Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: BRC Former C-6 Torrance Harbor Gateway

Collection Date: August 1, 2002

LDC Report Date: March 4, 2003

Matrix: Soil

Parameters: Volatiles

Validation Level: Tier 2 & Tier 3

Laboratory: Severn Trent Laboratories

Sample Delivery Group (SDG): E2H010352

Sample Identification

2_VEW_18_SSA080102_0001**
2_VEW_18_SSB080102_0001
2_VEW_18_SSC080102_0001
2_VEW_19_SSA080102_0001**
2_VEW_19_SSB080102_0001
2_VEW_19_SSC080102_0001**
2_VEW_20_SSA080102_0001
2_VEW_20_SSB080102_0001
2_VEW_20_SSC080102_0001
SB1000_SSA080102_0001
SB1000_SSB080102_0001
SB1000_SSC080102_0001
SB1001_SSA080102_0001
SB1001_SSB080102_0001
SB1001_SSC080102_0001
2_VEW_18_SSA080102_0001MS
2_VEW_18_SSA080102_0001MSD
2_VEW_20_SSA080102_0001MS
2_VEW_20_SSA080102_0001MSD

**Indicates sample underwent a Tier 3 review

Introduction

This data review covers 19 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Samples indicated by a double asterisk on the front cover underwent a Tier 3 review. A Tier 2 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
7/30/02	Bromomethane Iodomethane Tetrahydrofuran	50.400 31.363 39.775	2_VEW_18_SSA080102_0001** 2_VEW_18_SSB080102_0001 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSA080102_0001 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001 2_VEW_18_SSA080102_0001MS 2_VEW_18_SSA080102_0001MSD 2_VEW_20_SSA080102_0001MS 2_VEW_20_SSA080102_0001MSD 2220270MB 2218248MB 2220252MB	J (all detects) UJ (all non-detects)	A
7/28/02	Acrolein Iodomethane	32.559 40.194	SB1001_SSB080102_0001 2225371MB	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
7/30/02	Acrolein Acrylonitrile	0.00398 (≥0.05) 0.04290 (≥0.05)	2_VEW_18_SSA080102_0001** 2_VEW_18_SSB080102_0001 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSA080102_0001 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001 2_VEW_18_SSA080102_0001MS 2_VEW_18_SSA080102_0001MSD 2_VEW_20_SSA080102_0001MS 2_VEW_20_SSA080102_0001MSD 2220270MB 2218248MB 2220252MB	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
7/28/02	Acrolein Acrylonitrile	0.00340 (≥0.05) 0.03823 (≥0.05)	SB1001_SSB080102_0001 2225371MB	J (all detects) R (all non-detects) J (all detects) R (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
8/2/02	Iodomethane	35.6	2_VEW_18_SSA080102_0001** 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001 2220270MB	J (all detects) UJ (all non-detects)	A
8/5/02	Dichlorodifluoromethane Bromomethane	30.7 26.2	2_VEW_18_SSB080102_0001 2_VEW_18_SSA080102_0001MS 2_VEW_18_SSA080102_0001MSD 2218248MB	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
8/7/02 (DS3784)	Bromomethane	26.2	2_VEW_20_SSA080102_0001 2_VEW_20_SSA080102_0001MS 2_VEW_20_SSA080102_0001MSD 220252MB	J (all detects) UJ (all non-detects)	A
8/7/02 (DS3786)	Dichlorodifluoromethane Chloromethane	77.2 25.2	SB1001_SSB080102_0001 2225971MB	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
8/2/02	Acrolein Acrylonitrile	0.00441 (≥0.05) 0.04556 (≥0.05)	2_VEW_18_SSA080102_0001** 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001 2220270MB	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
8/5/02	Acrolein Acrylonitrile 2-Chloroethylvinyl ether	0.00439 (≥0.05) 0.04482 (≥0.05) 0.04877 (≥0.05)	2_VEW_18_SSB080102_0001 2_VEW_18_SSA080102_0001MS 2_VEW_18_SSA080102_0001MSD 2218248MB	J (all detects) R (all non-detects)	A

