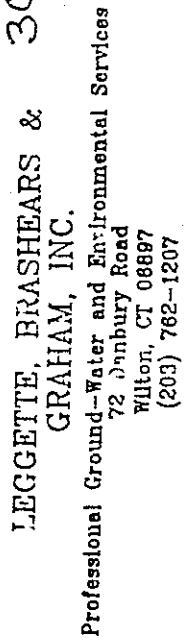
Report To:
S. GUTZ

PARAMETERS

SAMPLE ID	DATE	TIME	TYPE	# CONT.	TAL-GNAT, MTL, PEST	CYAN-CLP	VOL-TAL+	TAL-BNR, PEST	CYAN-CLP	MTL-TAL	VOL-TAL+	FIELD BLANK
EB-1	11/24/93	0950	WEET SOIL	2	X	X	001					
EB-2		1010			X	X	002					
EB-3 M3/msn		1050			X	X	003					PLEASE SPLIT FOR MS/msn
EB-4		1055			X	X	004					
CB-1		1200			X	X	005					
CB-2		1255			X	X	006					
CB-3		1300			X	X	007					
CB-4		1335			X	X	008					
WR-1		1400			X	X	009					
WR-2		1430			X	X	010					
SOG-20UP		-	↓	↓	X	X	011					
F.B.	✓		W	8			012	X	X	X	X	

Remarks: BEGIN SOG-2

Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	11/26 1330	Received By:	11/26 1320
Relinquished By:	11/26 1415	Received By:	11/26 1415
Relinquished By:	11/26 1415	Received By:	11/26 1415



LEGGETTE, BRASHEARS &
GRAHAM, INC.

Professional Ground-Water and Environmental Services
72 Danbury Road
Milton, CT 08897
(203) 762-1207

CHAIN OF CUSTODY

309 1325

Job #:	Project Name/Location:				VOL - TAIL + TEMP	
Sampler:	DATE	TIME	TYPE	# CONT.	TEMP	
J.B. LENVIGNA S. RITL	11/24/93		W	3	X	013
T.B. FOR TEMPERATURE ONLY	11/24/93		W	1	X	5°C
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>						

TRIP BLANK
5°C

VOL - TAIL + TEMP

Remarks: END SDG - 2
PAGE 2 OF 2

LABORATORY CHAINS OF CUSTODY

CLIENT:
PROJECT ID:
SDG #:
IEA ID:

UNISYS CORPORATION
GREAT NECK/RIFS
Z1325
30930-1325

Client: UNISYS

Custody Seal: present / absent
: intact / not intact

Field Chain
of Custody present / absent

Sample Tags : present / absent
: listed / not listed

SMO Forms : present / absent

IEA Internal Chain of Custody Form

IEA Job #: 3093-1325

Case #: N/A

Airbill #: N/A

Sample #s: 001-013

Location: B736389

Date/Time: 11/26/93

Sample Custodian: CP Damiani
(signature) (print)

1325

Laboratory Sample Number	Removed By (Full Signature)	Date	Time	Reason	Returned By (Full Signature)	Date	Time	Returned To Ref. #
12	mauracudo	11/24/93	12:30	BNA EXT	used			
1-11	<i>[Signature]</i>	11/24/93	16:00	VOA				
12	<i>[Signature]</i>	11/24/93	17:00	Hg Prep	<i>[Signature]</i>	11/24/93	19:00	UB3
1-3, 4-11	<i>[Signature]</i>	11/30/93	9:30	AN only ext	D. Longo			37
1, 3, 5, 9, 11	<i>[Signature]</i>	11/30/93	11:00	VOA				
12	<i>[Signature]</i>	11/30/93	19:03	Pest Ext	used			
12, 11	<i>[Signature]</i>	11/24/93	01:25	NOA	<i>[Signature]</i>	12/01/93	02:00	36
1-11	D. Longo	12/01/93	9:30	P/P EXT	<i>[Signature]</i>	12/01/93	15:30	37
12, 13	<i>[Signature]</i>	12/24/93	11:00	VOA	used			7
1-11	<i>[Signature]</i>	12/24/93	07:00	CN - CLP	<i>[Signature]</i>	12/27	16:00	SR
1-11	<i>[Signature]</i>	12/27/93	18:25	Hg Prep	<i>[Signature]</i>	12/27/93	21:00	B7
1-3, 4-11	<i>[Signature]</i>	12/29/93	15:40	Hg Prep % Solids	<i>[Signature]</i>	12/29/93	21:30	B7
13	Mike Crowe	12/29/93	23:20	BNA Analysis	<i>[Signature]</i>	12/29/93	03:15	
12, 11	<i>[Signature]</i>	12/29/93	15:00	NOA	<i>[Signature]</i>	12/29/93	10:30	37

