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To: James Cashwell
From: Chris Ricardi
Date: June 2, 2011
Subject: Olin Chemical Superfund Site–November 2010 OU1 Geoprobe Soil Sampling

DATA VALIDATION REPORT
2010 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NOVEMBER OU1 GEOPROBE SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS
TestAmerica Data Sets: 360-31096-1, 360-31147-1, and 360-31167-1

1.0 INTRODUCTION

Surface soil and subsurface soil samples were collected at the Olin Chemical Superfund Site from November 15 through November 18, 2010 as specified in the Remedial Investigation/Feasibility Study Work Plan (MACTEC, 2009). Samples were analyzed by one or more of the following U.S. Environmental Protection Agency (USEPA) SW-846 (USEPA, 1996a) or Massachusetts Department of Environmental Protection (MassDEP) methods:

Laboratory	Parameter	Analytical Method	Validation Level
TestAmerica - Westfield, MA	VOCs	SW-846 8260C	100% Tier II
TestAmerica - Westfield, MA	SVOCs	SW-846 8270D – Low Level	100% Tier II
TestAmerica - Westfield, MA	EPH	MassDEP EPH-98-1	Olin Level 1
TestAmerica - Westfield, MA	VPH	MassDEP VPH-98-1	Olin Level 1
TestAmerica - Westfield, MA	Percent Solids	SW-846 E160.3	Chemist Review

A summary of samples (by sample delivery group [SDG]) included in this data validation report is presented in Table 1. Analytical data packages were reviewed in accordance with the Olin Chemical Superfund Site Final Remedial Investigation/Feasibility Study Work Plan Quality Assurance Project Plan (QAPP) [MACTEC, 2009]. Data were validated using the Region I EPA-New England Data Validation Functional Guidelines (USEPA, 1996b) and the Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the MCP (MassDEP, 2004). USEPA Region I Data validation procedures for SW-846 Methods were modified to include method-specific criteria (i.e., measurement performance criteria detailed in the QAPP) from the MCP Methods. For other methods that were not addressed in USEPA Region I guidelines or the MCP Compendium, method performance criteria were developed for this project. Validation levels for each method reviewed (Tier II, Olin Level 1, chemist review) are summarized above.

Final sample results are presented on data summaries in Table 2 by the analysis method.

A summary of results that were qualified during validation is included on Table 3. Validation reason codes used to document validation qualification actions were associated with final results that have been qualified. An index of the reason codes is presented on the last page of Table 3.

Tentatively identified compounds (TICs) were reported by the laboratory if detected in samples analyzed for VOCs and SVOCs. TICs were evaluated during validation and were removed from the data set if reported in associated method blanks. VOC TICs are presented by SDG in Table 4-1. SVOC TICs are presented by SDG in Table 4-2.

2.0 VOLATILE ORGANIC COMPOUNDS (VOCs)

Samples were analyzed for VOCs by method SW-846 8260C. Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
  Blanks
* Instrument Tunes
  Initial Calibration Standards
  Continuing Calibration Standards
  Laboratory Control Sample
  Matrix Spikes (MS/MSD)
  Field Duplicates
* Surrogate Recovery
* Internal Standards
* Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)
* TICs

***** = indicates that criteria were met for this parameter

Except for the validation actions noted below, sample results are interpreted to be usable as reported by the laboratory.

2.1 Blanks

SDGs 360-31147-1

Trip blank OC-TBK-057 had a detection of acetone at 18 µg/kg. An action level was established at ten times the concentration in the blank and compared to sample results. The following samples had detections of acetone below the reporting limit and action limit and were qualified non-detect (U) at the reporting limit: OC-SB-479-8.0/10-XXX, OC-SB-480-0.0/1.0-XXX, OC-SB-500-0.5/3.0-XXX, and OC-SB-501-0.5/3.0-XXX.

2.2 Initial Calibration

SDGs 360-31096-1, 360-31147-1, and 360-31167-1

The initial calibration (analyzed on 10/19/10) associated with samples in SDGs 360-31096-1, 360-31147-1 and 360-31167-1 had average relative response factors (RRFs) for 1,4-dioxane (0.02), acetone (0.04) and tetrahydrofuran (0.04) that were below the Region I limit of 0.05. The average

RRF for 1,4-dioxane was greater than the USEPA Contract Lab Program requirement of 0.005. The relative standard deviations (RSDs) were less than 30 and within Region I validation guideline control limits indicating good linearity across the calibration range for these three compounds. There were no detections of 1,4-dioxane and tetrahydrofuran in associated samples. Acetone was detected in a sub-set of samples in SDG 360-31167-1. Based on professional judgment results were not qualified as rejected and results were qualified estimated (J/UJ). Qualified results are summarized on Table 3 with a reason code of ICVRRF.

2.3 Continuing Calibration Standards

SDGs 360-31096-1

The following compounds had percent differences greater than the Region I goal of 25 percent in the continuing calibration standards analyzed in SDG 360-31096-1: acetone (-29), methyl acetate (acetic acid, methyl ester) [-28], and 1,2,4-trimethylbenzene (26). These compounds were not detected in associated samples and results were qualified estimated (UJ) at the reporting limit. Qualified results are summarized on Table 3 with a reason code of CCV%D.

Acetone (0.02), 2-butanone (0.047), and 1,4-dioxane (0.017) had RRFs that were below 0.05. The average RRFs for these compounds in the initial calibration were within control limits (< 30%) and the LCS/LCSD recoveries were generally within control limits; therefore, professional judgment was used not to reject acetone, 2-butanone, and 1,4-dioxane, but qualify estimated (UJ) at the reporting limit for all samples in SDG 360-31096-1. Qualified results are summarized on Table 3 with a reason code of CCVRRF.

SDGs 360-31147-1 and 360-31167-1

The following compounds had percent differences greater than the Region I goal of 25 percent in the continuing calibration standards analyzed in SDG 360-31167-1: acetone (-26 to -29), 1,2,4-trimethylbenzene (27 to 29). These compounds were qualified estimated (J/UJ) in associated samples. Qualified results are summarized on Table 3 with a reason code of CCV%D.

Acetone (0.02 to 0.03), 1,4-dioxane (0.016 to 0.019), and tetrahydrofuran (0.03), 2-butanone (0.049) had RRFs that were below 0.05 and professional judgment was used to qualify these compounds estimated (UJ) in associated samples. Qualified results are summarized on Table 3 with a reason code of CCVRRF.

2.4 Laboratory Control Samples (LCS/LCSD)

SDG 360-31096-1

The LCS and LCSD percent recoveries of acetone (69 and 68) were less than the lower QC limit of 70. Sample results for acetone were non-detect and the reporting limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of LCS-L.

SDG 360-31147-1

The LCS and LCSD (analyzed on 11/19/10) had percent recoveries of acetone (62 and 62), bromomethane (64 and 64), and chloroethane (42 and 46) less than the lower QC limit of 70.

Sample results for these compounds were non-detect and the reporting limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of LCS-L.

SDG 360-31167-1

There were six LCS/LCSD pairs analyzed with samples in SDG 360-31167-1. Percent recoveries below the lower QC limit of 70 were reported for the following compounds in a subset of LCS pairs: acetone (62 to 68), bromomethane (61 to 68), chloroethane (40 to 46), trichlorofluoromethane (57 to 66), and dichlorodifluoromethane (62 to 66). There were no detections in associated samples and the reporting limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of LCS-L.

2.5 Matrix Spikes (MS/MSD)

SDG 360-31147-1

MS/MSD analyses were performed on sample OC-SB-481-7.0/9.0-XXX. The following compounds had percent recoveries below the lower control limit of 70: 2,2-dichloropropane (65), acetone (69), bromomethane (63 and 69), chloroethane (43 and 50), and trichlorofluoromethane (63 and 67). These compounds were not detected in sample OC-SB-481-7.0/9.0-XXX or the field duplicate OC-SB-481-7.0/9.0-DUP, and results were qualified estimated (UJ) at the reporting. Qualified results are summarized on Table 3 with a reason code of MS-L.

SDG 360-31167-1

MS/MSD analyses were performed on sample OC-SB-475-16/18-XXX. The following compounds had percent recoveries below the lower control limit of 70: trichlorofluoromethane (65% and 67%) and dichlorodifluoromethane (64% and 66%). These compounds were not detected in sample OC-SB-475-16/18-XXX and results were qualified estimated (UJ) at the reporting. Qualified results are summarized on Table 3 with a reason code of MS-L.

2.6 Field Duplicates

SDG 360-31167-1

A field duplicate was collected with sample OC-SB-475-8.0/10-XXX. The table below presents the relative percent difference (RPD) for 2,4,4-trimethyl-1-pentene and 2,4,4-trimethyl-2-pentene which was above the control limit of 50. These compounds were qualified estimated (J) in the field sample and field duplicate sample.

Analyte	OC-SB-475-8.0/10-DUP	OC-SB-475-8.0/10-XXX	RPD
2,4,4-Trimethyl-1-pentene	36,000 µg/kg	74,000 µg/kg	69%
2,4,4-Trimethyl-2-Pentene	4,300 µg/kg	13,000 µg/kg	100%

3.0 SEMIVOLATILE ORGANIC COMPOUNDS (SVOC)

Samples were analyzed for SVOCs by SW-846 8270D−Low Level method. Validation actions for samples that were analyzed for N-nitrosodiphenylamine (NDPA)/diphenylamine (DPA) and low

level 8270 for N-nitrosodimethylamine (NDMA) are also presented in this section. Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Blanks
* Instrument Tunes
  Initial and Continuing Calibration Standards
  Laboratory Control Sample
  Matrix Spikes
* Surrogate Recovery
* Internal Standards
* Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)
* TICs

***** = indicates that criteria were met for this parameter

Except for the validation actions noted below, the results are interpreted to be usable as reported by the laboratory.

3.1 Initial Calibration Standards

SDG 360-31096-1

The laboratory performed quadratic regressions for benzoic acid and 2,4-dintirophenol. The regression coefficient (r2) for benzoic acid (0.9890) and 2,4-dintirophenol (0.9810) was less than the QC limit of 0.99. Reported detections of benzoic acid were qualified estimated (J). Non-detect results for benzoic acid and 2,4-dinitrophenol were qualified estimated (UJ) at the reporting limits. Qualified results are summarized on Table 3 with a reason code of ICVRSD.

3.2 Continuing Calibration Standards

SDG 360-31147-1

The continuing calibration RRF for 2,4-dinitrophenol (0.0490) and the percent differences for 2,4-dintirophenol (43), 4,6-dintiro-2-methylphenol (27), and dibenz(a,h)anthracene (28) were outside of the QC limits. Sample results for 2,4-dintirophenol, 4,6-dintiro-2-methylphenol, and dibenz(a,h)anthracene were non-detect and the reporting limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason codes CCVRRF and CCV%D.

SDG 360-31167-1

For a subset of samples, the continuing calibration percent difference of benzoic acid (36), hexachlorocyclopentadiene (55), 2-nitroaniline (39), 2,4-dinitrophenol (53), 4-nitrophenol (30), 4-nitroaniline (42), and 4,6-dintiro-2-methylphenol (35) exceeded the QC limit of 25. Associated sample results for benzoic acid, hexachlorocyclopentadiene, 2-nitroaniline, 2,4-dinitrophenol, 4-nitrophenol, 4-nitroaniline, and 4,6-dintiro-2-methylphenol were non-detect and the reporting

limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of CCV%D.

For a subset of samples, the continuing calibration percent difference of benzoic acid (-29) exceeded the QC limit of 25. Associated sample results for benzoic acid that were non-detect were qualified estimated (UJ) at the reporting limits. Reported detections of benzoic acid were qualified estimated (J). Qualified results are summarized on Table 3 with a reason code of CCV%D.

3.3 Laboratory Control Sample

SDG 360-31167-1

The LCS and LCSD percent recoveries of aniline (38 and 38) were less than the lower QC limit of 40. Sample results for aniline were non-detect and the reporting limits were qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of LCS-L.

3.4 Matrix Spikes

SDG 360-31096-1

Sample OC-SB-485-11/13-XXX was selected for MS/MSD analysis. The MS and MSD percent recoveries of aniline (36 and 37) were less than the lower QC limit of 40. The result for aniline in the unspiked sample was non-detect and the reporting limit was qualified estimated (UJ). Qualified results are summarized on Table 3 with a reason code of MS-L.

SDG 360-31147-1

Sample OC-SB-481-7.0/9.0-XXX was selected for MS/MSD analysis. The MS and MSD percent recoveries of hexachlorocyclopentadiene (0 and 0) were less than the lower QC limit of 40. The RPD for 2,4-dinitrophenol (68) exceeded the QC limit of 50. The result for 2,4-dinitrophenol in the unspiked sample was non-detect and the reporting limit was qualified estimated (UJ). The result for hexachlorocyclopentadiene in the unspiked sample was non-detect and was rejected (R). Qualified results are summarized on Table 3 with a reason code of MS-L and MSRPD.

SDG 360-31167-1

Sample OC-SB-475-16/18-XXX was selected for MS/MSD analysis. The MS and/or MSD percent recoveries of aniline (36 and 38), benzoic acid (7), hexachlorocyclopentadiene (35), and pentachlorophenol (131), and the RPD for benzoic acid (107) were outside of the QC limits. The result for aniline in the unspiked sample was qualified previously under the LCS criteria. The unspiked sample result for benzoic acid was qualified estimated (J). The unspiked sample result for hexachlorocyclopentadiene was qualified estimated (UJ) at the reporting limit. The unspiked sample result for pentachlorophenol was non-detect, and no further action was required. Qualified results are summarized on Table 3 with a reason code of MS-L and MSRPD.

4.0 EXTRACTABLE PETROLEUM HYDROCARBONS (EPH)

Samples were analyzed for EPH by MassDEP Method EPH-98-1. Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Blanks
* Surrogate Recovery
* Laboratory Control Sample
  Matrix Spikes (MS/MSD)
* Field Duplicates
* Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)

***** = indicates that criteria were met for this parameter

Except for the validation actions noted below, the results are interpreted to be usable as reported by the laboratory.

4.1 Matrix Spikes

360-31147-1

Sample OC-SB-479-0.0/1.0-XXX was analyzed for MS/MSD. The MS percent recovery of C11-C12 Aromatics (4) and C9-C18 Aliphatics (-36) were less than the lower QC limit of 70. The MS/MSD RPD for C9-C18 Aliphatics (51) exceeded the QC limit of 50. Based upon professional judgment, the non-detect results for C11-C12 Aromatics, C9-C18 Aliphatics, and Total Extractable Petroleum Hydrocarbons were qualified estimated (UJ) at the reporting limits.

5.0 VOLATILE PETROLEUM HYDROCARBONS (VPH)

Samples were analyzed for VPH by MassDEP Method VPH-98-1. Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Blanks
* Surrogate Recovery
* Laboratory Control Sample
  Matrix Spikes (MS/MSD)
* Field Duplicates
  Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)

***** = indicates that criteria were met for this parameter

Except for the validation actions noted above, the results are interpreted to be usable as reported by the laboratory.

5.1 Matrix Spikes

360-31147-1

Sample OC-SB-481-7.0/9.0-XXX was analyzed for MS/MSD. The MSD percent recovery of C5-C8 Aliphatics (unadjusted) (57), C9-C10 Aromatics (61), and C9-C13 Aliphatics (unadjusted) (67) were less than the lower QC limit of 70. The MS/MSD RPD for C5-C8 Aliphatics (unadjusted) (53) exceeded the QC limit of 50. All VPH results for sample OC-SB-481-7.0/9.0-XXX were qualified estimated (J) or the reporting limits were qualified estimated (UJ).

5.2 Detection Limits

Dilution analyses were performed on the samples below due to high target compound concentrations. Reporting limits for the following samples are elevated: OC-SB-475-8.0/10- DUP (2X), OC-SB-476-8.0/10- XXX (10X), OC-SB-476-13/15- XXX (5X), OC-SB-477-10/12-XXX (10X), and OC-SB-481-7.0/9.0-XXX (5X)

6.0 PERCENT SOLIDS

Samples were analyzed for percent solids and percent moisture by EPA Method 160.3. Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Field Duplicates
* Laboratory Duplicates
* Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)

***** = indicates that criteria were met for this parameter

The results are interpreted to be usable as reported by the laboratory.

MACTEC

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Date

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Michael Murphy
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Date

Reference:

MACTEC Engineering and Consulting, Inc. (MACTEC), 2009. "Final Remedial Investigation/Feasibility Study Work Plan Project Operations Plan"; Volume III-B Quality Assurance Project Plan; Olin Chemical Superfund Site; 51 Eames Street; Wilmington, MA; August 14, 2009.

Massachusetts Department of Environmental Protection (MassDEP), 2004. "The Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the Massachusetts Contingency Plan (MCP)"; Bureau of Waste Site Cleanup; 1 Winter Street, Boston, Massachusetts 02108; WSC-CAM; May 2004.