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
8/7/02 (DS3784)	Acrolein Acrylonitrile 2-Chloroethylvinyl ether	0.00333 (≥0.05) 0.03849 (≥0.05) 0.04851 (≥0.05)	2_VEW_20_SSA080102_0001 2_VEW_20_SSA080102_0001MS 2_VEW_20_SSA080102_0001MSD 220252MB	J (all detects) R (all non-detects)	A
8/7/02 (DS3786)	Acrolein Acrylonitrile 2-Chloroethylvinyl ether	0.00340 (≥0.05) 0.03799 (≥0.05) 0.04875 (≥0.05)	SB1001_SSB080102_0001 2225371MB	J (all detects) R (all non-detects)	A

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
2225371MB	8/7/02	Acetone Unknown (9.704) Unknown (11.929)	920 ug/Kg 260 ug/Kg 280 ug/Kg	SB1001_SSB080102_0001

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SB1001_SSB080102_0001	Acetone	890 ug/Kg	1200U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
2_VEW_18_SSB080102_0001	Bromofluorobenzene 1,2-Dichloroethane-d4 Toluene-d8	5.7 (65-135) 18 (60-140) 4.0 (70-130)	All TCL compounds	J (all detects) R (all non-detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
SB1001_SSC080102_0001	1,4-Dichlorobenzene-d4	307401 (493560-1974320)	1,2-Dibromo-3-chloropropane Bromobenzene 1,2,3-Trichloropropane n-Propylbenzene 2-Chlorotoluene 1,3,5-Trimethylbenzene 4-Chlorotoluene tert-Butylbenzene 1,2,4-Trimethylbenzene sec-Butylbenzene 1,3-Dichlorobenzene p-Isopropyltoluene 1,4-Dichlorobenzene n-Butylbenzene 1,2-Dichlorobenzene 1,2,4-Trichlorobenzene Hexachlorobutadiene 1,2,3-Trichlorobenzene	J (all detects) UJ (all non-detects)	P

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XIV. System Performance

The system performance was within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

BOE-C6-0005913

BRC Former C-6 Torrance Harbor Gateway
Volatiles - Data Qualification Summary - SDG E2H010352

SDG	Sample	Compound	Flag	A or P	Reason
E2H010352	2_VEW_18_SSA080102_0001** 2_VEW_18_SSB080102_0001 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSA080102_0001 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001	Bromomethane Iodomethane Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
E2H010352	SB1001_SSB080102_0001	Acrolein Iodomethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
E2H010352	2_VEW_18_SSA080102_0001** 2_VEW_18_SSB080102_0001 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSA080102_0001 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001	Acrolein Acrylonitrile	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
E2H010352	SB1001_SSB080102_0001	Acrolein Acrylonitrile	J (all detects) R (all non-detects) J (all detects) R (all non-detects)	A	Initial calibration (RRF)
E2H010352	2_VEW_18_SSA080102_0001** 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001	Iodomethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)

SDG	Sample	Compound	Flag	A or P	Reason
E2H010352	2_VEW_18_SSB080102_0001	Dichlorodifluoromethane Bromomethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
E2H010352	2_VEW_20_SSA080102_0001	Bromomethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
E2H010352	SB1001_SSB080102_0001	Dichlorodifluoromethane Chloromethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
E2H010352	2_VEW_18_SSA080102_0001** 2_VEW_18_SSC080102_0001 2_VEW_19_SSA080102_0001** 2_VEW_19_SSB080102_0001 2_VEW_19_SSC080102_0001** 2_VEW_20_SSB080102_0001 2_VEW_20_SSC080102_0001 SB1000_SSA080102_0001 SB1000_SSB080102_0001 SB1000_SSC080102_0001 SB1001_SSA080102_0001 SB1001_SSC080102_0001	Acrolein Acrylonitrile	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
E2H010352	2_VEW_18_SSB080102_0001 2_VEW_20_SSA080102_0001 SB1001_SSB080102_0001	Acrolein Acrylonitrile 2-Chloroethylvinyl ether	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
E2H010352	2_VEW_18_SSB080102_0001	All TCL compounds	J (all detects) R (all non-detects)	P	Surrogate spikes (%R)
E2H010352	SB1001_SSC080102_0001	1,2-Dibromo-3-chloropropane Bromobenzene 1,2,3-Trichloropropane n-Propylbenzene 2-Chlorotoluene 1,3,5-Trimethylbenzene 4-Chlorotoluene tert-Butylbenzene 1,2,4-Trimethylbenzene sec-Butylbenzene 1,3-Dichlorobenzene p-Isopropyltoluene 1,4-Dichlorobenzene n-Butylbenzene 1,2-Dichlorobenzene 1,2,4-Trichlorobenzene Hexachlorobutadiene 1,2,3-Trichlorobenzene	J (all detects) UJ (all non-detects)	P	Internal standards (area)