Client : _____

Custody Seal: present / absent

Field Chain

Sample Tags : present / absent

NAME	DATE	TIME	LOCATION	STATUS	REMARKS
JOHN DOE	10/10/2023	14:30	Room 101	present	
JANE SMITH	10/10/2023	15:00	Room 102	present	
ALICE BROWN	10/10/2023	15:30	Room 103	present	
BOB WHITE	10/10/2023	16:00	Room 104	present	
CHARLIE GREEN	10/10/2023	16:30	Room 105	present	
DAVID BLACK	10/10/2023	17:00	Room 106	present	
EVE YELLOW	10/10/2023	17:30	Room 107	present	
FRANK PINK	10/10/2023	18:00	Room 108	present	
GRACE BLUE	10/10/2023	18:30	Room 109	present	
HELEN PURPLE	10/10/2023	19:00	Room 110	present	
IGOR BROWN	10/10/2023	19:30	Room 111	present	
JACK GREEN	10/10/2023	20:00	Room 112	present	
JILL PINK	10/10/2023	20:30	Room 113	present	
JOHN BLUE	10/10/2023	21:00	Room 114	present	
JANE PURPLE	10/10/2023	21:30	Room 115	present	
JOE BROWN	10/10/2023	22:00	Room 116	present	
JUDY GREEN	10/10/2023	22:30	Room 117	present	
KARL PINK	10/10/2023	23:00	Room 118	present	
KAREN BLUE	10/10/2023	23:30	Room 119	present	
KEVIN PURPLE	10/10/2023	00:00	Room 120	present	
KIM BROWN	10/10/2023	00:30	Room 121	present	
LEO GREEN	10/10/2023	01:00	Room 122	present	
LUCY PINK	10/10/2023	01:30	Room 123	present	
MARTIN BLUE	10/10/2023	02:00	Room 124	present	
MARY PURPLE	10/10/2023	02:30	Room 125	present	
MIKE BROWN	10/10/2023	03:00	Room 126	present	
MICHELLE GREEN	10/10/2023	03:30	Room 127	present	
MONTE PINK	10/10/2023	04:00	Room 128	present	
MURDER BLUE	10/10/2023	04:30	Room 129	present	
NANCY PURPLE	10/10/2023	05:00	Room 130	present	
NATHAN BROWN	10/10/2023	05:30	Room 131	present	
NEIL GREEN	10/10/2023	06:00	Room 132	present	
NINA PINK	10/10/2023	06:30	Room 133	present	
NORMAN BLUE	10/10/2023	07:00	Room 134	present	
OLIVIA PURPLE	10/10/2023	07:30	Room 135	present	
OSCAR BROWN	10/10/2023	08:00	Room 136	present	
PATRICIA GREEN	10/10/2023	08:30	Room 137	present	
PETER PINK	10/10/2023	09:00	Room 138	present	
POLINA BLUE	10/10/2023	09:30	Room 139	present	
PRINCE PURPLE	10/10/2023	10:00	Room 140	present	
PRINCESS BROWN	10/10/2023	10:30	Room 141	present	
RAFAEL GREEN	10/10/2023	11:00	Room 142	present	
RAFAELA PINK	10/10/2023	11:30	Room 143	present	
RAMON BLUE	10/10/2023	12:00	Room 144	present	
RAMONA PURPLE	10/10/2023	12:30	Room 145	present	
REBECCA BROWN	10/10/2023	13:00	Room 146	present	
REBECCAH GREEN	10/10/2023	13:30	Room 147	present	
RICARDO PINK	10/10/2023	14:00	Room 148	present	
RICARDA BLUE	10/10/2023	14:30	Room 149	present	
ROBERT PURPLE	10/10/2023	15:00	Room 150	present	
ROBERTA BROWN	10/10/2023	15:30	Room 151	present	
ROSEMARY GREEN	10/10/2023	16:00	Room 152	present	
ROSEMARY PINK	10/10/2023	16:30	Room 153	present	
ROSEMARY BLUE	10/10/2023	17:00	Room 154	present	
ROSEMARY PURPLE	10/10/2023	17:30	Room 155	present	
ROSEMARY BROWN	10/10/2023	18:00	Room 156	present	
ROSEMARY GREEN	10/10/2023	18:30	Room 157	present	
ROSEMARY PINK	10/10/2023	19:00	Room 158	present	
ROSEMARY BLUE	10/10/2023	19:30	Room 159	present	
ROSEMARY PURPLE	10/10/2023	20:00	Room 160	present	
ROSEMARY BROWN	10/10/				