U.S. Environmental Protection Agency (USEPA), 1996a. "Test Methods for Evaluating Solid Waste"; Laboratory Manual Physical/Chemical Methods; Office of Solid Waste and Emergency Response; Washington, DC; SW-846; November 1986; Revision 4 -December 1996.

USEPA, 1996b. "Region 1 EPA-NE Data Validation Guidelines for Evaluating Environmental Analyses"; Quality Assurance Unit Staff; Office of Environmental Measurement and Evaluation; December 1996.

Table 1
Sample Summary
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts					
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260B	SW8270C	E160_3	MAVPH	MAEPH
				VOCs	SVOCs	Percent Solid	MAVPH	MAEPH
Field Samples								
SB-474	OC-SB-474-0.0/1.0-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-474	OC-SB-474-8.0/10-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-474	OC-SB-474-10.5/12.5-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-475	OC-SB-475-0.0/1.0-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-475	OC-SB-475-8.0/10-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-475	OC-SB-475-8.0/10-DUP	11/18/10	360-31167-1	77	79	2	6	5
SB-475	OC-SB-475-16/18-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-476	OC-SB-476-0.0/1.0-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-476	OC-SB-476-8.0/10-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-476	OC-SB-476-13/15-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-477	OC-SB-477-0.0/1.0-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-477	OC-SB-477-8.0/10-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-477	OC-SB-477-10/12-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-478	OC-SB-478-0.0/1.0-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-478	OC-SB-478-8.0/10-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-478	OC-SB-478-10/12-XXX	11/18/10	360-31167-1	77	79	2	6	5
SB-479	OC-SB-479-0.0/1.0-XXX	11/16/10	360-31147-1	77	79	2	6	5
SB-479	OC-SB-479-8.0/10-XXX	11/16/10	360-31147-1	77	79	2	6	5
SB-480	OC-SB-480-0.0/1.0-XXX	11/16/10	360-31147-1	77	79	2	6	5
SB-480	OC-SB-480-6.0/8.0-XXX	11/16/10	360-31147-1	77	79	2	6	5
SB-480	OC-SB-480-6.0/8.0-DUP	11/16/10	360-31147-1	77	79	2	6	5
SB-481	OC-SB-481-0.0/1.0-XXX	11/17/10	360-31147-1	77	79	2	6	5
SB-481	OC-SB-481-7.0/9.0-XXX	11/17/10	360-31147-1	77	79	2	6	5
SB-485	OC-SB-485-0.0/1.0-XXX	11/15/10	360-31096-1	77	79	2	6	5
SB-485	OC-SB-485-6.0/8.0-XXX	11/15/10	360-31096-1	77	79	2	6	5
SB-485	OC-SB-485-11/13-XXX	11/15/10	360-31096-1	77	79	2	6	5
SB-488	OC-SB-488-0.0/1.0-XXX	11/15/10	360-31096-1	77	79	2	6	5
SB-488	OC-SB-488-7.0/9.0-XXX	11/15/10	360-31096-1	77	79	2	6	5
SB-490	OC-SB-490-0.0/1.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-490	OC-SB-490-7.0/9.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-494	OC-SB-494-0.0/1.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-494	OC-SB-494-6.0/8.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-494	OC-SB-494-12/14-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-495	OC-SB-495-0.0/1.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-495	OC-SB-495-4.0/6.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-496	OC-SB-496-0.0/1.0-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-496	OC-SB-496-5.0/6.5-XXX	11/16/10	360-31096-1	77	79	2	6	5
SB-497	OC-SB-497-0.0/1.0-XXX	11/17/10	360-31167-1	77	79	2	6	5
SB-497	OC-SB-497-6.0/8.0-XXX	11/17/10	360-31167-1	77	79	2	6	5
SB-497	OC-SB-497-11/13-XXX	11/17/10	360-31167-1	77	79	2	6	5
SB-500	OC-SB-500-0.5/3.0-XXX	11/17/10	360-31147-1	77	79	2	6	5
SB-501	OC-SB-501-0.5/3.0-XXX	11/17/10	360-31147-1	77	79	2	6	5
SB-502	OC-SB-502-3.0/5.0-XXX	11/17/10	360-31147-1	77	79	2	6	5
QC Samples								
TRIP BLANK	OC-TBK-055	11/15/10	360-31096-1	77			6	
TRIP BLANK	OC-TBK-056	11/16/10	360-31096-1	77			6	
TRIP BLANK	OC-TBK-057	11/16/10	360-31147-1	77			6	
TRIP BLANK	OC-TBK-058	11/17/10	360-31167-1	77			6	

Notes:
Number listed under method indicates number of target analytes reported.

Prepared by / Date: KJC 12/09/10
Checked by / Date: WDC 12/16/10

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1,1-Trichloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	16	U	13	U	13	U	14	U	670	U	670	U
SW8260C	1,1,2-Trichloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1-Dichloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1-Dichloroethene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,1-Dichloropropene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2,3-Trichloropropane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	3.1	UJ	2.5	UJ	2.6	UJ	2.8	UJ	130	U	130	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	31	U	25	U	26	U	28	U	1300	U	1300	U
SW8260C	1,2-Dibromoethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2-Dichlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2-Dichloroethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,2-Dichloropropane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,3-Dichlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,3-Dichloropropane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,4-Dichlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	1,4-Dioxane	ug/kg	310	UJ	250	UJ	260	UJ	280	UJ	13000	UJ	13000	UJ
SW8260C	2,2-Dichloropropane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	36000	J	74000	J
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	4300	J	13000	J
SW8260C	2-Butanone	ug/kg	31	UJ	25	UJ	26	UJ	28	UJ	1300	U	1300	U
SW8260C	2-Chlorotoluene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	2-Hexanone	ug/kg	31	U	25	U	26	U	28	U	1300	U	1300	U
SW8260C	4-Chlorotoluene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	4-iso-Propyltoluene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	4-Methyl-2-pentanone	ug/kg	31	U	25	U	26	U	28	U	1300	U	1300	U
SW8260C	Acetic acid, methyl ester	ug/kg	63	U	51	U	52	U	57	U	2700	U	2700	U
SW8260C	Acetone	ug/kg	23	J	18	J	260	UJ	21	J	13000	UJ	13000	UJ
SW8260C	Benzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Bromobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Bromochloromethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U

Table 2 - Final Results
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Wilmington, Massachusetts

		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Bromoform	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Bromomethane	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	UJ	270	UJ
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Carbon disulfide	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Carbon tetrachloride	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Chlorobenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Chlorodibromomethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Chloroethane	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	UJ	270	UJ
SW8260C	Chloroform	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Chloromethane	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	U	270	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Cyclohexane	ug/kg	31	U	25	U	26	U	28	U	1300	U	1300	U
SW8260C	Dibromomethane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Dichlorodifluoromethane	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	U	270	U
SW8260C	Diethyl ether	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Ethyl benzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Hexachlorobutadiene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Isopropyl ether	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Isopropylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Methyl cyclohexane	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Methylene chloride	ug/kg	13	U	10	U	10	U	11	U	540	U	540	U
SW8260C	n-Butylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Naphthalene	ug/kg	31	U	25	U	26	U	28	U	1300	U	1300	U
SW8260C	Propylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	sec-Butylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Styrene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	tert-Butylbenzene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Tetrachloroethene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Tetrahydrofuran	ug/kg	31	UJ	25	UJ	26	UJ	28	UJ	1300	UJ	1300	UJ
SW8260C	Toluene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U

Table 2 - Final Results
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		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Trichlorofluoromethane	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	U	270	U
SW8260C	Vinyl chloride	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U
SW8260C	Xylene, m/p	ug/kg	6.3	U	5.1	U	5.2	U	5.7	U	270	U	270	U
SW8260C	Xylene, o	ug/kg	3.1	U	2.5	U	2.6	U	2.8	U	130	U	130	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	21	U	680	U	620	U	16	U	720	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1-Dichloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1-Dichloroethene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,1-Dichloropropene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.6	UJ	4.1	UJ	140	U	120	U	3.2	UJ	140	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	26	U	41	U	1400	U	1200	U	32	U	1400	U
SW8260C	1,2-Dibromoethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2-Dichloroethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,2-Dichloropropane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,3-Dichloropropane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	1,4-Dioxane	ug/kg	260	UJ	410	UJ	14000	UJ	12000	UJ	320	UJ	14000	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5.2	U	8.3	U	230000		130000		6.4	U	180000	
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	5.2	U	8.3	U	27000		23000		6.4	U	14000	
SW8260C	2-Butanone	ug/kg	26	U	41	UJ	1400	U	1200	U	32	U	1400	U
SW8260C	2-Chlorotoluene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	2-Hexanone	ug/kg	26	U	41	U	1400	U	1200	U	32	U	1400	U
SW8260C	4-Chlorotoluene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	4-Methyl-2-pentanone	ug/kg	26	U	41	U	1400	U	1200	U	32	U	1400	U
SW8260C	Acetic acid, methyl ester	ug/kg	52	U	83	U	2700	U	2500	U	64	U	2900	U
SW8260C	Acetone	ug/kg	260	UJ	40	J	1600	J	1100	J	320	UJ	1500	J
SW8260C	Benzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Bromobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Bromochloromethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U

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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Bromoform	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Bromomethane	ug/kg	5.2	U	8.3	U	270	UJ	250	UJ	6.4	U	290	UJ
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Carbon disulfide	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Carbon tetrachloride	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Chlorobenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Chlorodibromomethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Chloroethane	ug/kg	5.2	U	8.3	U	270	UJ	250	UJ	6.4	U	290	UJ
SW8260C	Chloroform	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Chloromethane	ug/kg	5.2	U	8.3	U	270	U	250	U	6.4	U	290	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Cyclohexane	ug/kg	26	U	41	U	1400	U	1200	U	32	U	1400	U
SW8260C	Dibromomethane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Dichlorodifluoromethane	ug/kg	5.2	UJ	8.3	U	270	UJ	250	UJ	6.4	U	290	UJ
SW8260C	Diethyl ether	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Ethyl benzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Hexachlorobutadiene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Isopropyl ether	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Isopropylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Methyl cyclohexane	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Methylene chloride	ug/kg	10	U	17	U	540	U	500	U	13	U	580	U
SW8260C	n-Butylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Naphthalene	ug/kg	26	U	41	U	1400	U	1200	U	32	U	1400	U
SW8260C	Propylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	sec-Butylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Styrene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	tert-Butylbenzene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Tetrachloroethene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Tetrahydrofuran	ug/kg	26	UJ	41	UJ	1400	UJ	1200	UJ	32	UJ	1400	UJ
SW8260C	Toluene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U

Table 2 - Final Results
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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Trichlorofluoromethane	ug/kg	5.2	UJ	8.3	U	270	UJ	250	UJ	6.4	U	290	UJ
SW8260C	Vinyl chloride	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U
SW8260C	Xylene, m/p	ug/kg	5.2	U	8.3	U	270	U	250	U	6.4	U	290	U
SW8260C	Xylene, o	ug/kg	2.6	U	4.1	U	140	U	120	U	3.2	U	140	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1,1-Trichloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	640	U	19	U	490	U	690	U	15	U	11	U
SW8260C	1,1,2-Trichloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1-Dichloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1-Dichloroethene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,1-Dichloropropene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2,3-Trichloropropane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	130	U	3.8	UJ	97	UJ	140	UJ	3.1	UJ	2.3	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	1300	U	38	U	970	U	1400	U	31	U	23	U
SW8260C	1,2-Dibromoethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2-Dichlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2-Dichloroethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,2-Dichloropropane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,3-Dichlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,3-Dichloropropane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,4-Dichlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	1,4-Dioxane	ug/kg	13000	UJ	380	UJ	9700	UJ	14000	UJ	310	UJ	230	UJ
SW8260C	2,2-Dichloropropane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	390000		7.7	U	190	U	290000		6.1	U	4.5	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	53000		7.7	U	190	U	58000		6.1	U	4.5	U
SW8260C	2-Butanone	ug/kg	1300	U	38	U	970	U	1400	U	31	UJ	23	UJ
SW8260C	2-Chlorotoluene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	2-Hexanone	ug/kg	1300	U	38	U	970	U	1400	U	31	U	23	U
SW8260C	4-Chlorotoluene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	4-iso-Propyltoluene	ug/kg	85	J	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	4-Methyl-2-pentanone	ug/kg	1300	U	38	U	970	U	1400	U	31	U	23	U
SW8260C	Acetic acid, methyl ester	ug/kg	2600	U	77	U	1900	U	2800	U	61	U	45	U
SW8260C	Acetone	ug/kg	1500	J	380	UJ	9700	UJ	14000	UJ	310	UJ	230	UJ
SW8260C	Benzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Bromobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Bromochloromethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U

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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Bromoform	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Bromomethane	ug/kg	260	UJ	7.7	U	190	UJ	280	UJ	6.1	U	4.5	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Carbon disulfide	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Carbon tetrachloride	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Chlorobenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Chlorodibromomethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Chloroethane	ug/kg	260	UJ	7.7	U	190	UJ	280	UJ	6.1	U	4.5	U
SW8260C	Chloroform	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Chloromethane	ug/kg	260	U	7.7	U	190	U	280	U	6.1	U	4.5	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Cyclohexane	ug/kg	1300	U	38	U	970	U	1400	U	31	U	23	U
SW8260C	Dibromomethane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Dichlorodifluoromethane	ug/kg	260	UJ	7.7	U	190	U	280	U	6.1	U	4.5	U
SW8260C	Diethyl ether	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Ethyl benzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Hexachlorobutadiene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Isopropyl ether	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Isopropylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Methyl cyclohexane	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Methylene chloride	ug/kg	510	U	15	U	390	U	550	U	12	U	9	U
SW8260C	n-Butylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Naphthalene	ug/kg	1300	U	38	U	970	U	1400	U	31	U	23	U
SW8260C	Propylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	sec-Butylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Styrene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	tert-Butylbenzene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Tetrachloroethene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Tetrahydrofuran	ug/kg	1300	UJ	38	UJ	970	UJ	1400	UJ	31	UJ	23	UJ
SW8260C	Toluene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U

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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Trichlorofluoromethane	ug/kg	260	UJ	7.7	U	190	UJ	280	UJ	6.1	U	4.5	U
SW8260C	Vinyl chloride	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U
SW8260C	Xylene, m/p	ug/kg	260	U	7.7	U	190	U	280	U	6.1	U	4.5	U
SW8260C	Xylene, o	ug/kg	130	U	3.8	U	97	U	140	U	3.1	U	2.3	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	660	U	650	U	12	U	640	U	15	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1-Dichloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1-Dichloroethene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,1-Dichloropropene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.5	UJ	130	U	130	U	2.4	UJ	130	U	3	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	25	U	1300	U	1300	U	24	U	1300	U	30	U
SW8260C	1,2-Dibromoethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2-Dichloroethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,2-Dichloropropane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,3-Dichloropropane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	1,4-Dioxane	ug/kg	250	UJ	13000	UJ	13000	UJ	240	UJ	13000	UJ	300	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	UJ	3	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5	U	260	U	260	U	4.9	U	260	U	5.9	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	260	U	260	U	4.9	U	260	U	5.9	U
SW8260C	2-Butanone	ug/kg	25	UJ	1300	U	1300	U	24	UJ	1300	U	30	U
SW8260C	2-Chlorotoluene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	2-Hexanone	ug/kg	25	U	1300	U	1300	U	24	U	1300	U	30	U
SW8260C	4-Chlorotoluene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	4-Methyl-2-pentanone	ug/kg	25	U	1300	U	1300	U	24	U	1300	U	30	U
SW8260C	Acetic acid, methyl ester	ug/kg	50	U	2600	U	2600	U	49	U	2600	U	59	UJ
SW8260C	Acetone	ug/kg	250	UJ	13000	UJ	13000	UJ	240	UJ	13000	UJ	300	UJ
SW8260C	Benzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Bromobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Bromochloromethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U

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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Bromoform	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Bromomethane	ug/kg	5	U	260	UJ	260	UJ	4.9	U	260	UJ	5.9	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Carbon disulfide	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Carbon tetrachloride	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Chlorobenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Chlorodibromomethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Chloroethane	ug/kg	5	U	260	UJ	260	UJ	4.9	U	260	UJ	5.9	U
SW8260C	Chloroform	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Chloromethane	ug/kg	5	U	260	U	260	U	4.9	U	260	U	5.9	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Cyclohexane	ug/kg	25	U	1300	U	1300	U	24	U	1300	U	30	U
SW8260C	Dibromomethane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Dichlorodifluoromethane	ug/kg	5	U	260	U	260	U	4.9	U	260	U	5.9	U
SW8260C	Diethyl ether	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Ethyl benzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Hexachlorobutadiene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Isopropyl ether	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Isopropylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Methyl cyclohexane	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Methylene chloride	ug/kg	10	U	530	U	520	U	9.8	U	510	U	12	U
SW8260C	n-Butylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Naphthalene	ug/kg	25	U	1300	U	1300	U	24	U	1300	U	30	U
SW8260C	Propylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	sec-Butylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Styrene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	tert-Butylbenzene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Tetrachloroethene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Tetrahydrofuran	ug/kg	25	UJ	1300	UJ	1300	UJ	24	UJ	1300	UJ	30	UJ
SW8260C	Toluene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U