BRC Former C-6 Torrance Harbor Gateway
Volatiles - Laboratory Blank Data Qualification Summary - SDG E2H010352

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
E2H010352	SB1001_SSB080102_0001	Acetone	1200U ug/Kg	A

9883A

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_18_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-001 Work Order #...: E5RFP1AA Matrix.....: SOLID
Date Sampled...: 08/01/02 09:00 Date Received..: 08/01/02 16:20 MS Run #.....: 2220107
Prep Date.....: 08/02/02 Analysis Date..: 08/02/02
Prep Batch #...: 2220270 Analysis Time..: 22:03
Dilution Factor: 1
Analyst ID.....: 999998 Instrument ID..: MSD
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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A
3403

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_18_SSA000102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-001 **Work Order #...:** E5RFP1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	97	(65 - 135)
1,2-Dichloroethane-d4	85	(60 - 140)
Toluene-d8	88	(70 - 130)

A
9403

HALEY & ALDRICH INC

2_VEW_18_SGA000102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-001 **Work Order #:** E5RFP1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3403

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_18_SSR080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-002	**Work Order #...:**	E5RF41AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 09:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2218096
Prep Date.....:	08/05/02	**Analysis Date..:**	08/05/02		
Prep Batch #...:	2218248	**Analysis Time..:**	16:49		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND R	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND R	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND R	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND R	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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3407

HALEY & ALDRICH INC

Client Sample ID: 2_VEW 18_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-002 **Work Order #...:** E5RF41AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND R	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	5.7 *	(65 - 135)
1,2-Dichloroethane-d4	18 *	(60 - 140)
Toluene-d8	4.0 *	(70 - 130)

NOTE(S):

The surrogate recovery in the sample is outside control limits due to confirmed matrix effect.

* Surrogate recovery is outside stated control limits.

A 3/4/05

HALEY & ALDRICH INC

2_VEW_18_SSB080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-002 **Work Order #:** E5RF41AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

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3403

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_18_SSC000102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-003	Work Order #...:	E5RGE1AA	Matrix.....:	SOLID
Date Sampled...:	08/01/02 09:00	Date Received..:	08/01/02 16:20	MS Run #.....:	2220107
Prep Date.....:	08/02/02	Analysis Date..:	08/02/02		
Prep Batch #...:	2220270	Analysis Time..:	20:01		
Dilution Factor:	1				
Analyst ID.....:	999998	Instrument ID..:	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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3453

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_18_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-003 **Work Order #...:** E5RGE1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	98	(65 - 135)
1,2-Dichloroethane-d4	92	(60 - 140)
Toluene-d8	98	(70 - 130)

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345

HALEY & ALDRICH INC

2_VEW_18_SSC080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-003 Work Order #: E5RGE1AA Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3403

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-004	Work Order #...:	E5RGF1AA	Matrix.....:	SOLID
Date Sampled...:	08/01/02 10:00	Date Received..:	08/01/02 16:20	MS Run #.....:	2220107
Prep Date.....:	08/02/02	Analysis Date..:	08/02/02		
Prep Batch #...:	2220270	Analysis Time..:	21:32		
Dilution Factor:	1				
Analyst ID.....:	999998	Instrument ID..:	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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3405

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-004 **Work Order #...:** E5RGF1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	92	(65 - 135)
1,2-Dichloroethane-d4	91	(60 - 140)
Toluene-d8	92	(70 - 130)

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3-4-07

HALEY & ALDRICH INC

2_VEW_19_SGA080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-004 **Work Order #:** E5RGF1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3453