SMO Forms : present / absent

TEA . CT

IEA Job #:

Case # ::

Airbill #:

Sample #s: 001-013

Location :

Sample Custodian: _____ Date/Time: _____
(print) (signature)

[illegible]

Extract Chain-of-Custody

25

IEA, Inc.

GC-GC/MS Extract Chain-of-Custody

Fraction: BNA/ Pesticide-PCB/ Herbicide/ O/P Pest/ Other
(Circle One)

CLIENT: Unsys

JOB NO(S): 1325

SAMPLE IN (Extractions)					SAMPLE IN (Extractions)				
Sample(s)	Date	Time	Sgr.	Location	Sample(s)	Date	Time	Sgr.	Location
012	12/1/93	1600	M.M.L	50					
1-11	12/3/93	4:00	M.Gudo	50					

SAMPLE OUT					SAMPLE IN			
Sample(s)	Date	Time	Code	Sgr.	Date	Time	Location	Sgr.
1-11	12/6/93	10:45	SC	<i>[Signature]</i>	12/6/93	14:00	50	<i>[Signature]</i>
1-3, 3MS, 150								
12	12/7/93	9:40	AN	<i>[Signature]</i>	12/7/93	5:00	50	<i>[Signature]</i>
1-5	12/9/93	15:30	Au	<i>[Signature]</i>	12/9/93	16	50	<i>[Signature]</i>
5-11	12/10/93	11:30	Au	<i>[Signature]</i>	12/10/93	12	50	<i>[Signature]</i>
3MS 3MSD								
1-11, 12	12/10/93	15:30	Au	<i>[Signature]</i>	12/10/93	16:00	50	<i>[Signature]</i>
5-11	12/14/93	13:30	Au	<i>[Signature]</i>	12/14/93	14:00	50	<i>[Signature]</i>

Codes:

SC = Screening

AN = Analysis

Verified by:

[Signature]

Date: 12/22/93

Form: SMF00200.CT



an environmental testing company

200 Monroe Turnpike
Monroe, Connecticut 06408
(203) 261-4458
FAX (203) 268-5346

CHAIN OF CUSTODY
ATOMIC SPECTROSCOPY DEPARTMENT

26

Job Number: 3093-1325 Sample Numbers 012

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep

<u>Joseph Venezia</u>	<u>12/11/93</u>	ICP/FLME
<u>Joseph Venezia</u>	<u>12/11/93</u>	FURN
<u>H.M.</u>	<u>11/29/93</u>	MERCURY
Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>Diancubate</u>	<u>12/29/93</u>	ICP
			FLAME
	<u>Shirley Hopkins / Jeff Noe</u>	<u>12/12-13/93</u>	FURN
	<u>H.M.</u>	<u>11/30/93</u>	MERCURY
	Chemist	Date(s)	

have reviewed and authorize the release of this job:

Complete 254.16 Hall 12/31/93
Supervisor Date

Batch Assignment _____

200 MONROE TURNPIKE • MONROE, CONNECTICUT 06408 • (203) 261-4458

620 ROUTE 17 • LIVINGSTON, NEW JERSEY 07033 • (201) 421-0838

120 WEST CENTER STREET • SCHENECTADY, NEW YORK 12305 • (518) 705-0440



an environmental testing company

200 Monroe Turnpike
Monroe, Connecticut 06468
(203) 261-4458
FAX (203) 268-5346

27

CHAIN OF CUSTODY
ATOMIC SPECTROSCOPY DEPARTMENT

Job Number 3093-1325 Sample Numbers 001-011

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	<u>H.M.</u>	<u>12/13/93</u>	ICP/FLME
	<u>H.M.</u>	<u>12/13/93</u>	FURN
	<u>H.M.</u>	<u>12/7/93</u>	MERCURY
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>Diane Abate</u>	<u>12/24, 29/93</u>	ICP
	<u>Shirley Minkins / Jeff Roe</u>	<u>12/13-15, 24/93</u>	FLAME
	<u>H.M.</u>	<u>12/8/93</u>	FURN
	Chemist	Date(s)	MERCURY

I have reviewed and authorize the release of this job:

Complete	<u>25 Dec 11/93</u>	<u>12/31/93</u>
	Supervisor	Date

Batch Assignment _____

200 MONROE TURNPIKE • MONROE, CONNECTICUT 06468 • (203) 261-4458
1520 ROUTE 10 • WHIPPIANY, NEW JERSEY 07981 • (201) 421-1000
126 WEST CENTER COURT • SCHUMBERG, ILLINOIS 60081 • (312) 705-0740



an environmental testing company

200 Monroe Turnpike
 Monroe, Connecticut 06468
 (203) 261-4458
 FAX (203) 268-5346

28

CHAIN OF CUSTODY
 ATOMIC SPECTROSCOPY DEPARTMENT

Job Number 3093-1325 Sample Numbers 0035

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	_____	_____	ICP/FLME
	_____	_____	FURN
	_____	_____	MERCURY
	<u>H.M.</u>	<u>12/9/93</u>	
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

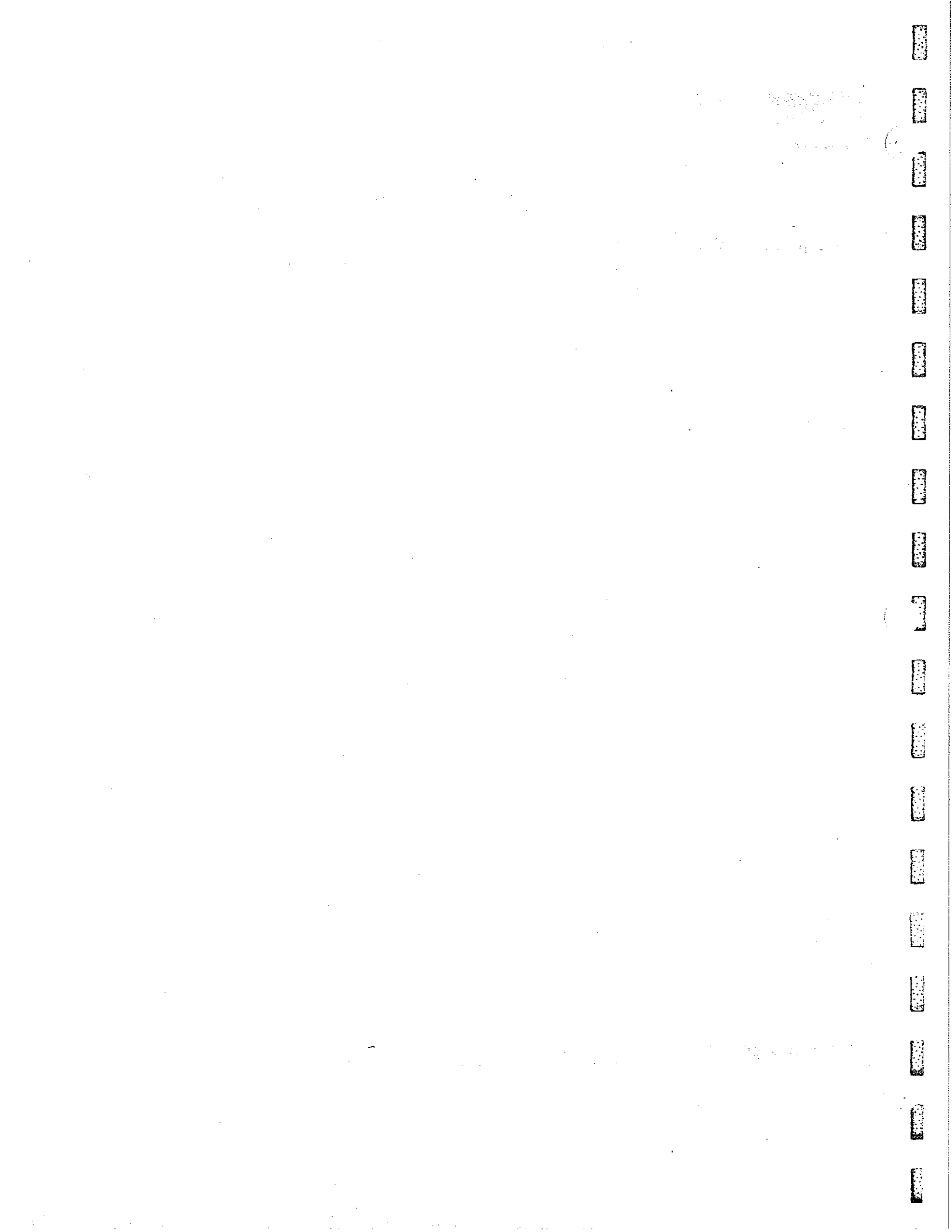
Analysis	_____	_____	ICP
	_____	_____	FLAME
	_____	_____	FURN
	<u>H.M.</u>	<u>12/10/93</u>	
	Chemist	Date(s)	MERCURY