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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Trichlorofluoromethane	ug/kg	5	U	260	U	260	U	4.9	U	260	UJ	5.9	U
SW8260C	Vinyl chloride	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U
SW8260C	Xylene, m/p	ug/kg	5	U	260	U	260	U	4.9	U	260	U	5.9	U
SW8260C	Xylene, o	ug/kg	2.5	U	130	U	130	U	2.4	U	130	U	3	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	9.9	U	12	U	12	U	12	U	11	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1-Dichloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1-Dichloroethene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,1-Dichloropropene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.1	UJ	2	UJ	2.5	UJ	2.4	UJ	2.4	UJ	2.2	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	1,2-Dibromoethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2-Dichloroethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,2-Dichloropropane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,3-Dichloropropane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	1,4-Dioxane	ug/kg	210	UJ	200	UJ	250	UJ	240	UJ	240	UJ	220	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.2	U	12		4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	4.2	U	4		4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	2-Butanone	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	2-Chlorotoluene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	2-Hexanone	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	4-Chlorotoluene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	Acetic acid, methyl ester	ug/kg	42	UJ	39	UJ	49	UJ	49	UJ	49	UJ	44	UJ
SW8260C	Acetone	ug/kg	210	UJ	200	UJ	250	UJ	240	UJ	240	UJ	220	UJ
SW8260C	Benzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Bromobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Bromochloromethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U

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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Bromoform	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Bromomethane	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Carbon disulfide	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Carbon tetrachloride	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Chlorobenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Chlorodibromomethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Chloroethane	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Chloroform	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Chloromethane	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Cyclohexane	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	Dibromomethane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Diethyl ether	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Ethyl benzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Hexachlorobutadiene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Isopropyl ether	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Isopropylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Methyl cyclohexane	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Methylene chloride	ug/kg	8.5	U	7.9	U	9.9	U	9.8	U	9.7	U	8.7	U
SW8260C	n-Butylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Naphthalene	ug/kg	21	U	20	U	25	U	24	U	24	U	22	U
SW8260C	Propylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	sec-Butylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Styrene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	tert-Butylbenzene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Tetrachloroethene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Tetrahydrofuran	ug/kg	21	UJ	20	UJ	25	UJ	24	UJ	24	UJ	22	UJ
SW8260C	Toluene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U

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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Trichlorofluoromethane	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Vinyl chloride	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U
SW8260C	Xylene, m/p	ug/kg	4.2	U	3.9	U	4.9	U	4.9	U	4.9	U	4.4	U
SW8260C	Xylene, o	ug/kg	2.1	U	2	U	2.5	U	2.4	U	2.4	U	2.2	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	13	U	12	U	16	U	11	U	19	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1-Dichloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1-Dichloroethene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,1-Dichloropropene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.3	UJ	2.6	UJ	2.4	UJ	3.2	UJ	2.2	UJ	3.7	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	1,2-Dibromoethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2-Dichloroethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,2-Dichloropropane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,3-Dichloropropane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	1,4-Dioxane	ug/kg	230	UJ	260	UJ	240	UJ	320	UJ	220	UJ	370	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	2-Butanone	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	2-Chlorotoluene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	2-Hexanone	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	4-Chlorotoluene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	4-Methyl-2-pentanone	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	Acetic acid, methyl ester	ug/kg	46	UJ	51	UJ	47	UJ	65	UJ	45	UJ	75	UJ
SW8260C	Acetone	ug/kg	230	UJ	260	UJ	240	UJ	320	UJ	220	UJ	370	UJ
SW8260C	Benzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Bromobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Bromochloromethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U

Table 2 - Final Results
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		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Bromoform	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Bromomethane	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Carbon disulfide	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Carbon tetrachloride	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Chlorobenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Chlorodibromomethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Chloroethane	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Chloroform	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Chloromethane	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Cyclohexane	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	Dibromomethane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Diethyl ether	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Ethyl benzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Hexachlorobutadiene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Isopropyl ether	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Isopropylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Methyl cyclohexane	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Methylene chloride	ug/kg	9.1	U	10	U	9.4	U	13	U	9	U	15	U
SW8260C	n-Butylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Naphthalene	ug/kg	23	U	26	U	24	U	32	U	22	U	37	U
SW8260C	Propylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	sec-Butylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Styrene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	tert-Butylbenzene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Tetrachloroethene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Tetrahydrofuran	ug/kg	23	UJ	26	UJ	24	UJ	32	UJ	22	UJ	37	UJ
SW8260C	Toluene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Trichlorofluoromethane	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Vinyl chloride	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U
SW8260C	Xylene, m/p	ug/kg	4.6	U	5.1	U	4.7	U	6.5	U	4.5	U	7.5	U
SW8260C	Xylene, o	ug/kg	2.3	U	2.6	U	2.4	U	3.2	U	2.2	U	3.7	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	670	U	12	U	10	U	12	U	12	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1-Dichloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1-Dichloroethene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,1-Dichloropropene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.6	UJ	130	UJ	2.4	UJ	2.1	UJ	2.5	UJ	2.4	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	26	U	1300	U	24	U	21	U	25	U	24	U
SW8260C	1,2-Dibromoethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2-Dichloroethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,2-Dichloropropane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,3-Dichloropropane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	1,4-Dioxane	ug/kg	260	UJ	13000	UJ	240	UJ	210	UJ	250	UJ	240	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5.2	U	270	U	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	5.2	U	270	U	4.9	U	4.1	U	1.2	J	4.8	U
SW8260C	2-Butanone	ug/kg	26	U	1300	U	24	U	21	U	25	UJ	24	UJ
SW8260C	2-Chlorotoluene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	2-Hexanone	ug/kg	26	U	1300	U	24	U	21	U	25	U	24	U
SW8260C	4-Chlorotoluene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	4-Methyl-2-pentanone	ug/kg	26	U	1300	U	24	U	21	U	25	U	24	U
SW8260C	Acetic acid, methyl ester	ug/kg	52	UJ	2700	U	49	U	41	U	49	U	48	U
SW8260C	Acetone	ug/kg	260	UJ	13000	UJ	240	UJ	210	UJ	250	UJ	240	UJ
SW8260C	Benzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Bromobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Bromochloromethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Bromoform	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Bromomethane	ug/kg	5.2	U	270	UJ	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Carbon disulfide	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Carbon tetrachloride	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Chlorobenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Chlorodibromomethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Chloroethane	ug/kg	5.2	U	270	UJ	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Chloroform	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Chloromethane	ug/kg	5.2	U	270	U	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Cyclohexane	ug/kg	26	U	1300	U	24	U	21	U	25	U	24	U
SW8260C	Dibromomethane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Dichlorodifluoromethane	ug/kg	5.2	U	270	U	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Diethyl ether	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Ethyl benzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Hexachlorobutadiene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Isopropyl ether	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Isopropylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Methyl cyclohexane	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Methylene chloride	ug/kg	10	U	530	U	9.8	U	8.2	U	9.8	U	9.7	U
SW8260C	n-Butylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Naphthalene	ug/kg	26	U	1300	U	24	U	21	U	25	U	24	U
SW8260C	Propylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	sec-Butylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Styrene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	tert-Butylbenzene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Tetrachloroethene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Tetrahydrofuran	ug/kg	26	UJ	1300	UJ	24	UJ	21	UJ	25	UJ	24	UJ
SW8260C	Toluene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U

Table 2 - Final Results
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November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
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		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Trichlorofluoromethane	ug/kg	5.2	U	270	UJ	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Vinyl chloride	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U
SW8260C	Xylene, m/p	ug/kg	5.2	U	270	U	4.9	U	4.1	U	4.9	U	4.8	U
SW8260C	Xylene, o	ug/kg	2.6	U	130	U	2.4	U	2.1	U	2.5	U	2.4	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.3	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.3	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.3	U
SW8260C	1,1-Dichloroethane	ug/kg	2.3	U
SW8260C	1,1-Dichloroethene	ug/kg	2.3	U
SW8260C	1,1-Dichloropropene	ug/kg	2.3	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.3	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.3	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.3	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.3	UJ
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	23	U
SW8260C	1,2-Dibromoethane	ug/kg	2.3	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.3	U
SW8260C	1,2-Dichloroethane	ug/kg	2.3	U
SW8260C	1,2-Dichloropropane	ug/kg	2.3	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.3	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.3	U
SW8260C	1,3-Dichloropropane	ug/kg	2.3	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.3	U
SW8260C	1,4-Dioxane	ug/kg	230	UJ
SW8260C	2,2-Dichloropropane	ug/kg	2.3	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.5	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	4.5	U
SW8260C	2-Butanone	ug/kg	23	UJ
SW8260C	2-Chlorotoluene	ug/kg	2.3	U
SW8260C	2-Hexanone	ug/kg	23	U
SW8260C	4-Chlorotoluene	ug/kg	2.3	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.3	U
SW8260C	4-Methyl-2-pentanone	ug/kg	23	U
SW8260C	Acetic acid, methyl ester	ug/kg	45	U
SW8260C	Acetone	ug/kg	230	UJ
SW8260C	Benzene	ug/kg	2.3	U
SW8260C	Bromobenzene	ug/kg	2.3	U
SW8260C	Bromochloromethane	ug/kg	2.3	U

Table 2 - Final Results
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2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.3	U
SW8260C	Bromoform	ug/kg	2.3	U
SW8260C	Bromomethane	ug/kg	4.5	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U
SW8260C	Carbon disulfide	ug/kg	2.3	U
SW8260C	Carbon tetrachloride	ug/kg	2.3	U
SW8260C	Chlorobenzene	ug/kg	2.3	U
SW8260C	Chlorodibromomethane	ug/kg	2.3	U
SW8260C	Chloroethane	ug/kg	4.5	U
SW8260C	Chloroform	ug/kg	2.3	U
SW8260C	Chloromethane	ug/kg	4.5	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.3	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.3	U
SW8260C	Cyclohexane	ug/kg	23	U
SW8260C	Dibromomethane	ug/kg	2.3	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.5	U
SW8260C	Diethyl ether	ug/kg	2.3	U
SW8260C	Ethyl benzene	ug/kg	2.3	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.3	U
SW8260C	Hexachlorobutadiene	ug/kg	2.3	U
SW8260C	Isopropyl ether	ug/kg	2.3	U
SW8260C	Isopropylbenzene	ug/kg	2.3	U
SW8260C	Methyl cyclohexane	ug/kg	2.3	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.3	U
SW8260C	Methylene chloride	ug/kg	9.1	U
SW8260C	n-Butylbenzene	ug/kg	2.3	U
SW8260C	Naphthalene	ug/kg	23	U
SW8260C	Propylbenzene	ug/kg	2.3	U
SW8260C	sec-Butylbenzene	ug/kg	2.3	U
SW8260C	Styrene	ug/kg	2.3	U
SW8260C	tert-Butylbenzene	ug/kg	2.3	U
SW8260C	Tetrachloroethene	ug/kg	2.3	U
SW8260C	Tetrahydrofuran	ug/kg	23	UJ
SW8260C	Toluene	ug/kg	2.3	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.3	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.3	U

Table 2 - Final Results
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.3	U
SW8260C	Trichlorofluoromethane	ug/kg	4.5	U
SW8260C	Vinyl chloride	ug/kg	2.3	U
SW8260C	Xylene, m/p	ug/kg	4.5	U
SW8260C	Xylene, o	ug/kg	2.3	U

ug/kg = microgram per kilogram

Prepared by / Date: WCG 01/03/11

Checked by / Date: CSR 01/04/11

U = not detected, value is the detection limit

J = value is estimated

FS = field sample

FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
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		Loc Name	TRIP BLANK		TRIP BLANK		TRIP BLANK		TRIP BLANK	
		Field Sample ID	OC-TBK-055		OC-TBK-056		OC-TBK-057		OC-TBK-058	
		Field Sample Date	11/15/10		11/16/10		11/16/10		11/17/10	
		QC Code	TB		TB		TB		TB	
		Lab Sample ID	360-31096-4		360-31096-16		360-31147-11		360-31167-20	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31147-1		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1,1-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	12	U	12	U
SW8260C	1,1,2-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,1-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2,3-Trichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	25	U	25	U	25	U	25	U
SW8260C	1,2-Dibromoethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,3-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,3-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,4-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	1,4-Dioxane	ug/kg	250	U	250	U	250	U	250	U
SW8260C	2,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5	U	5	U	5	U	5	U
SW8260C	2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	5	U	5	U	5	U
SW8260C	2-Butanone	ug/kg	25	U	25	U	25	U	25	U
SW8260C	2-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	2-Hexanone	ug/kg	25	U	25	U	25	U	25	U
SW8260C	4-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	4-iso-Propyltoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	4-Methyl-2-pentanone	ug/kg	25	U	25	U	25	U	25	U
SW8260C	Acetic acid, methyl ester	ug/kg	50	U	50	U	50	U	50	U
SW8260C	Acetone	ug/kg	250	U	250	U	18	J	250	U
SW8260C	Benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Bromobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Bromochloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	TRIP BLANK		TRIP BLANK		TRIP BLANK		TRIP BLANK	
		Field Sample ID	OC-TBK-055		OC-TBK-056		OC-TBK-057		OC-TBK-058	
		Field Sample Date	11/15/10		11/16/10		11/16/10		11/17/10	
		QC Code	TB		TB		TB		TB	
		Lab Sample ID	360-31096-4		360-31096-16		360-31147-11		360-31167-20	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31147-1		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Bromodichloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Bromoform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Bromomethane	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Carbon disulfide	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Carbon tetrachloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Chlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Chlorodibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Chloroethane	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Chloroform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Chloromethane	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Cyclohexane	ug/kg	25	U	25	U	25	U	25	U
SW8260C	Dibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Dichlorodifluoromethane	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Diethyl ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Ethyl benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Hexachlorobutadiene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Isopropyl ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Isopropylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Methyl cyclohexane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Methylene chloride	ug/kg	10	U	10	U	10	U	10	U
SW8260C	n-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Naphthalene	ug/kg	25	U	25	U	25	U	25	U
SW8260C	Propylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	sec-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Styrene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	tert-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Tetrachloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Tetrahydrofuran	ug/kg	25	U	25	U	25	U	25	U
SW8260C	Toluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U

Table 2 - Final Results
Data Validation Report
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		Loc Name	TRIP BLANK		TRIP BLANK		TRIP BLANK		TRIP BLANK	
		Field Sample ID	OC-TBK-055		OC-TBK-056		OC-TBK-057		OC-TBK-058	
		Field Sample Date	11/15/10		11/16/10		11/16/10		11/17/10	
		QC Code	TB		TB		TB		TB	
		Lab Sample ID	360-31096-4		360-31096-16		360-31147-11		360-31167-20	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31147-1		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8260C	Trichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Trichlorofluoromethane	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Vinyl chloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U
SW8260C	Xylene, m/p	ug/kg	5	U	5	U	5	U	5	U
SW8260C	Xylene, o	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U

ug/kg = microgram per kilogram

Prepared by / Date: WCG 01/03/11

Checked by / Date: CSR 01/04/11

U = not detected, value is the detection limit

J = value is estimated

TB = trip blank

Table 2 - Final Results
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		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	1,2-Dichlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	1,3-Dichlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	1,4-Dichlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	1-Methylnaphthalene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,4,5-Trichlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,4,6-Trichlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,4-Dichlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,4-Dimethylphenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,4-Dinitrophenol	ug/kg	38	U	40	U	40	U	36	U	750	UJ	750	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2,6-Dinitrotoluene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2-Chloronaphthalene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2-Chlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2-Methylnaphthalene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2-Methylphenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	2-Nitroaniline	ug/kg	190	U	200	U	200	U	180	U	3700	UJ	3800	UJ
SW8270	2-Nitrophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	3 & 4 Methylphenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	76	U	79	U	79	U	72	U	1500	U	1500	U
SW8270	3-Nitroaniline	ug/kg	190	U	200	U	200	U	180	U	3700	U	3800	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	190	U	200	U	200	U	180	U	3700	UJ	3800	UJ
SW8270	4-Bromophenyl phenyl ether	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	4-Chloro-3-methylphenol	ug/kg	76	U	79	U	79	U	72	U	1500	U	1500	U
SW8270	4-Chloroaniline	ug/kg	76	U	79	U	79	U	72	U	1500	U	1500	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	4-Nitroaniline	ug/kg	190	U	200	U	200	U	180	U	3700	UJ	3800	UJ
SW8270	4-Nitrophenol	ug/kg	190	U	200	U	200	U	180	U	3700	UJ	3800	UJ
SW8270	Acenaphthene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Acenaphthylene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Acetophenone	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Aniline	ug/kg	38	UJ	40	UJ	40	UJ	36	UJ	750	UJ	750	UJ
SW8270	Anthracene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Atrazine	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U