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-005	**Work Order #...:**	E5RGK1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 10:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/02/02		
Prep Batch #...:	2220270	**Analysis Time..:**	22:33		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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3405

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-005 **Work Order #...:** E5RGK1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	87	(65 - 135)
1,2-Dichloroethane-d4	93	(60 - 140)
Toluene-d8	92	(70 - 130)

A
3403

HALEY & ALDRICH INC

2_VEW_19_SSB080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-005 **Work Order #:** E5RGK1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

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9403

HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-006	**Work Order #...:**	E5RGM1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 10:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/02/02		
Prep Batch #...:	2220270	**Analysis Time..:**	23:04		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_19_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-006 **Work Order #...:** E5RGM1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	90	(65 - 135)
1,2-Dichloroethane-d4	99	(60 - 140)
Toluene-d8	91	(70 - 130)

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HALEY & ALDRICH INC

2_VEW_19_SSC080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-006 **Work Order #:** E5RGM1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_20_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-007	**Work Order #...:**	E5RGN1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 10:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220089
Prep Date.....:	08/07/02	**Analysis Date..:**	08/07/02		
Prep Batch #...:	2220252	**Analysis Time..:**	12:59		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND ~~UJ~~ R	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND ~~UJ~~ R	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND R	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_20_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-007 Work Order #...: E5RGN1AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	96	(65 - 135)
1,2-Dichloroethane-d4	75	(60 - 140)
Toluene d8	72	(70 - 130)

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HALEY & ALDRICH INC

2 VEW 20 SSA080102 0001

GC/MS Volatiles

Lot-Sample #: E2H010352-007 **Work Order #:** E5RGN1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_20_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-008 Work Order #...: E5RGQ1AA Matrix.....: SOLID
Date Sampled...: 08/01/02 10:00 Date Received..: 08/01/02 16:20 MS Run #.....: 2220107
Prep Date.....: 08/02/02 Analysis Date..: 08/03/02
Prep Batch #...: 2220270 Analysis Time..: 00:04
Dilution Factor: 1
Analyst ID.....: 999998 Instrument ID..: MSD
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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HALEY & ALDRICH INC

Client Sample ID: 2_VRW_20_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-008 Work Order #...: E5RGQ1AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	93	(65 - 135)
1,2-Dichloroethane-d4	103	(60 - 140)
Toluene-d8	93	(70 - 130)

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HALEY & ALDRICH INC

2_VEW_20_SSB080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-008 **Work Order #:** E5RGQ1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_20_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-009	**Work Order #...:**	E5RGR1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 10:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/03/02		
Prep Batch #...:	2220270	**Analysis Time..:**	00:35		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	**1.2 J**	**5.0**	**ug/kg**	**1.0**
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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HALEY & ALDRICH INC

Client Sample ID: 2_VEW_20_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-009 **Work Order #...:** E5RGR1AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	**4.9 J**	**5.0**	**ug/kg**	**3.0**
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	94	(65 - 135)
1,2-Dichloroethane-d4	102	(60 - 140)
Toluene-d8	94	(70 - 130)

NOTE(S):

J Estimated result. Result is less than RL.

A
9/4/07

HALEY & ALDRICH INC

2 VEW_20_SSC080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-009 **Work Order #:** E5RGR1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3407

HALEY & ALDRICH INC

Client Sample ID: SB1000_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-010	Work Order #...:	E5RGV1AA	Matrix.....:	SOLID
Date Sampled...:	08/01/02 09:00	Date Received..:	08/01/02 16:20	MS Run #.....:	2220107
Prep Date.....:	08/02/02	Analysis Date..:	08/03/02		
Prep Batch #...:	2220270	Analysis Time..:	01:05		
Dilution Factor:	1				
Analyst ID.....:	999998	Instrument ID..:	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2 Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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A
7403

HALEY & ALDRICH INC

Client Sample ID: SB1000_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-010 Work Order #...: E5RGV1AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	88	(65 - 135)
1,2-Dichloroethane-d4	99	(60 - 140)
Toluene-d8	90	(70 - 130)

A 3403

HALEY & ALDRICH INC

SB1000_SSA080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-010 **Work Order #:** E5RGV1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3403