I have reviewed and authorize the release of this job:

Complete	<u>Joseph N. H.D.</u>	<u>12/21/93</u>
	Supervisor	Date

Batch Assignment _____

200 MONROE TURNPIKE • MONROE, CONNECTICUT 06468 • (203) 261-4458
 620 ROUTE 10 • WHIPPANY NEW JERSEY 07981 • (201) 424-5101
 126 WEST CENTER COURT • SCHLAIBURG ILLINOIS 60195 • (312) 705-0740



SECTION 6

NYSDEC MATRIX SUMMARY

CODES FOR THE NYSDEC MATRIX SUMMARY

ORGANIC CODES

- A The associated semivolatile initial calibration contained seven compounds which failed to meet the minimum RRF or maximum %RSD criteria (NYSDEC 12/91 ASP, pg. D-III-53).
- B The associated semivolatile method blank contained TICs with areas greater than 10% of the nearest internal standard (NYSDEC 12/91 ASP, D-III-67).
- C The recoveries of one or more of the spike compounds in the semivolatile matrix spike blank associated with this sample were outside the required QC limits (NYSDEC 12/91 ASP, D-III-66).

INORGANIC CODES

- D The initial digestion weight was approximately 0.50 grams and the final digestion volume for KP and GFAA metals was 100 mLs, contrary to the initial digestion weight of 1.0 - 1.5 grams and the final volume of 200 mL required by NYSDEC (NYSDEC 12/91 ASP, pg. D-V-17).

Site: Great Neck RIFS

Laboratory: IEA Laboratories

SDG	Date	CLP/ASP Year	Sample Number	Matrix	Compliance				Page No. in the CLP	Non-Compliance
					VOA	BNA	Pes/PCB	Metals	CN	
Z1325	11/24/93	12/91 ASP	EB-1	Soil	YES	No	YES	No	YES	B, D
			EB-2		YES	No	YES	No	YES	A, B, D
			EB-3		YES	No	YES	No	YES	B, D
			EB-3MS		YES	No	YES	No	YES	B, C, D
			EB-3MSD		YES	No	YES	NA	NA	B, C, D
			EB-3D		NA	NA	NA	No	YES	B, D
			EB-4		YES	No	YES	No	YES	A, B, D
			CB-1		YES	No	YES	No	YES	A, B, D
			CB-2		YES	No	YES	No	YES	A, B, D
			CB-3		YES	No	YES	No	YES	A, B, D
			CB-4		YES	No	YES	No	YES	A, B, D
			WB-1		YES	No	YES	No	YES	A, B, D
			WB-2		YES	No	YES	No	YES	A, B, D
			SDG-2 DUP	↓	YES	No	YES	No	YES	A, B, D
			F.B.	Aqueous	YES	No	YES	YES	YES	A, B
			T.B.	Aqueous	YES	NA	VA	NA	NA	↓