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November 2010 OU1 Geoprobe Soil Program
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		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzaldehyde	ug/kg	320		40	U	40	U	36	U	750	U	750	U
SW8270	Benzo(a)anthracene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzo(a)pyrene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzo(b)fluoranthene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzo(ghi)perylene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzo(k)fluoranthene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Benzoic Acid	ug/kg	190	UJ	110	J	120	J	130	J	3700	UJ	3800	UJ
SW8270	Benzyl alcohol	ug/kg	340		79	U	79	U	72	U	1500	U	1500	U
SW8270	Biphenyl	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	2000		34	J	50		570		440000		430000	
SW8270	Butylbenzylphthalate	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Caprolactum	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Carbazole	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Chrysene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Di-n-butylphthalate	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Di-n-octylphthalate	ug/kg	38	U	40	U	40	U	36	U	9900		12000	
SW8270	Dibenz(a,h)anthracene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Dibenzofuran	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Diethylphthalate	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Dimethylphthalate	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Diphenyl ether	ug/kg	25	J	40	U	40	U	36	U	750	U	750	U
SW8270	Diphenylmethanone	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Fluoranthene	ug/kg	38	U	40	U	40	U	22	J	750	U	750	U
SW8270	Fluorene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Hexachlorobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Hexachlorobutadiene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Hexachlorocyclopentadiene	ug/kg	76	U	79	U	79	U	72	U	1500	UJ	1500	UJ
SW8270	Hexachloroethane	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Isophorone	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	N-Nitrosodimethylamine	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U

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		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	26	J	40	U	40	U	32	J	750	U	750	U
SW8270	Naphthalene	ug/kg	92	U	95	U	95	U	86	U	1800	U	1800	U
SW8270	Nitrobenzene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Pentachlorophenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Phenanthrene	ug/kg	46	U	47	U	48	U	43	U	900	U	910	U
SW8270	Phenol	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U
SW8270	Pyrene	ug/kg	38	U	40	U	40	U	36	U	750	U	750	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	1,2-Dichlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	1,3-Dichlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	1,4-Dichlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	1-Methylnaphthalene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,4,5-Trichlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,4,6-Trichlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,4-Dichlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,4-Dimethylphenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,4-Dinitrophenol	ug/kg	36	U	37	U	19000	UJ	7500	UJ	180	UJ	37000	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2,6-Dinitrotoluene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2-Chloronaphthalene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2-Chlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2-Methylnaphthalene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2-Methylphenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	2-Nitroaniline	ug/kg	180	U	180	U	93000	UJ	37000	UJ	910	UJ	190000	UJ
SW8270	2-Nitrophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	3 & 4 Methylphenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	72	U	74	U	37000	U	15000	U	360	U	74000	U
SW8270	3-Nitroaniline	ug/kg	180	U	180	U	93000	U	37000	U	910	U	190000	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	93000	UJ	37000	UJ	910	UJ	190000	UJ
SW8270	4-Bromophenyl phenyl ether	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	4-Chloro-3-methylphenol	ug/kg	72	U	74	U	37000	U	15000	U	360	U	74000	U
SW8270	4-Chloroaniline	ug/kg	72	U	74	U	37000	U	15000	U	360	U	74000	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	4-Nitroaniline	ug/kg	180	U	180	U	93000	UJ	37000	UJ	910	UJ	190000	UJ
SW8270	4-Nitrophenol	ug/kg	180	U	180	U	93000	UJ	37000	UJ	910	UJ	190000	UJ
SW8270	Acenaphthene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Acenaphthylene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Acetophenone	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Aniline	ug/kg	36	UJ	37	UJ	19000	UJ	7500	UJ	180	UJ	37000	UJ
SW8270	Anthracene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Atrazine	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U

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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Benzaldehyde	ug/kg	36	U	230		19000	U	7500	U	180	U	37000	U
SW8270	Benzo(a)anthracene	ug/kg	36	U	110		19000	U	7500	U	180	U	37000	U
SW8270	Benzo(a)pyrene	ug/kg	36	U	77		19000	U	7500	U	180	U	37000	U
SW8270	Benzo(b)fluoranthene	ug/kg	36	U	170		19000	U	7500	U	180	U	37000	U
SW8270	Benzo(ghi)perylene	ug/kg	36	U	58		19000	U	7500	U	180	U	37000	U
SW8270	Benzo(k)fluoranthene	ug/kg	36	U	75		19000	U	7500	U	180	U	37000	U
SW8270	Benzoic Acid	ug/kg	100	J	1900	J	93000	UJ	37000	UJ	910	UJ	190000	UJ
SW8270	Benzyl alcohol	ug/kg	72	U	74	U	37000	U	15000	U	360	U	74000	U
SW8270	Biphenyl	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	480		590		3500000		1900000		2700		8600000	
SW8270	Butylbenzylphthalate	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Caprolactum	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Carbazole	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Chrysene	ug/kg	36	U	150		19000	U	7500	U	180	U	37000	U
SW8270	Di-n-butylphthalate	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Di-n-octylphthalate	ug/kg	36		37	U	19000	U	7500	U	180	U	37000	U
SW8270	Dibenz(a,h)anthracene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Dibenzofuran	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Diethylphthalate	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Dimethylphthalate	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Diphenyl ether	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Diphenylmethanone	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Fluoranthene	ug/kg	36	U	240		19000	U	7500	U	180	U	37000	U
SW8270	Fluorene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Hexachlorobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Hexachlorobutadiene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Hexachlorocyclopentadiene	ug/kg	72	UJ	74	U	37000	UJ	15000	UJ	360	UJ	74000	UJ
SW8270	Hexachloroethane	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	36	U	63		19000	U	7500	U	140	J	37000	U
SW8270	Isophorone	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	N-Nitrosodimethylamine	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U

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		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Naphthalene	ug/kg	87	U	89	U	45000	U	18000	U	440	U	89000	U
SW8270	Nitrobenzene	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Pentachlorophenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Phenanthrene	ug/kg	43	U	29	J	22000	U	9000	U	220	U	44000	U
SW8270	Phenol	ug/kg	36	U	37	U	19000	U	7500	U	180	U	37000	U
SW8270	Pyrene	ug/kg	36	U	200		19000	U	7500	U	180	U	37000	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	1,2-Dichlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	1,3-Dichlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	1,4-Dichlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	1-Methylnaphthalene	ug/kg	960	U	23	J	140	U	1900	U	37	U	36	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,4,5-Trichlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,4,6-Trichlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,4-Dichlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,4-Dimethylphenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,4-Dinitrophenol	ug/kg	960	UJ	42	U	140	UJ	1900	UJ	37	UJ	36	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2,6-Dinitrotoluene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2-Chloronaphthalene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2-Chlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2-Methylnaphthalene	ug/kg	960	U	37	J	140	U	1900	U	37	U	36	U
SW8270	2-Methylphenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	2-Nitroaniline	ug/kg	4800	UJ	210	U	680	UJ	9700	UJ	180	U	180	U
SW8270	2-Nitrophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	3 & 4 Methylphenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	1900	U	83	U	270	U	3900	U	74	U	72	U
SW8270	3-Nitroaniline	ug/kg	4800	U	210	U	680	U	9700	U	180	U	180	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	4800	UJ	210	U	680	UJ	9700	UJ	180	UJ	180	UJ
SW8270	4-Bromophenyl phenyl ether	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	4-Chloro-3-methylphenol	ug/kg	1900	U	83	U	270	U	3900	U	74	U	72	U
SW8270	4-Chloroaniline	ug/kg	1900	U	83	U	270	U	3900	U	74	U	72	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	4-Nitroaniline	ug/kg	4800	UJ	210	U	680	UJ	9700	UJ	180	U	180	U
SW8270	4-Nitrophenol	ug/kg	4800	UJ	210	U	680	UJ	9700	UJ	180	U	180	U
SW8270	Acenaphthene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Acenaphthylene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Acetophenone	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Aniline	ug/kg	960	UJ	42	UJ	140	UJ	1900	UJ	37	U	36	U
SW8270	Anthracene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Atrazine	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U

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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Benzaldehyde	ug/kg	960	U	37	J	140	U	1900	U	37	U	36	U
SW8270	Benzo(a)anthracene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Benzo(a)pyrene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Benzo(b)fluoranthene	ug/kg	960	U	38	J	140	U	1900	U	37	U	36	U
SW8270	Benzo(ghi)perylene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Benzo(k)fluoranthene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Benzoic Acid	ug/kg	4800	UJ	250	J	680	UJ	9700	UJ	58	J	22	J
SW8270	Benzyl alcohol	ug/kg	1900	U	83	U	270	U	3900	U	74	U	72	U
SW8270	Biphenyl	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	28000		3200		83	J	1600000		37	U	36	U
SW8270	Butylbenzylphthalate	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Caprolactum	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Carbazole	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Chrysene	ug/kg	960	U	37	J	140	U	1900	U	37	U	36	U
SW8270	Di-n-butylphthalate	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Di-n-octylphthalate	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Dibenz(a,h)anthracene	ug/kg	960	U	42	U	140	U	1900	U	37	UJ	36	UJ
SW8270	Dibenzofuran	ug/kg	960	U	26	J	140	U	1900	U	37	U	36	U
SW8270	Diethylphthalate	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Dimethylphthalate	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Diphenyl ether	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Diphenylmethanone	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Fluoranthene	ug/kg	960	U	50		140	U	1900	U	37	U	36	U
SW8270	Fluorene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Hexachlorobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Hexachlorobutadiene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Hexachlorocyclopentadiene	ug/kg	1900	UJ	83	U	270	UJ	3900	UJ	74	U	72	U
SW8270	Hexachloroethane	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Isophorone	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	N-Nitrosodimethylamine	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U

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		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Naphthalene	ug/kg	2300	U	57	J	330	U	4700	U	89	U	86	U
SW8270	Nitrobenzene	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Pentachlorophenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Phenanthrene	ug/kg	1200	U	66		160	U	2300	U	44	U	43	U
SW8270	Phenol	ug/kg	960	U	42	U	140	U	1900	U	37	U	36	U
SW8270	Pyrene	ug/kg	960	U	48		140	U	1900	U	37	U	36	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	1,2-Dichlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	1,3-Dichlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	1,4-Dichlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	1-Methylnaphthalene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,4,5-Trichlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,4,6-Trichlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,4-Dichlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,4-Dimethylphenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,4-Dinitrophenol	ug/kg	180	UJ	180	UJ	180	UJ	35	UJ	180	UJ	36	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2,6-Dinitrotoluene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2-Chloronaphthalene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2-Chlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2-Methylnaphthalene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2-Methylphenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	2-Nitroaniline	ug/kg	880	U	900	U	910	U	180	U	900	U	180	U
SW8270	2-Nitrophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	3 & 4 Methylphenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	350	U	360	U	360	U	71	U	360	U	73	U
SW8270	3-Nitroaniline	ug/kg	880	U	900	U	910	U	180	U	900	U	180	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	880	UJ	900	UJ	910	UJ	180	UJ	900	UJ	180	U
SW8270	4-Bromophenyl phenyl ether	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	4-Chloro-3-methylphenol	ug/kg	350	U	360	U	360	U	71	U	360	U	73	U
SW8270	4-Chloroaniline	ug/kg	350	U	360	U	360	U	71	U	360	U	73	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	4-Nitroaniline	ug/kg	880	U	900	U	910	U	180	U	900	U	180	U
SW8270	4-Nitrophenol	ug/kg	880	U	900	U	910	U	180	U	900	U	180	U
SW8270	Acenaphthene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Acenaphthylene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Acetophenone	ug/kg	180	U	180	U	180	U	35	U	180	U	36	
SW8270	Aniline	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Anthracene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Atrazine	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Olin Chemical Superfund Site
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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzaldehyde	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzo(a)anthracene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzo(a)pyrene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzo(b)fluoranthene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzo(ghi)perylene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzo(k)fluoranthene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Benzoic Acid	ug/kg	880	U	900	U	910	U	25	J	900	U	180	J
SW8270	Benzyl alcohol	ug/kg	350	U	360	U	360	U	71	U	360	U	73	U
SW8270	Biphenyl	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	210		200		180		35	U	450		26	J
SW8270	Butylbenzylphthalate	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Caprolactum	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Carbazole	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Chrysene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Di-n-butylphthalate	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Di-n-octylphthalate	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Dibenz(a,h)anthracene	ug/kg	180	UJ	180	UJ	180	UJ	35	UJ	180	UJ	36	U
SW8270	Dibenzofuran	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Diethylphthalate	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Dimethylphthalate	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Diphenyl ether	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Diphenylmethanone	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Fluoranthene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Fluorene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Hexachlorobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Hexachlorobutadiene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Hexachlorocyclopentadiene	ug/kg	350	U	360	U	360	U	71	U		R	73	U
SW8270	Hexachloroethane	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Isophorone	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	N-Nitrosodimethylamine	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U

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Olin Chemical Superfund Site
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		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Naphthalene	ug/kg	420	U	430	U	440	U	85	U	430	U	74	J
SW8270	Nitrobenzene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Pentachlorophenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Phenanthrene	ug/kg	210	U	220	U	220	U	42	U	210	U	44	U
SW8270	Phenol	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U
SW8270	Pyrene	ug/kg	180	U	180	U	180	U	35	U	180	U	36	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	1,2-Dichlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	1,3-Dichlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	1,4-Dichlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	1-Methylnaphthalene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,4,5-Trichlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,4,6-Trichlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,4-Dichlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,4-Dimethylphenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,4-Dinitrophenol	ug/kg	36	UJ	36	UJ	34	UJ	35	UJ	35	UJ	34	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2,6-Dinitrotoluene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2-Chloronaphthalene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2-Chlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2-Methylnaphthalene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2-Methylphenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	2-Nitroaniline	ug/kg	180	U	180	U	170	U	170	U	170	U	170	U
SW8270	2-Nitrophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	3 & 4 Methylphenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	71	U	71	U	68	U	69	U	70	U	68	U
SW8270	3-Nitroaniline	ug/kg	180	U	180	U	170	U	170	U	170	U	170	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	170	U	170	U	170	U	170	U
SW8270	4-Bromophenyl phenyl ether	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	4-Chloro-3-methylphenol	ug/kg	71	U	71	U	68	U	69	U	70	U	68	U
SW8270	4-Chloroaniline	ug/kg	71	U	71	U	68	U	69	U	70	U	68	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	4-Nitroaniline	ug/kg	180	U	180	U	170	U	170	U	170	U	170	U
SW8270	4-Nitrophenol	ug/kg	180	U	180	U	170	U	170	U	170	U	170	U
SW8270	Acenaphthene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Acenaphthylene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Acetophenone	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Aniline	ug/kg	36	U	36	UJ	34	U	35	U	35	U	34	U
SW8270	Anthracene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Atrazine	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U

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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzaldehyde	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzo(a)anthracene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzo(a)pyrene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzo(b)fluoranthene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzo(ghi)perylene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzo(k)fluoranthene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Benzoic Acid	ug/kg	44	J	50	J	44	J	170	UJ	33	J	170	UJ
SW8270	Benzyl alcohol	ug/kg	71	U	71	U	68	U	69	U	70	U	68	U
SW8270	Biphenyl	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Butylbenzylphthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Caprolactum	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Carbazole	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Chrysene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Di-n-butylphthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Di-n-octylphthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Dibenz(a,h)anthracene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Dibenzofuran	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Diethylphthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Dimethylphthalate	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Diphenyl ether	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Diphenylmethanone	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Fluoranthene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Fluorene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Hexachlorobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Hexachlorobutadiene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Hexachlorocyclopentadiene	ug/kg	71	U	71	U	68	U	69	U	70	U	68	U
SW8270	Hexachloroethane	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Isophorone	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	N-Nitrosodimethylamine	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U

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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Naphthalene	ug/kg	86	U	85	U	81	U	83	U	84	U	82	U
SW8270	Nitrobenzene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Pentachlorophenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Phenanthrene	ug/kg	43	U	43	U	41	U	42	U	42	U	41	U
SW8270	Phenol	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U
SW8270	Pyrene	ug/kg	36	U	36	U	34	U	35	U	35	U	34	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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Wilmington, Massachusetts