HALEY & ALDRICH INC

Client Sample ID: SB1000_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-011	**Work Order #...:**	E5RG11AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 09:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/03/02		
Prep Batch #...:	2220270	**Analysis Time..:**	01:35		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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HALEY & ALDRICH INC

Client Sample ID: SB1000_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-011 Work Order #...: E5RG11AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	91	(65 - 135)
1,2-Dichloroethane-d4	112	(60 - 140)
Toluene-d8	94	(70 - 130)

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3407

HALEY & ALDRICH INC

SB1000_SSB080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-011 **Work Order #:** E5RG11AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A 3/4/03

HALEY & ALDRICH INC

Client Sample ID: SB1000_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-012 Work Order #...: E5RG41AA Matrix.....: SOLID
Date Sampled...: 08/01/02 09:00 Date Received..: 08/01/02 16:20 MS Run #.....: 2220107
Prep Date.....: 08/02/02 Analysis Date..: 08/03/02
Prep Batch #...: 2220270 Analysis Time..: 02:06
Dilution Factor: 1
Analyst ID.....: 999998 Instrument ID..: MSD
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	**3.6 J**	**5.0**	**ug/kg**	**2.0**
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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2403

HALEY & ALDRICH INC

Client Sample ID: SB1000_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-012 Work Order #...: E5RG41AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	91	(65 - 135)
1,2-Dichloroethane-d4	110	(60 - 140)
Toluene-d8	93	(70 - 130)

NOTE(S):

J Estimated result. Result is less than RL.

A 3403

HALEY & ALDRICH INC

Client Sample ID: SB1001_SSA080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-013	**Work Order #...:**	E5RG91AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 13:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/03/02		
Prep Batch #...:	2220270	**Analysis Time..:**	02:36		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2 Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

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A 3403

HALEY & ALDRICH INC

Client Sample ID: SD1001_S3A080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-013 **Work Order #...:** E5RG91AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	94	(65 - 135)
1,2-Dichloroethane-d4	115	(60 - 140)
Toluene-d8	95	(70 - 130)

A
3407

HALEY & ALDRICH INC

SB1001_SSA080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-013 **Work Order #:** E5RG91AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

A
3403

HALEY & ALDRICH INC

Client Sample ID: SB1001_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-014	**Work Order #...:**	E5RHC1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 13:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2225151
Prep Date.....:	08/06/02	**Analysis Date..:**	08/07/02		
Prep Batch #...:	2225371	**Analysis Time..:**	19:08		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND UJ	500	ug/kg	170
Chloromethane	ND UJ	500	ug/kg	200
Vinyl chloride	ND	500	ug/kg	150
Bromomethane	ND	500	ug/kg	250
1,2-Dibromoethane	ND	250	ug/kg	70
Chloroethane	ND	500	ug/kg	250
Trichlorofluoromethane	ND	500	ug/kg	70
Acrolein	ND UJR	5000	ug/kg	2000
1,1-Dichloroethene	ND	250	ug/kg	120
Iodomethane	ND UJ	500	ug/kg	250
Acetone	**890 J,B 1200 U**	**1200**	**ug/kg**	**400**
Carbon disulfide	ND	250	ug/kg	120
Methylene chloride	ND	250	ug/kg	50
trans-1,2-Dichloroethene	ND	250	ug/kg	120
Acrylonitrile	ND R	5000	ug/kg	2000
Methyl tert-butyl ether	ND	250	ug/kg	100
1,1-Dichloroethane	ND	250	ug/kg	100
Vinyl acetate	ND	500	ug/kg	380
2,2-Dichloropropane	ND	250	ug/kg	100
cis-1,2-Dichloroethene	ND	250	ug/kg	120
2-Butanone	ND	1200	ug/kg	700
Bromochloromethane	ND	250	ug/kg	110
Chloroform	ND	250	ug/kg	70
Tetrahydrofuran	ND	1000	ug/kg	500
1,1,1-Trichloroethane	ND	250	ug/kg	180
1,1-Dichloropropene	ND	250	ug/kg	100
Carbon tetrachloride	ND	250	ug/kg	100
Benzene	ND	250	ug/kg	100
1,2-Dichloroethane	ND	250	ug/kg	70
Trichloroethene	**380**	**250**	**ug/kg**	**70**
1,2-Dichloropropane	ND	250	ug/kg	100
Bromodichloromethane	ND	250	ug/kg	100
2-Chloroethyl vinyl ether	ND R	500	ug/kg	350
cis-1,3-Dichloropropene	ND	250	ug/kg	100
4-Methyl-2-pentanone	ND	1200	ug/kg	400
Toluene	ND	250	ug/kg	60
trans-1,3-Dichloropropene	ND	250	ug/kg	70