SECTION 7

NYSDEC SAMPLE PREPARATION FORMS

10 02 12

306 E : 3093-1325

* Check Appropriate Boxes

* NSL, Priority Pollutant

Sample ID	Matrix	Date Collected	Date Analyzed	Notes
SP-1	Soil	11/24/93	N/A	11/30/93
SP-2	Soil			11/29/93
SP-3	Soil			11/29/93
SP-4	Soil			11/29/93
SP-5	Soil			11/30/93
SP-6	Soil			11/29/93
SP-7	Soil			11/30/93
SP-8	Soil			↓
SP-9	Soil			12/01/93
SP-10	Soil			11/30/93
SP-11	Soil			11/30/93
SP-12	Soil			12/02/93
SP-13	Soil			↓
SP-14	Soil			
SP-15	Soil			
SP-16	Soil			
SP-17	Soil			
SP-18	Soil			
SP-19	Soil			
SP-20	Soil			
SP-21	Soil			
SP-22	Soil			
SP-23	Soil			
SP-24	Soil			
SP-25	Soil			
SP-26	Soil			
SP-27	Soil			
SP-28	Soil			
SP-29	Soil			
SP-30	Soil			
SP-31	Soil			
SP-32	Soil			
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SP-42	Soil			
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SP-93	Soil			
SP-94	Soil			
SP-95	Soil			
SP-96	Soil			
SP-97	Soil			
SP-98	Soil			
SP-99	Soil			
SP-100	Soil			

See
12/16/93

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

S/N-A - TCL + TIC's

ANALYSIS

JOB # : 3093-1325

SAMPLE ID	MATRIX	DATE COLLECTED	DATE RECVD AT LAB	DATE EXTRACTED	DATE ANALYZED
EB-1	Soil	11/24/93	11/26/93	11/30/93	12/10/93
EB-2	Soil		11/26/93	12/01/93	12/22/93
EB-3	Soil		11/26/93	11/30/93	12/10/93
EB-4	Soil		11/26/93		12/17/93
CB-1	Soil		11/26/93		12/17/93
CB-2	Soil		11/26/93		12/17/93
CB-3	Soil		11/26/93		12/21/93
CB-4	Soil		11/26/93		12/21/93
WB-1	Soil		11/26/93		12/22/93
WB-2	Soil		11/26/93	12/01/93	12/22/93
SDG-2 DUP	Soil		11/26/93	11/30/93	12/22/93
F.B. 112493	Aqueous		11/26/93	11/29/93	12/21/93
EB-3RE	Soil			11/30/93	12/14/93
EB-3MS					12/10/93
MSD					12/10/93
MSB			NA		12/10/93

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
PESTICIDE/PCB - TCL
ANALYSIS

JOB # : 3093-1325

06

SAMPLE ID	MATRIX	DATE COLLECTED	DATE RECVD AT LAB	DATE EXTRACTED	DATE ANALYZED
EB-1	Soil		11/26/93	12/01/93	12/08/93
EB-2	Soil		11/26/93		
EB-3	Soil		11/26/93		
EB-4	Soil		11/26/93		
CB-1	Soil		11/26/93		
CB-2	Soil		11/26/93		
CB-3	Soil		11/26/93		
CB-4	Soil		11/26/93		
WB-1	Soil		11/26/93		12/09/93
WB-2	Soil		11/26/93		
SDG-2 DUP	Soil		11/26/93		
F.B. 112493	Aqueous		11/26/93	11/30/93	12/08/93