		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	1,2-Dichlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	1,3-Dichlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	1,4-Dichlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	1-Methylnaphthalene	ug/kg	35	U	38	U	36	U	23	J	36	U	38	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,4,5-Trichlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,4,6-Trichlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,4-Dichlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,4-Dimethylphenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,4-Dinitrophenol	ug/kg	35	UJ	38	UJ	36	UJ	41	UJ	36	UJ	38	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2,6-Dinitrotoluene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2-Chloronaphthalene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2-Chlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2-Methylnaphthalene	ug/kg	35	U	38	U	36	U	26	J	36	U	38	U
SW8270	2-Methylphenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	2-Nitroaniline	ug/kg	170	U	190	U	180	U	200	U	180	U	190	U
SW8270	2-Nitrophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	3 & 4 Methylphenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	70	U	76	U	72	U	82	U	71	U	76	U
SW8270	3-Nitroaniline	ug/kg	170	U	190	U	180	U	200	U	180	U	190	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	170	U	190	U	180	U	200	U	180	U	190	U
SW8270	4-Bromophenyl phenyl ether	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	4-Chloro-3-methylphenol	ug/kg	70	U	76	U	72	U	82	U	71	U	76	U
SW8270	4-Chloroaniline	ug/kg	70	U	76	U	72	U	82	U	71	U	76	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	4-Nitroaniline	ug/kg	170	U	190	U	180	U	200	U	180	U	190	U
SW8270	4-Nitrophenol	ug/kg	170	U	190	U	180	U	200	U	180	U	190	U
SW8270	Acenaphthene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Acenaphthylene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Acetophenone	ug/kg	35	U	38	U	53		41	U	36	U	38	U
SW8270	Aniline	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Anthracene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Atrazine	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U

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		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Benzaldehyde	ug/kg	150		38	U	36	U	280		36	U	35	J
SW8270	Benzo(a)anthracene	ug/kg	35	U	38	U	36	U	73		36	U	23	J
SW8270	Benzo(a)pyrene	ug/kg	35	U	38	U	36	U	33	J	36	U	38	U
SW8270	Benzo(b)fluoranthene	ug/kg	35	U	38	U	36	U	70		36	U	28	J
SW8270	Benzo(ghi)perylene	ug/kg	35	U	38	U	36	U	25	J	36	U	38	U
SW8270	Benzo(k)fluoranthene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Benzoic Acid	ug/kg	79	J	88	J	180	UJ	620	J	110	J	280	J
SW8270	Benzyl alcohol	ug/kg	70	U	76	U	72	U	82	U	71	U	76	U
SW8270	Biphenyl	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	35	U	38	U	22	J	31	J	21	J	65	
SW8270	Butylbenzylphthalate	ug/kg	35	U	38	U	110		41	U	36	U	38	U
SW8270	Caprolactum	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Carbazole	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Chrysene	ug/kg	35	U	38	U	36	U	29	J	36	U	38	U
SW8270	Di-n-butylphthalate	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Di-n-octylphthalate	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Dibenz(a,h)anthracene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Dibenzofuran	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Diethylphthalate	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Dimethylphthalate	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Diphenyl ether	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Diphenylmethanone	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Fluoranthene	ug/kg	35	U	38	U	36	U	61		36	U	27	J
SW8270	Fluorene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Hexachlorobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Hexachlorobutadiene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Hexachlorocyclopentadiene	ug/kg	70	U	76	U	72	U	82	U	71	U	76	U
SW8270	Hexachloroethane	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	35	U	38	U	36	U	22	J	36	U	38	U
SW8270	Isophorone	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	N-Nitrosodimethylamine	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U

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		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Naphthalene	ug/kg	84	U	91	U	62	J	42	J	86	U	91	U
SW8270	Nitrobenzene	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Pentachlorophenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Phenanthrene	ug/kg	42	U	45	U	43	U	86		43	U	24	J
SW8270	Phenol	ug/kg	35	U	38	U	36	U	41	U	36	U	38	U
SW8270	Pyrene	ug/kg	35	U	38	U	36	U	150		36	U	45	

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	1,2-Dichlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	1,3-Dichlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	1,4-Dichlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	1-Methylnaphthalene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,4,5-Trichlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,4,6-Trichlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,4-Dichlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,4-Dimethylphenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,4-Dinitrophenol	ug/kg	34	UJ	71	UJ	380	UJ	73	UJ	36	UJ	36	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2,6-Dinitrotoluene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2-Chloronaphthalene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2-Chlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2-Methylnaphthalene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2-Methylphenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	2-Nitroaniline	ug/kg	170	U	350	UJ	1900	UJ	360	UJ	180	U	180	U
SW8270	2-Nitrophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	3 & 4 Methylphenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	68	U	140	U	760	U	150	U	71	U	73	U
SW8270	3-Nitroaniline	ug/kg	170	U	350	U	1900	U	360	U	180	U	180	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	170	U	350	UJ	1900	UJ	360	UJ	180	UJ	180	UJ
SW8270	4-Bromophenyl phenyl ether	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	4-Chloro-3-methylphenol	ug/kg	68	U	140	U	760	U	150	U	71	U	73	U
SW8270	4-Chloroaniline	ug/kg	68	U	140	U	760	U	150	U	71	U	73	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	4-Nitroaniline	ug/kg	170	U	350	UJ	1900	UJ	360	UJ	180	U	180	U
SW8270	4-Nitrophenol	ug/kg	170	U	350	UJ	1900	UJ	360	UJ	180	U	180	U
SW8270	Acenaphthene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Acenaphthylene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Acetophenone	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Aniline	ug/kg	34	U	71	UJ	380	UJ	73	UJ	36	U	36	U
SW8270	Anthracene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Atrazine	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U

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		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	Azobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzaldehyde	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzo(a)anthracene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzo(a)pyrene	ug/kg	34	U	71	U	970		73	U	36	U	36	U
SW8270	Benzo(b)fluoranthene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzo(ghi)perylene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzo(k)fluoranthene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Benzoic Acid	ug/kg	190	J	350	UJ	1900	UJ	360	UJ	49	J	36	J
SW8270	Benzyl alcohol	ug/kg	68	U	140	U	760	U	150	U	71	U	73	U
SW8270	Biphenyl	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	82		670		6400		920		74		37	
SW8270	Butylbenzylphthalate	ug/kg	34	U	71	U	380	U	73	U	39		36	U
SW8270	Caprolactum	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Carbazole	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Chrysene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Di-n-butylphthalate	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Di-n-octylphthalate	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Dibenz(a,h)anthracene	ug/kg	34	U	71	U	380	U	73	U	36	UJ	36	UJ
SW8270	Dibenzofuran	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Diethylphthalate	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Dimethylphthalate	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Diphenyl ether	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Diphenylmethanone	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Fluoranthene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Fluorene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Hexachlorobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Hexachlorobutadiene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Hexachlorocyclopentadiene	ug/kg	68	U	140	UJ	760	UJ	150	UJ	71	U	73	U
SW8270	Hexachloroethane	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Isophorone	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	N-Nitrosodimethylamine	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Naphthalene	ug/kg	82	U	170	U	920	U	170	U	86	U	87	U
SW8270	Nitrobenzene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Pentachlorophenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Phenanthrene	ug/kg	41	U	85	U	460	U	87	U	43	U	44	U
SW8270	Phenol	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U
SW8270	Pyrene	ug/kg	34	U	71	U	380	U	73	U	36	U	36	U

ug/kg = microgram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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Table 2 - Final Results
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2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8270	1,2,4,5-Tetrachlorobenzene	ug/kg	36	U
SW8270	1,2,4-Trichlorobenzene	ug/kg	36	U
SW8270	1,2-Dichlorobenzene	ug/kg	36	U
SW8270	1,3-Dichlorobenzene	ug/kg	36	U
SW8270	1,4-Dichlorobenzene	ug/kg	36	U
SW8270	1-Methylnaphthalene	ug/kg	36	U
SW8270	2,3,4,6-Tetrachlorophenol	ug/kg	36	U
SW8270	2,4,5-Trichlorophenol	ug/kg	36	U
SW8270	2,4,6-Trichlorophenol	ug/kg	36	U
SW8270	2,4-Dichlorophenol	ug/kg	36	U
SW8270	2,4-Dimethylphenol	ug/kg	36	U
SW8270	2,4-Dinitrophenol	ug/kg	36	UJ
SW8270	2,4-Dinitrotoluene	ug/kg	36	U
SW8270	2,6-Dinitrotoluene	ug/kg	36	U
SW8270	2-Chloronaphthalene	ug/kg	36	U
SW8270	2-Chlorophenol	ug/kg	36	U
SW8270	2-Methylnaphthalene	ug/kg	36	U
SW8270	2-Methylphenol	ug/kg	36	U
SW8270	2-Nitroaniline	ug/kg	180	U
SW8270	2-Nitrophenol	ug/kg	36	U
SW8270	3 & 4 Methylphenol	ug/kg	36	U
SW8270	3,3`-Dichlorobenzidine	ug/kg	72	U
SW8270	3-Nitroaniline	ug/kg	180	U
SW8270	4,6-Dinitro-2-methylphenol	ug/kg	180	UJ
SW8270	4-Bromophenyl phenyl ether	ug/kg	36	U
SW8270	4-Chloro-3-methylphenol	ug/kg	72	U
SW8270	4-Chloroaniline	ug/kg	72	U
SW8270	4-Chlorophenyl phenyl ether	ug/kg	36	U
SW8270	4-Nitroaniline	ug/kg	180	U
SW8270	4-Nitrophenol	ug/kg	180	U
SW8270	Acenaphthene	ug/kg	36	U
SW8270	Acenaphthylene	ug/kg	36	U
SW8270	Acetophenone	ug/kg	36	U
SW8270	Aniline	ug/kg	36	U
SW8270	Anthracene	ug/kg	36	U
SW8270	Atrazine	ug/kg	36	U

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2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8270	Azobenzene	ug/kg	36	U
SW8270	Benzaldehyde	ug/kg	36	U
SW8270	Benzo(a)anthracene	ug/kg	36	U
SW8270	Benzo(a)pyrene	ug/kg	36	U
SW8270	Benzo(b)fluoranthene	ug/kg	36	U
SW8270	Benzo(ghi)perylene	ug/kg	36	U
SW8270	Benzo(k)fluoranthene	ug/kg	36	U
SW8270	Benzoic Acid	ug/kg	38	J
SW8270	Benzyl alcohol	ug/kg	72	U
SW8270	Biphenyl	ug/kg	36	U
SW8270	Bis(2-Chloroethoxy)methane	ug/kg	36	U
SW8270	Bis(2-Chloroethyl)ether	ug/kg	36	U
SW8270	Bis(2-Chloroisopropyl)ether	ug/kg	36	U
SW8270	Bis(2-Ethylhexyl)phthalate	ug/kg	36	U
SW8270	Butylbenzylphthalate	ug/kg	34	J
SW8270	Caprolactum	ug/kg	36	U
SW8270	Carbazole	ug/kg	36	U
SW8270	Chrysene	ug/kg	36	U
SW8270	Di-n-butylphthalate	ug/kg	36	U
SW8270	Di-n-octylphthalate	ug/kg	36	U
SW8270	Dibenz(a,h)anthracene	ug/kg	36	UJ
SW8270	Dibenzofuran	ug/kg	36	U
SW8270	Diethylphthalate	ug/kg	36	U
SW8270	Dimethylphthalate	ug/kg	36	U
SW8270	Diphenyl ether	ug/kg	36	U
SW8270	Diphenylmethanone	ug/kg	36	U
SW8270	Fluoranthene	ug/kg	36	U
SW8270	Fluorene	ug/kg	36	U
SW8270	Hexachlorobenzene	ug/kg	36	U
SW8270	Hexachlorobutadiene	ug/kg	36	U
SW8270	Hexachlorocyclopentadiene	ug/kg	72	U
SW8270	Hexachloroethane	ug/kg	36	U
SW8270	Indeno(1,2,3-cd)pyrene	ug/kg	36	U
SW8270	Isophorone	ug/kg	36	U
SW8270	N-Nitrosodi-n-propylamine	ug/kg	36	U
SW8270	N-Nitrosodimethylamine	ug/kg	36	U

Table 2 - Final Results
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2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
SW8270	N-Nitrosodiphenylamine	ug/kg	36	U
SW8270	Naphthalene	ug/kg	86	U
SW8270	Nitrobenzene	ug/kg	36	U
SW8270	Pentachlorophenol	ug/kg	36	U
SW8270	Phenanthrene	ug/kg	43	U
SW8270	Phenol	ug/kg	36	U
SW8270	Pyrene	ug/kg	36	U

ug/kg = microgram per kilogram

ared by / Date: WCG 01/03/11

cked by / Date: CSR 01/04/11

U = not detected, value is the detection limit

J = value is estimated

FS = field sample

FD = field duplicate

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
		QC Code	FS		FS		FS		FS		FD		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	41		100	
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	41		100	
MAVPH	C9-C10 Aromatics	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	5.1	U	6	
MAVPH	C9-C12 Aliphatics	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	5.1	U	5.1	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	6.4		6.7	
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.7	U	2.8	U	2.7	U	2.9	U	41		110	

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-10/12-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-12	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
		QC Code	FS		FS		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.3	U	3.3	U	290		230		3	U	91	
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.3	U	3.3	U	290		230		3	U	91	
MAVPH	C9-C10 Aromatics	mg/kg	2.3	U	3.3	U	26	U	12		3	U	24	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.3	U	3.3	U	26	U	12	U	3	U	24	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.3	U	3.3	U	28		14		3	U	24	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.3	U	3.3	U	290		240		3	U	91	

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-8.0/10-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-10/12-XXX		OC-SB-478-8.0/10-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		Lab Sample ID	360-31167-13		360-31167-14		360-31167-15		360-31167-16		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
		QC Code	FS		FS		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	400		4	U	510		1.9	U	2.4	U	2.2	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	400		4	U	510		1.9	U	2.4	U	2.2	U
MAVPH	C9-C10 Aromatics	mg/kg	31		4	U	37		1.9	U	2.4	U	2.2	U
MAVPH	C9-C12 Aliphatics	mg/kg	27		4	U	21		1.9	U	2.4	U	2.2	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	58		4	U	58		1.9	U	2.4	U	2.2	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	460		4	U	570		1.9	U	2.4	U	2.2	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
		QC Code	FS		FD		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.3	U	2.5	U	2.5	U	2.6	U	12	UJ	2.5	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.3	U	2.5	U	2.5	U	2.6	U	12	UJ	2.5	U
MAVPH	C9-C10 Aromatics	mg/kg	2.3	U	2.6		3		2.6	U	13	J	2.5	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.3	U	2.5	U	2.5	U	2.6	U	12	UJ	2.5	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.3	U	3.4		4.3		2.6	U	13	J	2.5	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.3	U	2.6		3		2.6	U	13	J	2.5	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
		QC Code	FS		FS		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U
MAVPH	C9-C10 Aromatics	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.1	U	2	U	2.7	U	2.2	U	2.4	U	2.2	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

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November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-12/14-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		Lab Sample ID	360-31096-9		360-31096-10		360-31096-11		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
		QC Code	FS		FS		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U
MAVPH	C9-C10 Aromatics	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U
MAVPH	C9-C12 Aliphatics	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2	U	2.4	U	2.5	U	3.1	U	2.2	U	3	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
		QC Code	FS		FS		FS		FS		FS		FS	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U
MAVPH	C9-C10 Aromatics	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.5	U	2.5	U	2.4	U	2.2	U	2.5	U	2.2	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
		QC Code	FS	
Method	**Analyte**	**Units**	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.2	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.2	U
MAVPH	C9-C10 Aromatics	mg/kg	2.2	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.2	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.2	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.2	U

mg/kg = milligram per kilogram

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

U = not detected, value is the detection limit
J = value is estimated
FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Wilmington, Massachusetts

		Loc Name	TRIP BLANK		TRIP BLANK		TRIP BLANK		TRIP BLANK	
		Field Sample ID	OC-TBK-055		OC-TBK-056		OC-TBK-057		OC-TBK-058	
		Field Sample Date	11/15/10		11/16/10		11/16/10		11/17/10	
		Lab Sample ID	360-31096-4		360-31096-16		360-31147-11		360-31167-20	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31147-1		360-31167	
		QC Code	TB		TB		TB		TB	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAVPH	C5-C8 Aliphatics	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U
MAVPH	C5-C8 Aliphatics (unadj.)	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U
MAVPH	C9-C10 Aromatics	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U
MAVPH	C9-C12 Aliphatics	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U
MAVPH	C9-C12 Aliphatics (unadj.)	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U
MAVPH	Volatile Petroleum Hydrocarbons, Total	mg/kg	2.4	U	2.4	U	2.4	U	2.4	U

mg/kg = milligram per kilogram

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

U = not detected, value is the detection limit
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FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	15		3.9	U	3.9	U	14		1000		1100	
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	15		3.9	U	3.9	U	14		1000		1100	
MAEPH	C19-C36 Aliphatics	mg/kg	3.8	U	3.9	U	3.9	U	3.6	U	2000		2900	
MAEPH	C9-C18 Aliphatics	mg/kg	3.8	U	3.9	U	3.9	U	3.6	U	260		350	
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	15		3.9	U	3.9	U	14		3300		4400	