(Continued on next page)

A
3/13

HALEY & ALDRICH INC

Client Sample ID: SB1001_SSB080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-014 Work Order #...: E5RHC1AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	250	ug/kg	100
Tetrachloroethene	**330**	**250**	**ug/kg**	**80**
2-Hexanone	ND	1200	ug/kg	350
Dibromochloromethane	ND	250	ug/kg	110
Chlorobenzene	ND	250	ug/kg	100
Ethylbenzene	**390**	**250**	**ug/kg**	**70**
Xylenes (total)	**1000**	**250**	**ug/kg**	**180**
Styrene	ND	500	ug/kg	100
Bromoform	ND	250	ug/kg	100
Isopropylbenzene	**340**	**250**	**ug/kg**	**120**
p-Isopropyltoluene	**900**	**250**	**ug/kg**	**70**
Bromobenzene	ND	250	ug/kg	70
1,1,1,2-Tetrachloroethane	ND	250	ug/kg	60
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	100
1,2,3-Trichloropropane	ND	250	ug/kg	110
n-Propylbenzene	**900**	**250**	**ug/kg**	**110**
2-Chlorotoluene	ND	250	ug/kg	70
4-Chlorotoluene	ND	250	ug/kg	70
1,3,5-Trimethylbenzene	**2600**	**250**	**ug/kg**	**120**
tert-Butylbenzene	ND	250	ug/kg	70
1,2,4-Trimethylbenzene	**7700**	**250**	**ug/kg**	**70**
sec-Butylbenzene	**590**	**250**	**ug/kg**	**70**
1,3-Dichlorobenzene	ND	250	ug/kg	70
1,4-Dichlorobenzene	ND	250	ug/kg	100
1,2-Dichlorobenzene	ND	250	ug/kg	100
n-Butylbenzene	**1900**	**250**	**ug/kg**	**70**
1,2-Dibromo-3-chloro-propane	ND	500	ug/kg	150
1,2,4-Trichloro-benzene	ND	250	ug/kg	70
Hexachlorobutadiene	ND	250	ug/kg	70
1,2,3-Trichlorobenzene	ND	250	ug/kg	70
t-Butanol	ND	5000	ug/kg	2500
Isopropyl ether	ND	500	ug/kg	100
Tert-amyl methyl ether	ND	500	ug/kg	100
Tert-butyl ethyl ether	ND	500	ug/kg	100

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	99	(60 - 140)
1,2-Dichloroethane-d4	97	(60 - 140)
Toluene-d8	93	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

A
3/4/09

HALEY & ALDRICH INC

SB1001_SSB080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-014 **Work Order #:** E5RHC1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
unknown aromatic hydrocarbon		8900	M	16.178	ug/kg
unknown aromatic hydrocarbon		8100	M	17.94	ug/kg
unknown aromatic hydrocarbon		13000	M	18.403	ug/kg
unknown aromatic hydrocarbon		7600	M	19.17	ug/kg
unknown aromatic hydrocarbon		5300	M	20.263	ug/kg
unknown aromatic hydrocarbon		21000	M	21.1	ug/kg
unknown Naphthalene		6200	M	21.395	ug/kg
unknown Naphthalene		13000	M	23.443	ug/kg
unknown Naphthalene		31000	M	24.113	ug/kg
unknown Naphthalene		13000	M	24.29	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