SAMPLE PREPARATION AND ANALYSIS SUMMARY
TAL METALS
INORGANIC ANALYSIS

JOB # : 3093-1325

LABORATORY SAMPLE CODE	MATRIX	ANALYTICAL PROTOCOL	DIGESTION PROCEDURE	MATRIX MODIFIER	OIL/CONC FACTOR
EB-1	Soil	CAP	HNO3	NA	1:1
EB-2	Soil	↓	↓	↓	↓
EB-3	Soil				
EB-4	Soil				
CB-1	Soil				
CB-2	Soil				
CB-3	Soil				
CB-4	Soil				
WB-1	Soil				
WB-2	Soil				
SQG-2 DUP	Soil				
F.B. 112493	AQUEOUS				

308 # : 3093-1325

Furnace - A, Se

[illegible]

SAMPLE PREPARATION AND ANALYSIS SUMMARY
TAL METALS
INORGANIC ANALYSIS

10

Furnace. PL

LABORATORY SAMPLE CODE	MATRIX	ANALYTICAL PROTOCOL	DIGESTION PROCEDURE	MATRIX MODIFIER	DIL/CONC FACTOR
EB-1	Soil	CLP	HNO ₃	Mj N.I. Am. Phos	CLP
EB-2	Soil				↓
EB-3	Soil				1:10
EB-4	Soil				1:1
CB-1	Soil				CLP
CB-2	Soil				
CB-3	Soil				
CB-4	Soil				
WB-1	Soil				
WB-2	Soil				
SQG-2 DUP	Soil				
F.B. 112493	AQUEOUS				1:1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

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JOB # : 3093-1325

ICAP

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE DIGESTED	DATE ANALYZED
EB-1	Soil	TAL METALS	11/26/93	12/13/93	12/24/93
EB-2	Soil	TAL METALS	11/26/93		
EB-3	Soil	TAL METALS	11/26/93		
EB-4	Soil	TAL METALS	11/26/93		
CB-1	Soil	TAL METALS	11/26/93		
CB-2	Soil	TAL METALS	11/26/93		
CB-3	Soil	TAL METALS	11/26/93		
CB-4	Soil	TAL METALS	11/26/93		
WB-1	Soil	TAL METALS	11/26/93		
WB-2	Soil	TAL METALS	11/26/93		
SOC-2 DUP	Soil	TAL METALS	11/26/93		
F.B. 112493	Aqueous	TAL METALS	11/26/93	12/11/93	12/29/93

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

JOB # : 3093-1325

Furnace

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE DIGESTED	DATE ANALYZED
EB-1	Soil	TAL METALS	11/26/93	12/13/93	12/13, 14, 25/93
EB-2	Soil	TAL METALS	11/26/93		12/14-15, 24/93
EB-3	Soil	TAL METALS	11/26/93		12/13, 14, 27/93
EB-4	Soil	TAL METALS	11/26/93		
CB-1	Soil	TAL METALS	11/26/93		
CB-2	Soil	TAL METALS	11/26/93		
CB-3	Soil	TAL METALS	11/26/93		
CB-4	Soil	TAL METALS	11/26/93		
WB-1	Soil	TAL METALS	11/26/93		
WB-2	Soil	TAL METALS	11/26/93		
SDG-2 DUP	Soil	TAL METALS	11/26/93		
F.S. 112493	Aqueous	TAL METALS	11/26/93	12/11/93	12/12, 13/93

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

14
JOB # : 3093-1325

mercury

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE DIGESTED	DATE ANALYZED
EB-1	Soil	TAL METALS	11/26/93	12/7/93	12/8/93
EB-2	Soil	TAL METALS	11/26/93		
EB-3	Soil	TAL METALS	11/26/93		
EB-4	Soil	TAL METALS	11/26/93		
CB-1	Soil	TAL METALS	11/26/93		
CB-2	Soil	TAL METALS	11/26/93		
CB-3	Soil	TAL METALS	11/26/93		
CB-4	Soil	TAL METALS	11/26/93		
WB-1	Soil	TAL METALS	11/26/93		
WB-2	Soil	TAL METALS	11/26/93		
SOG-2 DUP	Soil	TAL METALS	11/26/93		
F.B. 112493	Aqueous	TAL METALS	11/26/93	11/29/93	11/30/93

2000 年 12 月 15 日

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