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
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Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	3.6	U	9.9		2200		1000		39		4500	
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	3.6	U	9.9		2200		1000		39		4500	
MAEPH	C19-C36 Aliphatics	mg/kg	3.6	U	7.9		260		59		4.3		140	
MAEPH	C9-C18 Aliphatics	mg/kg	3.6	U	3.6	U	130		35		3.6	U	260	
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	3.6	U	18		2600		1100		43		4900	

mg/kg = milligram per kilogram

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Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	41		10		82		350		3.7	UJ	3.6	U
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	12		10		82		350		3.7	UJ	3.6	U
MAEPH	C19-C36 Aliphatics	mg/kg	3.8	U	7.5		3.4	U	4.1		3.7	U	3.6	U
MAEPH	C9-C18 Aliphatics	mg/kg	3.8	U	4.1	U	14		120		3.7	UJ	3.6	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	41		18		96		470		3.7	UJ	3.6	U

mg/kg = milligram per kilogram

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Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	25		120		110		3.4	U	140		6.6	
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	25		120		110		3.4	U	140		6.6	
MAEPH	C19-C36 Aliphatics	mg/kg	4.5		3.6	U	3.6	U	3.4	U	3.5	U	10	
MAEPH	C9-C18 Aliphatics	mg/kg	3.5	U	18		14		3.4	U	36		3.6	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	30		140		120		3.4	U	180		17	

mg/kg = milligram per kilogram

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FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	3.5	U	3.6	U	3.4	U	3.5	U	3.5	U	3.3	U
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	3.5	U	3.6	U	3.4	U	3.5	U	3.5	U	3.3	U
MAEPH	C19-C36 Aliphatics	mg/kg	3.5	U	3.6	U	3.4	U	3.5	U	3.5	U	3.3	U
MAEPH	C9-C18 Aliphatics	mg/kg	3.5	U	3.6	U	3.4	U	3.5	U	3.5	U	3.3	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	3.5	U	3.6	U	3.4	U	3.5	U	3.5	U	3.3	U

mg/kg = milligram per kilogram

U = not detected, value is the detection limit
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FS = field sample
FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	3.4	U	3.7	U	3.6	U	8.4		3.5	U	4.7	
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	3.4	U	3.7	U	3.6	U	8.4		3.5	U	4.7	
MAEPH	C19-C36 Aliphatics	mg/kg	3.4	U	3.7	U	3.6	U	4.9		3.5	U	3.8	U
MAEPH	C9-C18 Aliphatics	mg/kg	3.4	U	3.7	U	3.6	U	4.1	U	3.5	U	3.8	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	3.4	U	3.7	U	3.6	U	13		3.5	U	4.7	

mg/kg = milligram per kilogram

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Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-502		SB-500	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-502-3.0/5.0-XXX		OC-SB-500-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-10		360-31147-8	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	3.7		33		44		3.6	U	3.5	U	12	
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	3.7		33		44		3.6	U	3.5	U	12	
MAEPH	C19-C36 Aliphatics	mg/kg	3.4	U	3.5	U	3.8	U	3.6	U	3.5	U	3.6	U
MAEPH	C9-C18 Aliphatics	mg/kg	3.4	U	10		6.7		3.6	U	3.5	U	3.6	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	3.7		43		51		3.6	U	3.5	U	12	

mg/kg = milligram per kilogram

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FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-501	
		Field Sample ID	OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-9	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
MAEPH	C11-C22 Aromatics	mg/kg	3.6	U
MAEPH	C11-C22 Aromatics (unadj.)	mg/kg	3.6	U
MAEPH	C19-C36 Aliphatics	mg/kg	5.5	
MAEPH	C9-C18 Aliphatics	mg/kg	3.6	U
MAEPH	Extractable Petroleum Hydrocarbons, Total	mg/kg	5.5	

mg/kg = milligram per kilogram

Prepared by / Date: WCG 01/03/11

Checked by / Date: CSR 01/04/11

U = not detected, value is the detection limit

J = value is estimated

FS = field sample

FD = field duplicate

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-474		SB-474		SB-474		SB-475		SB-475		SB-475	
		Field Sample ID	OC-SB-474-0.0/1.0-XXX		OC-SB-474-8.0/10-XXX		OC-SB-474-10.5/12.5-XXX		OC-SB-475-0.0/1.0-XXX		OC-SB-475-8.0/10-DUP		OC-SB-475-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FD		FS	
		Lab Sample ID	360-31167-1		360-31167-3		360-31167-2		360-31167-4		360-31167-6		360-31167-7	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	14		16		17		9.9		13		14	
E160.3	Percent Solids	percent	86		84		83		90		87		86	

U = not detected, value is the detection limit
J = value is estimated

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-475		SB-476		SB-476		SB-476		SB-477		SB-477	
		Field Sample ID	OC-SB-475-16/18-XXX		OC-SB-476-0.0/1.0-XXX		OC-SB-476-8.0/10-XXX		OC-SB-476-13/15-XXX		OC-SB-477-0.0/1.0-XXX		OC-SB-477-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/18/10		11/18/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-5		360-31167-8		360-31167-10		360-31167-9		360-31167-11		360-31167-13	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31167		360-31167	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	10		12		13		13		9.6		12	
E160.3	Percent Solids	percent	90		88		87		87		90		88	

U = not detected, value is the detection limit
J = value is estimated

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-477		SB-478		SB-478		SB-478		SB-479		SB-479	
		Field Sample ID	OC-SB-477-10/12-XXX		OC-SB-478-0.0/1.0-XXX		OC-SB-478-8.0/10-XXX		OC-SB-478-10/12-XXX		OC-SB-479-0.0/1.0-XXX		OC-SB-479-8.0/10-XXX	
		Field Sample Date	11/18/10		11/18/10		11/18/10		11/18/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31167-12		360-31167-14		360-31167-16		360-31167-15		360-31147-1		360-31147-2	
		Lab Sample Delivery Group	360-31167		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	16		21		3.5		15		9.9		9.5	
E160.3	Percent Solids	percent	84		79		96		85		90		91	

U = not detected, value is the detection limit

J = value is estimated

Table 2 - Final Results
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Loc Name	SB-480		SB-480		SB-480		SB-481		SB-481		SB-485	
		Field Sample ID	OC-SB-480-0.0/1.0-XXX		OC-SB-480-6.0/8.0-DUP		OC-SB-480-6.0/8.0-XXX		OC-SB-481-0.0/1.0-XXX		OC-SB-481-7.0/9.0-XXX		OC-SB-485-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/17/10		11/17/10		11/15/10	
		QC Code	FS		FD		FS		FS		FS		FS	
		Lab Sample ID	360-31147-3		360-31147-4		360-31147-5		360-31147-6		360-31147-7		360-31096-1	
		Lab Sample Delivery Group	360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31147-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	6.2		10		8.8		6.5		7.6		9.2	
E160.3	Percent Solids	percent	94		90		91		93		92		91	

U = not detected, value is the detection limit

J = value is estimated

Table 2 - Final Results
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		Loc Name	SB-485		SB-485		SB-488		SB-488		SB-490		SB-490	
		Field Sample ID	OC-SB-485-6.0/8.0-XXX		OC-SB-485-11/13-XXX		OC-SB-488-0.0/1.0-XXX		OC-SB-488-7.0/9.0-XXX		OC-SB-490-0.0/1.0-XXX		OC-SB-490-7.0/9.0-XXX	
		Field Sample Date	11/15/10		11/15/10		11/15/10		11/15/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-3		360-31096-2		360-31096-5		360-31096-6		360-31096-7		360-31096-8	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	7.3		9		2.5		6.4		7.2		3.4	
E160.3	Percent Solids	percent	93		91		98		94		93		97	

U = not detected, value is the detection limit
J = value is estimated

Table 2 - Final Results
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		Loc Name	SB-494		SB-494		SB-494		SB-495		SB-495		SB-496	
		Field Sample ID	OC-SB-494-0.0/1.0-XXX		OC-SB-494-6.0/8.0-XXX		OC-SB-494-12/14-XXX		OC-SB-495-0.0/1.0-XXX		OC-SB-495-4.0/6.0-XXX		OC-SB-496-0.0/1.0-XXX	
		Field Sample Date	11/16/10		11/16/10		11/16/10		11/16/10		11/16/10		11/16/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-9		360-31096-11		360-31096-10		360-31096-12		360-31096-13		360-31096-14	
		Lab Sample Delivery Group	360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1		360-31096-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	5.2		12		8.2		19		7.3		12	
E160.3	Percent Solids	percent	95		88		92		81		93		88	

U = not detected, value is the detection limit

J = value is estimated

Table 2 - Final Results
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		Loc Name	SB-496		SB-497		SB-497		SB-497		SB-500		SB-501	
		Field Sample ID	OC-SB-496-5.0/6.5-XXX		OC-SB-497-0.0/1.0-XXX		OC-SB-497-6.0/8.0-XXX		OC-SB-497-11/13-XXX		OC-SB-500-0.5/3.0-XXX		OC-SB-501-0.5/3.0-XXX	
		Field Sample Date	11/16/10		11/17/10		11/17/10		11/17/10		11/17/10		11/17/10	
		QC Code	FS		FS		FS		FS		FS		FS	
		Lab Sample ID	360-31096-15		360-31167-17		360-31167-19		360-31167-18		360-31147-8		360-31147-9	
		Lab Sample Delivery Group	360-31096-1		360-31167		360-31167		360-31167		360-31147-1		360-31147-1	
Method	**Analyte**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
E160.3	Percent Moisture	percent	3.6		7.1		14		8.9		7.7		8.6	
E160.3	Percent Solids	percent	96		93		86		91		92		91	

U = not detected, value is the detection limit
J = value is estimated

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		Loc Name	SB-502	
		Field Sample ID	OC-SB-502-3.0/5.0-XXX	
		Field Sample Date	11/17/10	
		QC Code	FS	
		Lab Sample ID	360-31147-10	
		Lab Sample Delivery Group	360-31147-1	
Method	**Analyte**	**Units**	Result	Qual
E160.3	Percent Moisture	percent	7.8	
E160.3	Percent Solids	percent	92	

U = not detected, value is the detection limit
J = value is estimated

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

Table 3 - Validations Actions
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31096-1	SW8260C	OC-SB-485-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3	U	3	UJ	CCV%D	ug/kg
360-31096-10	SW8260C	OC-SB-494-12/14-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31096-11	SW8260C	OC-SB-494-6.0/8.0-XXX	1,2,4-Trimethylbenzene	2.6	U	2.6	UJ	CCV%D	ug/kg
360-31096-12	SW8260C	OC-SB-495-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.2	U	3.2	UJ	CCV%D	ug/kg
360-31096-13	SW8260C	OC-SB-495-4.0/6.0-XXX	1,2,4-Trimethylbenzene	2.2	U	2.2	UJ	CCV%D	ug/kg
360-31096-14	SW8260C	OC-SB-496-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.7	U	3.7	UJ	CCV%D	ug/kg
360-31096-15	SW8260C	OC-SB-496-5.0/6.5-XXX	1,2,4-Trimethylbenzene	2.6	U	2.6	UJ	CCV%D	ug/kg
360-31096-2	SW8260C	OC-SB-485-11/13-XXX	1,2,4-Trimethylbenzene	2	U	2	UJ	CCV%D	ug/kg
360-31096-3	SW8260C	OC-SB-485-6.0/8.0-XXX	1,2,4-Trimethylbenzene	2.1	U	2.1	UJ	CCV%D	ug/kg
360-31096-5	SW8260C	OC-SB-488-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.5	U	2.5	UJ	CCV%D	ug/kg
360-31096-6	SW8260C	OC-SB-488-7.0/9.0-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31096-7	SW8260C	OC-SB-490-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31096-8	SW8260C	OC-SB-490-7.0/9.0-XXX	1,2,4-Trimethylbenzene	2.2	U	2.2	UJ	CCV%D	ug/kg
360-31096-9	SW8260C	OC-SB-494-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.3	U	2.3	UJ	CCV%D	ug/kg
360-31147-1	SW8260C	OC-SB-479-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.1	U	3.1	UJ	CCV%D	ug/kg
360-31147-10	SW8260C	OC-SB-502-3.0/5.0-XXX	1,2,4-Trimethylbenzene	2.3	U	2.3	UJ	CCV%D	ug/kg
360-31147-2	SW8260C	OC-SB-479-8.0/10-XXX	1,2,4-Trimethylbenzene	2.3	U	2.3	UJ	CCV%D	ug/kg
360-31147-3	SW8260C	OC-SB-480-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.5	U	2.5	UJ	CCV%D	ug/kg
360-31147-6	SW8260C	OC-SB-481-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31147-8	SW8260C	OC-SB-500-0.5/3.0-XXX	1,2,4-Trimethylbenzene	2.5	U	2.5	UJ	CCV%D	ug/kg
360-31147-9	SW8260C	OC-SB-501-0.5/3.0-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31167-1	SW8260C	OC-SB-474-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.1	U	3.1	UJ	CCV%D	ug/kg
360-31167-11	SW8260C	OC-SB-477-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.2	U	3.2	UJ	CCV%D	ug/kg
360-31167-14	SW8260C	OC-SB-478-0.0/1.0-XXX	1,2,4-Trimethylbenzene	3.8	U	3.8	UJ	CCV%D	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	1,2,4-Trimethylbenzene	140	U	140	UJ	CCV%D	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	1,2,4-Trimethylbenzene	97	U	97	UJ	CCV%D	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	1,2,4-Trimethylbenzene	130	U	130	UJ	CCV%D	ug/kg
360-31167-18	SW8260C	OC-SB-497-11/13-XXX	1,2,4-Trimethylbenzene	2.1	U	2.1	UJ	CCV%D	ug/kg
360-31167-19	SW8260C	OC-SB-497-6.0/8.0-XXX	1,2,4-Trimethylbenzene	2.4	U	2.4	UJ	CCV%D	ug/kg
360-31167-2	SW8260C	OC-SB-474-10.5/12.5-XXX	1,2,4-Trimethylbenzene	2.6	U	2.6	UJ	CCV%D	ug/kg
360-31167-3	SW8260C	OC-SB-474-8.0/10-XXX	1,2,4-Trimethylbenzene	2.5	U	2.5	UJ	CCV%D	ug/kg
360-31167-4	SW8260C	OC-SB-475-0.0/1.0-XXX	1,2,4-Trimethylbenzene	2.8	U	2.8	UJ	CCV%D	ug/kg
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	1,2,4-Trimethylbenzene	2.6	U	2.6	UJ	CCV%D	ug/kg
360-31167-8	SW8260C	OC-SB-476-0.0/1.0-XXX	1,2,4-Trimethylbenzene	4.1	U	4.1	UJ	CCV%D	ug/kg
360-31147-1	SW8260C	OC-SB-479-0.0/1.0-XXX	2-Butanone	31	U	31	UJ	CCV%D	ug/kg
360-31147-10	SW8260C	OC-SB-502-3.0/5.0-XXX	2-Butanone	23	U	23	UJ	CCV%D	ug/kg
360-31147-2	SW8260C	OC-SB-479-8.0/10-XXX	2-Butanone	23	U	23	UJ	CCV%D	ug/kg
360-31147-3	SW8260C	OC-SB-480-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	CCV%D	ug/kg
360-31147-6	SW8260C	OC-SB-481-0.0/1.0-XXX	2-Butanone	24	U	24	UJ	CCV%D	ug/kg
360-31147-8	SW8260C	OC-SB-500-0.5/3.0-XXX	2-Butanone	25	U	25	UJ	CCV%D	ug/kg
360-31147-9	SW8260C	OC-SB-501-0.5/3.0-XXX	2-Butanone	24	U	24	UJ	CCV%D	ug/kg