A
7/9/09

HALEY & ALDRICH INC

Client Sample ID: SB1001_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...:	E2H010352-015	**Work Order #...:**	E5RHD1AA	**Matrix.....:**	SOLID
Date Sampled...:	08/01/02 13:00	**Date Received..:**	08/01/02 16:20	**MS Run #.....:**	2220107
Prep Date.....:	08/02/02	**Analysis Date..:**	08/03/02		
Prep Batch #...:	2220270	**Analysis Time..:**	03:36		
Dilution Factor:	1				
Analyst ID.....:	999998	**Instrument ID..:**	MSD		
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND UJ	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND UJ	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND UJ	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND UJ	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND UJ	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	**7.0**	**5.0**	**ug/kg**	**2.0**
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

(Continued on next page)

A
JUG

HALEY & ALDRICH INC

Client Sample ID: SB1001_SSC080102_0001

GC/MS Volatiles

Lot-Sample #...: E2H010352-015 Work Order #...: E5RHD1AA Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	**2.0 J**	**5.0**	**ug/kg**	**2.0**
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND UJ	5.0	ug/kg	2.0
Bromobenzene	ND UJ	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND UJ	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	**3.1 J J**	**5.0**	**ug/kg**	**2.0**
tert-Butylbenzene	ND UJ	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	**7.6 J**	**5.0**	**ug/kg**	**2.0**
sec-Butylbenzene	ND UJ	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND UJ	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND UJ	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND UJ	5.0	ug/kg	2.0
Hexachlorobutadiene	ND UJ	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND UJ	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Bromofluorobenzene	128	(65 - 135)
1,2-Dichloroethane-d4	96	(60 - 140)
Toluene-d8	87	(70 - 130)

NOTE(S):

J Estimated result. Result is less than RL.

A
3/4/07

HALEY & ALDRICH INC

SB1001_SSC080102_0001

GC/MS Volatiles

Lot-Sample #: E2H010352-015 **Work Order #:** E5RHD1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aromatic		140	M	17.382	ug/kg
Unknown alkane		420	M	18.82	ug/kg
Unknown cycloalkane		92	M	19.952	ug/kg
Unknown aromatic		67	M	20.11	ug/kg
Unknown alkane		380	M	21.399	ug/kg
Unknown cycloalkane		70	M	22.108	ug/kg
Unknown alkane		940	M	23.152	ug/kg
Unknown cycloalkane		140	M	23.9	ug/kg
Unknown alkane		410	M	24.087	ug/kg
Unknown alkane		330	M	24.284	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

A
3403

LDC #: 9883A1

SDG #: E2H010352

Laboratory: Severn Trent Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III/IV

Date: 2/27/

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8/1/02
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	TW	
IV.	Continuing calibration	TW	
V.	Blanks	TW	
VI.	Surrogate spikes	TW	
VII.	Matrix spike/Matrix spike duplicates	TW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	TW	
XI.	Target compound identification	A	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	A	Not reviewed for Level III validation.
XIII.	Tentitatively identified compounds (TICs)	~~N~~ A	Not reviewed for Level III validation.
XIV.	System performance	A	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

MM soils

1	2_VEW_18_SSA080102_0001**	11	SB1000_SSB080102_0001	21	2220270MB	31	
2 1	2_VEW_18_SSB080102_0001	12	SB1000_SSC080102_0001 +	22 1	2218248MB	32	
3	2_VEW_18_SSC080102_0001	13	SB1001_SSA080102_0001	23 2	2220252MB	33	
4	2_VEW_19_SSA080102_0001**	14 3	SB1001_SSB080102_0001	24 3	22253T1MB	34	
5	2_VEW_19_SSB080102_0001	15	SB1001_SSC080102_0001	25		35	
6	2_VEW_19_SSC080102_0001**	16 1 2	2_VEW_18_SSA080102_0001MS	26		36	
7 2	2_VEW_20_SSA080102_0001	17 1 2	2_VEW_18_SSA080102_0001MSD	27		37	
8	2_VEW_20_SSB080102_0001	18 2	2_VEW_20_SSA080102_0001MS	28		38	
9	2_VEW_20_SSC080102_0001 +	19 2	2_VEW_20_SSA080102_0001MSD	29		39	
10	SB1000_SSA080102_0001	20		30		40	

9883A1W.H34.wpd

LDC #: 9883A1
SDG #: E2H01035

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $\geq$ 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		

LDC #: 9883A1
SDG #: 22H010352

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: 2

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?		✓		
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?	✓			
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?	✓			
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	

LDC #: 9883A1
SDG #: EZH010352

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. Benzyl chloride
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl choride**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Diethyl ether	FFF. 1,3-Dichlorobenzene	XXX. Ethyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

4 DCB

COMPNDL.1SB

BOE-C6-0005965

LDC #: 9883A1
SDG #: E2H010352

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: [signature]
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	7/30/02	ICAL	B	50.400		1-B.15-19.	J/UJ/A
			Iodomethane	31.363		2220270MB.	↓
			Tetrahydrofuran	39.775		2218248MB	↓
			Acrolein		0.00398	2220252MB	J/UJ/A *
			~~GGGG~~		0.04290		↓
	7/28/02	ICAL	FFFF	32.559		14.22253T1 MB	J/UJ/A
			Iodomethane	40.194			↓
			FFFF		0.00340		J/R/A
			~~GGGG~~		0.03823		↓

* lowest std < RL (level IV only)
(Ave/conc x RL > 10,000)

INICAL.1SB

LDC #: 9883A1
SDG #: E2H010352

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	8/2/02	DS3779	Iodomethane	35.6		1,3-6,8-13,15	J/US/A
			FFFF		0.00441	2220270MB	J/US/A *
			~~GGGG~~		0.04556		↓
	8/5/02	DS3782	W	30.7		2,16-17,2218248MB	J/US/A
			B	26.2			↓
			FFFF		0.00439		J/R/A
			~~GGGG~~		0.04482		↓
			II		0.04877		↓
	8/7/02	DS3784	B	26.2		7,18-19,2220252MB	J/US/A
			FFFF		0.00333	~~7,18-19,2220252MB~~	J/R/A
			~~GGGG~~		0.03849		↓
			II		0.04851		↓
	8/7/02	DS3786	W	77.2		14,2225371MB	J/US/A
			A	25.2			↓
			FFFF		0.00340		J/R/A
			~~GGGG~~		0.03799		↓
			II		0.04875		↓
		x $\frac{\text{ave}}{\text{conc}}$	x RC >	10,000 (only for level IV spl)			

CONCAL.1SB

BOE-C6-0005967

LDC #: 98830 1
SDG #: E2H010352

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 8/7/02
Conc. units: ug/L
Associated Samples: 14

Compound	Blank ID	Sample Identification								
	225371MB	14								
Methylene chloride										
Acetone	920	890/200U								
TICs										
Unknown	(9.704) 260									
↓	(11.929) 280									
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BLANKS2.1SB

BOE-C6-0005968

LDC #: 9883A1
SDG #: E2H010352

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery	(Limits)	Qualifications
		2	BFB	5.7	(65-135)	J/R/P
			DCE	18	(60-140)	↓
			TOL	4.0	(70-130)	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

	QC Limits (Soil)	QC Limits (Water)
SMC1 (TOL) = Toluene-d8	81-117	88-110
SMC2 (BFB) = Bromofluorobenzene	74-121	86-115
SMC3 (DCE) = 1,2-Dichloroethane-d4	80-120	80-120
SMC4 (DFM) = Dibromofluoromethane	80-120	86-118

SUR.1SB

LDC #: 9883A1
SDG #: E2H010352

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		~~No MS/MSD~~		( )	( )	( )		
				( )	( )	( )		
		E2H020314-001	S	142 (70-135)	146 (70-135)	( )	Done	No Qual
				( )	( )	( )		
		E2H020314-006	CC	0 (60-125)	0 (60-125)	( )	Done	No Qual
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	≤ 22%	61-145%	≤ 14%
S.	Trichloroethene	62-137%	≤ 24%	71-120%	≤ 14%
V.	Benzene	66-142%	≤ 21%	76-127%	≤ 11%
CC.	Toluene	59-139%	≤ 21%	76-125%	≤ 13%
DD.	Chlorobenzene	60-133%	≤ 21%	75-130%	≤ 13%

MSD.1SB

BOE-C6-0005970