Table 3 - Validations Actions
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31096-1	SW8260C	OC-SB-485-0.0/1.0-XXX	Acetic acid, methyl ester	59	U	59	UJ	CCV%D	ug/kg
360-31096-10	SW8260C	OC-SB-494-12/14-XXX	Acetic acid, methyl ester	47	U	47	UJ	CCV%D	ug/kg
360-31096-11	SW8260C	OC-SB-494-6.0/8.0-XXX	Acetic acid, methyl ester	51	U	51	UJ	CCV%D	ug/kg
360-31096-12	SW8260C	OC-SB-495-0.0/1.0-XXX	Acetic acid, methyl ester	65	U	65	UJ	CCV%D	ug/kg
360-31096-13	SW8260C	OC-SB-495-4.0/6.0-XXX	Acetic acid, methyl ester	45	U	45	UJ	CCV%D	ug/kg
360-31096-14	SW8260C	OC-SB-496-0.0/1.0-XXX	Acetic acid, methyl ester	75	U	75	UJ	CCV%D	ug/kg
360-31096-15	SW8260C	OC-SB-496-5.0/6.5-XXX	Acetic acid, methyl ester	52	U	52	UJ	CCV%D	ug/kg
360-31096-2	SW8260C	OC-SB-485-11/13-XXX	Acetic acid, methyl ester	39	U	39	UJ	CCV%D	ug/kg
360-31096-3	SW8260C	OC-SB-485-6.0/8.0-XXX	Acetic acid, methyl ester	42	U	42	UJ	CCV%D	ug/kg
360-31096-5	SW8260C	OC-SB-488-0.0/1.0-XXX	Acetic acid, methyl ester	49	U	49	UJ	CCV%D	ug/kg
360-31096-6	SW8260C	OC-SB-488-7.0/9.0-XXX	Acetic acid, methyl ester	49	U	49	UJ	CCV%D	ug/kg
360-31096-7	SW8260C	OC-SB-490-0.0/1.0-XXX	Acetic acid, methyl ester	49	U	49	UJ	CCV%D	ug/kg
360-31096-8	SW8260C	OC-SB-490-7.0/9.0-XXX	Acetic acid, methyl ester	44	U	44	UJ	CCV%D	ug/kg
360-31096-9	SW8260C	OC-SB-494-0.0/1.0-XXX	Acetic acid, methyl ester	46	U	46	UJ	CCV%D	ug/kg
360-31167-1	SW8260C	OC-SB-474-0.0/1.0-XXX	2-Butanone	31	U	31	UJ	CCVRRF	ug/kg
360-31167-2	SW8260C	OC-SB-474-10.5/12.5-XXX	2-Butanone	26	U	26	UJ	CCVRRF	ug/kg
360-31167-3	SW8260C	OC-SB-474-8.0/10-XXX	2-Butanone	25	U	25	UJ	CCVRRF	ug/kg
360-31167-4	SW8260C	OC-SB-475-0.0/1.0-XXX	2-Butanone	28	U	28	UJ	CCVRRF	ug/kg
360-31167-8	SW8260C	OC-SB-476-0.0/1.0-XXX	2-Butanone	41	U	41	UJ	CCVRRF	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	2,4,4-Trimethyl-1-pentene	36000		36000	J	FD	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	2,4,4-Trimethyl-1-pentene	74000		74000	J	FD	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	2,4,4-Trimethyl-2-Pentene	4300		4300	J	FD	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	2,4,4-Trimethyl-2-Pentene	13000		13000	J	FD	ug/kg
360-31096-1	SW8260C	OC-SB-485-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
360-31096-10	SW8260C	OC-SB-494-12/14-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
360-31096-11	SW8260C	OC-SB-494-6.0/8.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
360-31096-12	SW8260C	OC-SB-495-0.0/1.0-XXX	1,4-Dioxane	320	U	320	UJ	ICVRRF	ug/kg
360-31096-13	SW8260C	OC-SB-495-4.0/6.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
360-31096-14	SW8260C	OC-SB-496-0.0/1.0-XXX	1,4-Dioxane	370	U	370	UJ	ICVRRF	ug/kg
360-31096-15	SW8260C	OC-SB-496-5.0/6.5-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
360-31096-2	SW8260C	OC-SB-485-11/13-XXX	1,4-Dioxane	200	U	200	UJ	ICVRRF	ug/kg
360-31096-3	SW8260C	OC-SB-485-6.0/8.0-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
360-31096-5	SW8260C	OC-SB-488-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
360-31096-6	SW8260C	OC-SB-488-7.0/9.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
360-31096-7	SW8260C	OC-SB-490-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
360-31096-8	SW8260C	OC-SB-490-7.0/9.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
360-31096-9	SW8260C	OC-SB-494-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
360-31096-1	SW8260C	OC-SB-485-0.0/1.0-XXX	Tetrahydrofuran	30	U	30	UJ	ICVRRF	ug/kg
360-31096-10	SW8260C	OC-SB-494-12/14-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF	ug/kg
360-31096-11	SW8260C	OC-SB-494-6.0/8.0-XXX	Tetrahydrofuran	26	U	26	UJ	ICVRRF	ug/kg
360-31096-12	SW8260C	OC-SB-495-0.0/1.0-XXX	Tetrahydrofuran	32	U	32	UJ	ICVRRF	ug/kg

Table 3 - Validations Actions
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31096-13	SW8260C	OC-SB-495-4.0/6.0-XXX	Tetrahydrofuran	22	U	22	UJ	ICVRRF	ug/kg
360-31096-14	SW8260C	OC-SB-496-0.0/1.0-XXX	Tetrahydrofuran	37	U	37	UJ	ICVRRF	ug/kg
360-31096-15	SW8260C	OC-SB-496-5.0/6.5-XXX	Tetrahydrofuran	26	U	26	UJ	ICVRRF	ug/kg
360-31096-2	SW8260C	OC-SB-485-11/13-XXX	Tetrahydrofuran	20	U	20	UJ	ICVRRF	ug/kg
360-31096-3	SW8260C	OC-SB-485-6.0/8.0-XXX	Tetrahydrofuran	21	U	21	UJ	ICVRRF	ug/kg
360-31096-5	SW8260C	OC-SB-488-0.0/1.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF	ug/kg
360-31096-6	SW8260C	OC-SB-488-7.0/9.0-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF	ug/kg
360-31096-7	SW8260C	OC-SB-490-0.0/1.0-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF	ug/kg
360-31096-8	SW8260C	OC-SB-490-7.0/9.0-XXX	Tetrahydrofuran	22	U	22	UJ	ICVRRF	ug/kg
360-31096-9	SW8260C	OC-SB-494-0.0/1.0-XXX	Tetrahydrofuran	23	U	23	UJ	ICVRRF	ug/kg
360-31147-2	SW8260C	OC-SB-479-8.0/10-XXX	Acetone	16	J	230	UJ	ICVRRF, BL, CCVRRF	ug/kg
360-31147-3	SW8260C	OC-SB-480-0.0/1.0-XXX	Acetone	17	J	250	UJ	ICVRRF, BL, CCVRRF	ug/kg
360-31147-8	SW8260C	OC-SB-500-0.5/3.0-XXX	Acetone	34	J	250	UJ	ICVRRF, BL, CCVRRF	ug/kg
360-31147-9	SW8260C	OC-SB-501-0.5/3.0-XXX	Acetone	19	J	240	UJ	ICVRRF, BL, CCVRRF	ug/kg
360-31147-1	SW8260C	OC-SB-479-0.0/1.0-XXX	1,4-Dioxane	310	U	310	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-10	SW8260C	OC-SB-502-3.0/5.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-2	SW8260C	OC-SB-479-8.0/10-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-3	SW8260C	OC-SB-480-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-6	SW8260C	OC-SB-481-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-8	SW8260C	OC-SB-500-0.5/3.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-9	SW8260C	OC-SB-501-0.5/3.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-1	SW8260C	OC-SB-474-0.0/1.0-XXX	1,4-Dioxane	310	U	310	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	1,4-Dioxane	14000	U	14000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-11	SW8260C	OC-SB-477-0.0/1.0-XXX	1,4-Dioxane	320	U	320	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	1,4-Dioxane	14000	U	14000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-14	SW8260C	OC-SB-478-0.0/1.0-XXX	1,4-Dioxane	380	U	380	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	1,4-Dioxane	14000	U	14000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	1,4-Dioxane	9700	U	9700	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-18	SW8260C	OC-SB-497-11/13-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-19	SW8260C	OC-SB-497-6.0/8.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-2	SW8260C	OC-SB-474-10.5/12.5-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-3	SW8260C	OC-SB-474-8.0/10-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-4	SW8260C	OC-SB-475-0.0/1.0-XXX	1,4-Dioxane	280	U	280	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF, CCVRRF	ug/kg

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-8	SW8260C	OC-SB-476-0.0/1.0-XXX	1,4-Dioxane	410	U	410	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	1,4-Dioxane	12000	U	12000	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-1	SW8260C	OC-SB-479-0.0/1.0-XXX	Acetone	310	U	310	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-10	SW8260C	OC-SB-502-3.0/5.0-XXX	Acetone	230	U	230	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-6	SW8260C	OC-SB-481-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-1	SW8260C	OC-SB-474-0.0/1.0-XXX	Acetone	23	J	23	J	ICVRRF, CCVRRF	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Acetone	1600	J	1600	J	ICVRRF, CCVRRF	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Acetone	1500	J	1500	J	ICVRRF, CCVRRF	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Acetone	1500	J	1500	J	ICVRRF, CCVRRF	ug/kg
360-31167-14	SW8260C	OC-SB-478-0.0/1.0-XXX	Acetone	380	U	380	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-18	SW8260C	OC-SB-497-11/13-XXX	Acetone	210	U	210	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-19	SW8260C	OC-SB-497-6.0/8.0-XXX	Acetone	240	U	240	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-2	SW8260C	OC-SB-474-10.5/12.5-XXX	Acetone	260	U	260	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-3	SW8260C	OC-SB-474-8.0/10-XXX	Acetone	18	J	18	J	ICVRRF, CCVRRF	ug/kg
360-31167-4	SW8260C	OC-SB-475-0.0/1.0-XXX	Acetone	21	J	21	J	ICVRRF, CCVRRF	ug/kg
360-31167-8	SW8260C	OC-SB-476-0.0/1.0-XXX	Acetone	40	J	40	J	ICVRRF, CCVRRF	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Acetone	1100	J	1100	J	ICVRRF, CCVRRF	ug/kg
360-31147-1	SW8260C	OC-SB-479-0.0/1.0-XXX	Tetrahydrofuran	31	U	31	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-10	SW8260C	OC-SB-502-3.0/5.0-XXX	Tetrahydrofuran	23	U	23	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-2	SW8260C	OC-SB-479-8.0/10-XXX	Tetrahydrofuran	23	U	23	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-3	SW8260C	OC-SB-480-0.0/1.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-6	SW8260C	OC-SB-481-0.0/1.0-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-8	SW8260C	OC-SB-500-0.5/3.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF, CCVRRF	ug/kg
360-31147-9	SW8260C	OC-SB-501-0.5/3.0-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-1	SW8260C	OC-SB-474-0.0/1.0-XXX	Tetrahydrofuran	31	U	31	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Tetrahydrofuran	1400	U	1400	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-11	SW8260C	OC-SB-477-0.0/1.0-XXX	Tetrahydrofuran	32	U	32	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Tetrahydrofuran	1400	U	1400	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-14	SW8260C	OC-SB-478-0.0/1.0-XXX	Tetrahydrofuran	38	U	38	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	Tetrahydrofuran	1400	U	1400	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	Tetrahydrofuran	970	U	970	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-18	SW8260C	OC-SB-497-11/13-XXX	Tetrahydrofuran	21	U	21	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-19	SW8260C	OC-SB-497-6.0/8.0-XXX	Tetrahydrofuran	24	U	24	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-2	SW8260C	OC-SB-474-10.5/12.5-XXX	Tetrahydrofuran	26	U	26	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-3	SW8260C	OC-SB-474-8.0/10-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-4	SW8260C	OC-SB-475-0.0/1.0-XXX	Tetrahydrofuran	28	U	28	UJ	ICVRRF, CCVRRF	ug/kg

Table 3 - Validations Actions
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	Tetrahydrofuran	26	U	26	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	Tetrahydrofuran	1300	U	1300	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-8	SW8260C	OC-SB-476-0.0/1.0-XXX	Tetrahydrofuran	41	U	41	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Tetrahydrofuran	1200	U	1200	UJ	ICVRRF, CCVRRF	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	Acetone	13000	U *	13000	UJ	ICVRRF, CCVRRF, CCV%D, LCS-L	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	Acetone	13000	U *	13000	UJ	ICVRRF, CCVRRF, CCV%D, LCS-L	ug/kg
360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	Acetone	13000	U *	13000	UJ	ICVRRF, CCVRRF, LCS-L	ug/kg
360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	Acetone	13000	U *	13000	UJ	ICVRRF, CCVRRF, LCS-L	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	Acetone	13000	U *	13000	UJ	ICVRRF, CCVRRF, LCS-L, MS-L	ug/kg
360-31167-11	SW8260C	OC-SB-477-0.0/1.0-XXX	Acetone	320	U *	320	UJ	ICVRRF, CVRRF, CCV%D, LCS-L	ug/kg
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	Acetone	260	U *	260	UJ	ICVRRF, CVRRF, CCV%D, LCS-L	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	Acetone	14000	U	14000	UJ	ICVRRF, LCS-L	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	Acetone	9700	U	9700	UJ	ICVRRF, LCS-L	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	Acetone	13000	U	13000	UJ	ICVRRF, LCS-L	ug/kg
360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	Bromomethane	260	U *	260	UJ	LCS-L	ug/kg
360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	Bromomethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Bromomethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Bromomethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Bromomethane	290	U *	290	UJ	LCS-L	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	Bromomethane	280	U	280	UJ	LCS-L	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	Bromomethane	190	U	190	UJ	LCS-L	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	Bromomethane	270	U	270	UJ	LCS-L	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	Bromomethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	Bromomethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Bromomethane	250	U *	250	UJ	LCS-L	ug/kg
360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	Chloroethane	260	U *	260	UJ	LCS-L	ug/kg
360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	Chloroethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Chloroethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Chloroethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Chloroethane	290	U *	290	UJ	LCS-L	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	Chloroethane	280	U	280	UJ	LCS-L	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	Chloroethane	190	U	190	UJ	LCS-L	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	Chloroethane	270	U	270	UJ	LCS-L	ug/kg
360-31167-6	SW8260C	OC-SB-475-8.0/10-DUP	Chloroethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-7	SW8260C	OC-SB-475-8.0/10-XXX	Chloroethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Chloroethane	250	U *	250	UJ	LCS-L	ug/kg
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Dichlorodifluoromethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Dichlorodifluoromethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Dichlorodifluoromethane	290	U *	290	UJ	LCS-L	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Dichlorodifluoromethane	250	U *	250	UJ	LCS-L	ug/kg

Table 3 - Validations Actions
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	Trichlorofluoromethane	270	U *	270	UJ	LCS-L	ug/kg
360-31167-12	SW8260C	OC-SB-477-10/12-XXX	Trichlorofluoromethane	260	U *	260	UJ	LCS-L	ug/kg
360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	Trichlorofluoromethane	290	U *	290	UJ	LCS-L	ug/kg
360-31167-15	SW8260C	OC-SB-478-10/12-XXX	Trichlorofluoromethane	280	U	280	UJ	LCS-L	ug/kg
360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	Trichlorofluoromethane	190	U	190	UJ	LCS-L	ug/kg
360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	Trichlorofluoromethane	270	U	270	UJ	LCS-L	ug/kg
360-31167-9	SW8260C	OC-SB-476-13/15-XXX	Trichlorofluoromethane	250	U *	250	UJ	LCS-L	ug/kg
360-31096-1	SW8260C	OC-SB-485-0.0/1.0-XXX	Acetone	300	U *	300	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-10	SW8260C	OC-SB-494-12/14-XXX	Acetone	240	U *	240	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-11	SW8260C	OC-SB-494-6.0/8.0-XXX	Acetone	260	U *	260	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-12	SW8260C	OC-SB-495-0.0/1.0-XXX	Acetone	320	U *	320	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-13	SW8260C	OC-SB-495-4.0/6.0-XXX	Acetone	220	U *	220	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-14	SW8260C	OC-SB-496-0.0/1.0-XXX	Acetone	370	U *	370	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-15	SW8260C	OC-SB-496-5.0/6.5-XXX	Acetone	260	U *	260	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-2	SW8260C	OC-SB-485-11/13-XXX	Acetone	200	U *	200	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-3	SW8260C	OC-SB-485-6.0/8.0-XXX	Acetone	210	U *	210	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-5	SW8260C	OC-SB-488-0.0/1.0-XXX	Acetone	250	U *	250	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-6	SW8260C	OC-SB-488-7.0/9.0-XXX	Acetone	240	U *	240	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-7	SW8260C	OC-SB-490-0.0/1.0-XXX	Acetone	240	U *	240	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-8	SW8260C	OC-SB-490-7.0/9.0-XXX	Acetone	220	U *	220	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31096-9	SW8260C	OC-SB-494-0.0/1.0-XXX	Acetone	230	U *	230	UJ	LCS-L, ICVRRF, CCV%D	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	Bromomethane	260	U *	260	UJ	LCS-L, MS-L	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	Chloroethane	260	U *	260	UJ	LCS-L, MS-L	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	2,2-Dichloropropane	130	U	130	UJ	MS-L	ug/kg
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	Dichlorodifluoromethane	5.2	U	5.2	UJ	MS-L	ug/kg
360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	Trichlorofluoromethane	260	U	260	UJ	MS-L	ug/kg
360-31167-5	SW8260C	OC-SB-475-16/18-XXX	Trichlorofluoromethane	5.2	U	5.2	UJ	MS-L	ug/kg

Units:
ug/kg = microgram per kilogram

Validation Qualifier:
U = not detected, value is the detection limit
J = value is estimated
R = rejected

Validation Reason Codes:
BL = QC Blank Qualifier
CCV%D = Continuing calibration %D
CCVRFF= Continuing calibration RFF low
FD = Field Duplicate limit exceeded
ICVRFF= Initial calibration RFF low
LCS-L = LCS recovery low
MS-L = MS and/or MSD recovery low

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	2,4-Dinitrophenol	19000	U	19000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	2,4-Dinitrophenol	180	U	180	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	2,4-Dinitrophenol	960	U	960	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	2,4-Dinitrophenol	37000	U	37000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	2,4-Dinitrophenol	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	2,4-Dinitrophenol	140	U	140	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	2,4-Dinitrophenol	71	U	71	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	2,4-Dinitrophenol	73	U	73	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	2,4-Dinitrophenol	380	U	380	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	2,4-Dinitrophenol	750	U	750	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	2,4-Dinitrophenol	750	U	750	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	2,4-Dinitrophenol	7500	U	7500	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	2-Nitroaniline	93000	U	93000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	2-Nitroaniline	910	U	910	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	2-Nitroaniline	4800	U	4800	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	2-Nitroaniline	190000	U	190000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	2-Nitroaniline	9700	U	9700	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	2-Nitroaniline	680	U	680	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	2-Nitroaniline	350	U	350	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	2-Nitroaniline	360	U	360	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	2-Nitroaniline	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	2-Nitroaniline	3700	U	3700	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	2-Nitroaniline	3800	U	3800	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	2-Nitroaniline	37000	U	37000	UJ	CCV%D	ug/kg
360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	880	U	880	UJ	CCV%D	ug/kg
360-31147-4	SW8270	OC-SB-480-6.0/8.0-DUP	4,6-Dinitro-2-methylphenol	900	U	900	UJ	CCV%D	ug/kg
360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	910	U	910	UJ	CCV%D	ug/kg
360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	4,6-Dinitro-2-methylphenol	900	U	900	UJ	CCV%D	ug/kg
360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	4,6-Dinitro-2-methylphenol	93000	U	93000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	910	U	910	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	4,6-Dinitro-2-methylphenol	4800	U	4800	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	4,6-Dinitro-2-methylphenol	190000	U	190000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	4,6-Dinitro-2-methylphenol	9700	U	9700	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	4,6-Dinitro-2-methylphenol	680	U	680	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	350	U	350	UJ	CCV%D	ug/kg

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-18	SW8270	OC-SB-497-11/13-XXX	4,6-Dinitro-2-methylphenol	360	U	360	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	4,6-Dinitro-2-methylphenol	3700	U	3700	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	4,6-Dinitro-2-methylphenol	3800	U	3800	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	4,6-Dinitro-2-methylphenol	37000	U	37000	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	4-Nitroaniline	93000	U	93000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	4-Nitroaniline	910	U	910	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	4-Nitroaniline	4800	U	4800	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	4-Nitroaniline	190000	U	190000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	4-Nitroaniline	9700	U	9700	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	4-Nitroaniline	680	U	680	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	4-Nitroaniline	350	U	350	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	4-Nitroaniline	360	U	360	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	4-Nitroaniline	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	4-Nitroaniline	3700	U	3700	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	4-Nitroaniline	3800	U	3800	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	4-Nitroaniline	37000	U	37000	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	4-Nitrophenol	93000	U	93000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	4-Nitrophenol	910	U	910	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	4-Nitrophenol	4800	U	4800	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	4-Nitrophenol	190000	U	190000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	4-Nitrophenol	9700	U	9700	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	4-Nitrophenol	680	U	680	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	4-Nitrophenol	350	U	350	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	4-Nitrophenol	360	U	360	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	4-Nitrophenol	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	4-Nitrophenol	3700	U	3700	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	4-Nitrophenol	3800	U	3800	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	4-Nitrophenol	37000	U	37000	UJ	CCV%D	ug/kg
360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	Benzoic Acid	190	U	190	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	Benzoic Acid	93000	U	93000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	Benzoic Acid	910	U	910	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	Benzoic Acid	4800	U	4800	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	Benzoic Acid	190000	U	190000	UJ	CCV%D	ug/kg
360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	Benzoic Acid	250		250	J	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	Benzoic Acid	9700	U	9700	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	Benzoic Acid	680	U	680	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	Benzoic Acid	350	U	350	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	Benzoic Acid	360	U	360	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	Benzoic Acid	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-2	SW8270	OC-SB-474-10.5/12.5-XXX	Benzoic Acid	120	J	120	J	CCV%D	ug/kg

Table 3 - Validations Actions
Data Validation Report
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	Benzoic Acid	110	J	110	J	CCV%D	ug/kg
360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	Benzoic Acid	130	J	130	J	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	Benzoic Acid	3700	U	3700	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	Benzoic Acid	3800	U	3800	UJ	CCV%D	ug/kg
360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	Benzoic Acid	1900		1900	J	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	Benzoic Acid	37000	U	37000	UJ	CCV%D	ug/kg
360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	Dibenz(a,h)anthracene	37	U	37	UJ	CCV%D	ug/kg
360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	Dibenz(a,h)anthracene	180	U	180	UJ	CCV%D	ug/kg
360-31147-4	SW8270	OC-SB-480-6.0/8.0-DUP	Dibenz(a,h)anthracene	180	U	180	UJ	CCV%D	ug/kg
360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	Dibenz(a,h)anthracene	180	U	180	UJ	CCV%D	ug/kg
360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	CCV%D	ug/kg
360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	Dibenz(a,h)anthracene	180	U	180	UJ	CCV%D	ug/kg
360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	Hexachlorocyclopentadiene	37000	U	37000	UJ	CCV%D	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	Hexachlorocyclopentadiene	360	U	360	UJ	CCV%D	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	Hexachlorocyclopentadiene	1900	U	1900	UJ	CCV%D	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	Hexachlorocyclopentadiene	74000	U	74000	UJ	CCV%D	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	Hexachlorocyclopentadiene	3900	U	3900	UJ	CCV%D	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	Hexachlorocyclopentadiene	270	U	270	UJ	CCV%D	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	Hexachlorocyclopentadiene	140	U	140	UJ	CCV%D	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	Hexachlorocyclopentadiene	150	U	150	UJ	CCV%D	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	Hexachlorocyclopentadiene	760	U	760	UJ	CCV%D	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	Hexachlorocyclopentadiene	1500	U	1500	UJ	CCV%D	ug/kg
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	Hexachlorocyclopentadiene	1500	U	1500	UJ	CCV%D	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	Hexachlorocyclopentadiene	15000	U	15000	UJ	CCV%D	ug/kg
360-31167-5	SW8270	OC-SB-475-16/18-XXX	Benzoic Acid	100	J	100	J	CCV%D, MS-L. MS-RPD	ug/kg
360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	2,4-Dinitrophenol	37	U	37	UJ	CCVRRF, CCV%D	ug/kg
360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	CCVRRF, CCV%D	ug/kg
360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	2,4-Dinitrophenol	36	U	36	UJ	CCVRRF, CCV%D	ug/kg
360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	2,4-Dinitrophenol	180	U	180	UJ	CCVRRF, CCV%D	ug/kg
360-31147-4	SW8270	OC-SB-480-6.0/8.0-DUP	2,4-Dinitrophenol	180	U	180	UJ	CCVRRF, CCV%D	ug/kg
360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	2,4-Dinitrophenol	180	U	180	UJ	CCVRRF, CCV%D	ug/kg
360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	CCVRRF, CCV%D	ug/kg
360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	CCVRRF, CCV%D	ug/kg
360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	CCVRRF, CCV%D	ug/kg
360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	2,4-Dinitrophenol	180	U	180	UJ	CCVRRF, CCV%D, MS-RPD	ug/kg
360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
360-31096-10	SW8270	OC-SB-494-12/14-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
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SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	2,4-Dinitrophenol	41	U	41	UJ	ICVRSD	ug/kg
360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
360-31096-14	SW8270	OC-SB-496-0.0/1.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
360-31096-15	SW8270	OC-SB-496-5.0/6.5-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
360-31096-2	SW8270	OC-SB-485-11/13-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	Benzoic Acid	180		180	J	ICVRSD	ug/kg
360-31096-10	SW8270	OC-SB-494-12/14-XXX	Benzoic Acid	180	U	180	UJ	ICVRSD	ug/kg
360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	Benzoic Acid	88	J	88	J	ICVRSD	ug/kg
360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	Benzoic Acid	620		620	J	ICVRSD	ug/kg
360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	Benzoic Acid	110	J	110	J	ICVRSD	ug/kg
360-31096-14	SW8270	OC-SB-496-0.0/1.0-XXX	Benzoic Acid	280		280	J	ICVRSD	ug/kg
360-31096-15	SW8270	OC-SB-496-5.0/6.5-XXX	Benzoic Acid	190		190	J	ICVRSD	ug/kg
360-31096-2	SW8270	OC-SB-485-11/13-XXX	Benzoic Acid	50	J	50	J	ICVRSD	ug/kg
360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	Benzoic Acid	44	J	44	J	ICVRSD	ug/kg
360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	Benzoic Acid	44	J	44	J	ICVRSD	ug/kg
360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	Benzoic Acid	170	U	170	UJ	ICVRSD	ug/kg
360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	Benzoic Acid	33	J	33	J	ICVRSD	ug/kg
360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	Benzoic Acid	170	U	170	UJ	ICVRSD	ug/kg
360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	Benzoic Acid	79	J	79	J	ICVRSD	ug/kg
360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	Aniline	19000	U	19000	UJ	LCS-L	ug/kg
360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	Aniline	180	U	180	UJ	LCS-L	ug/kg
360-31167-12	SW8270	OC-SB-477-10/12-XXX	Aniline	960	U	960	UJ	LCS-L	ug/kg
360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	Aniline	37000	U	37000	UJ	LCS-L	ug/kg
360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
360-31167-15	SW8270	OC-SB-478-10/12-XXX	Aniline	1900	U	1900	UJ	LCS-L	ug/kg
360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	Aniline	140	U	140	UJ	LCS-L	ug/kg
360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	Aniline	71	U	71	UJ	LCS-L	ug/kg
360-31167-18	SW8270	OC-SB-497-11/13-XXX	Aniline	73	U	73	UJ	LCS-L	ug/kg
360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	Aniline	380	U	380	UJ	LCS-L	ug/kg
360-31167-2	SW8270	OC-SB-474-10.5/12.5-XXX	Aniline	40	U *	40	UJ	LCS-L	ug/kg
360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	Aniline	40	U *	40	UJ	LCS-L	ug/kg
360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
360-31167-6	SW8270	OC-SB-475-8.0/10-DUP	Aniline	750	U	750	UJ	LCS-L	ug/kg

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31167-7	SW8270	OC-SB-475-8.0/10-XXX	Aniline	750	U	750	UJ	LCS-L	ug/kg
360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
360-31167-9	SW8270	OC-SB-476-13/15-XXX	Aniline	7500	U	7500	UJ	LCS-L	ug/kg
360-31167-5	SW8270	OC-SB-475-16/18-XXX	Aniline	36	U *	36	UJ	LCS-L, MS-L	ug/kg
360-31096-2	SW8270	OC-SB-485-11/13-XXX	Aniline	36	U	36	UJ	MS-L	ug/kg
360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	Hexachlorocyclopentadiene	360	U		R	MS-L	ug/kg
360-31167-5	SW8270	OC-SB-475-16/18-XXX	Hexachlorocyclopentadiene	72	U	72	UJ	MS-L	ug/kg

Units:
ug/kg = microgram per kilogram

Validation Qualifier:
U = not detected, value is the detection limit
J = value is estimated
R = rejected

Validation Reason Codes:
CCV%D = Continuing calibration %D
CCVRFF= Continuing calibration RFF low
ICVRSD = Initial calibration RSD
LCS-L = LCS recovery low
MS-L = MS and/or MSD recovery low
MS-RPD = MS/MSD RPD limit exceeded

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qual	Validated Result	Val Qual	Validation Reason Code	Result Units
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	C5-C8 Aliphatics	12	U	12	UJ	MS-L, MS-RPD	mg/kg
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	C5-C8 Aliphatics (unadj.)	12	U	12	UJ	MS-L, MS-RPD	mg/kg
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	C9-C10 Aromatics	13		13	J	MS-L	mg/kg
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	C9-C12 Aliphatics	12	U	12	UJ	MS-L	mg/kg
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	C9-C12 Aliphatics (unadj.)	13		13	J	MS-L	mg/kg
360-31147-7	MAVPH	OC-SB-481-7.0/9.0-XXX	Volatile Petroleum Hydrocarbons, Total	13		13	J	MS-L	mg/kg

Units:
mg/kg = milligram per kilogram

Validation Qualifier:
U = not detected, value is the detection limit
J = value is estimated
R = rejected

Validation Reason Codes:
MS-L = MS and/or MSD recovery low
MS-RPD = MS/MSD RPD limit exceeded

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

Table 3 - Validations Actions
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

SDG/Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
360-31147-1	MAEPH	OC-SB-479-0.0/1.0-XXX	C11-C22 Aromatics (unadj.)	3.7	U	3.7	UJ	MS-L	mg/kg
360-31147-1	MAEPH	OC-SB-479-0.0/1.0-XXX	C9-C18 Aliphatics	3.7	U	3.7	UJ	MS-L, MS-RPD	mg/kg
360-31147-1	MAEPH	OC-SB-479-0.0/1.0-XXX	Extractable Petroleum Hydrocarbons, Total	3.7	U	3.7	UJ	MS-L, MS-RPD	mg/kg
360-31147-1	MAEPH	OC-SB-479-0.0/1.0-XXX	C11-C22 Aromatics	3.7	U	3.7	UJ	MS-L	mg/kg

Units:
mg/kg = milligram per kilogram
Validation Qualifier:
U = not detected, value is the detection limit
J = value is estimated

Validation Reason Codes:
MS-L = MS and/or MSD recovery low
MS-RPD = MS/MSD RPD limit exceeded

Prepared by / Date: WCG 01/03/11
Checked by / Date: CSR 01/04/11

Table 4-1
Tentatively Identified VOC Compounds
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site
Wilmington, Massachusetts

SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31147-1	360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	16-Nov-10	TIC01	Unknown	10.02	650	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	16-Nov-10	TIC02	Unknown	10.12	610	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	16-Nov-10	TIC04	Unknown	14.38	4300	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	16-Nov-10	TIC05	Unknown	14.7	2700	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-4	SW8260C	OC-SB-480-6.0/8.0-DUP	16-Nov-10	TIC06	Unknown	14.84	1600	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC01	Unknown	10.02	750	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC02	Unknown	10.07	1100	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC03	Unknown	10.12	700	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC04	Unknown	10.42	620	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC05	Unknown	14.37	4700	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-5	SW8260C	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC07	Unknown	14.84	1800	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC01	Unknown	10.07	790	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC02	Unknown	14.38	4500	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC03	Unknown	14.7	3000	JN	ug/kg	1	19-Nov-10
360-31147-1	360-31147-7	SW8260C	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC04	Unknown	14.84	1800	JN	ug/kg	1	19-Nov-10
360-31167-1	360-31167-10	SW8260C	OC-SB-476-8.0/10-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	640	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-12	SW8260C	OC-SB-477-10/12-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	740	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-13	SW8260C	OC-SB-477-8.0/10-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	940	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-15	SW8260C	OC-SB-478-10/12-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.35	690	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC01	Unknown	14.39	3100	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC02	Unknown	14.72	2200	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-16	SW8260C	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC03	Unknown	14.86	1200	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC01	Unknown	14.39	1100	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-17	SW8260C	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC02	Unknown	14.71	690	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-19	SW8260C	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC01	Unknown	14.39	15	JN	ug/kg	1	24-Nov-10

ug/kg = microgram per kilogram
J = value is estimated
N = presumptively present

Prepared by / Date: KJC 12/09/10
Checked by / Date: TLC 12/22/10

Table 4-2
Tentatively Identified SVOC Compounds
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site

SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	18435-45-5	1-Nonadecene	15.46	580	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	629-96-9	1-Eicosanol	16	1100	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	TIC02	Unknown	20.98	150	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	TIC01	Unknown	5.58	22000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	108-38-3	Benzene, 1,3-dimethyl-	5.95	310	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	108-38-3	Benzene, 1,3-dimethyl-	6.29	130	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	620-14-4	Benzene, 1-ethyl-3-methyl-	7.17	120	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	526-73-8	Benzene, 1,2,3-trimethyl-	7.56	310	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-1	SW8270	OC-SB-485-0.0/1.0-XXX	15-Nov-10	933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	8.46	120	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	TIC02	Unknown	16.35	540	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	106-42-3	p-Xylene	5.95	170	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	620-14-4	Benzene, 1-ethyl-3-methyl-	7.17	260	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	611-14-3	Benzene, 1-ethyl-2-methyl-	7.21	150	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	526-73-8	Benzene, 1,2,3-trimethyl-	7.27	130	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	95-63-6	Benzene, 1,2,4-trimethyl-	7.55	380	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	8.19	180	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	488-23-3	Benzene, 1,2,3,4-tetramethyl-	8.76	96	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-10	SW8270	OC-SB-494-12/14-XXX	16-Nov-10	874-41-9	Benzene, 1-ethyl-2,4-dimethyl-	8.79	130	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	544-63-8	Tetradecanoic acid	13.75	55	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	112-88-9	1-Octadecene	14.88	42	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	7206-21-5	5-Octadecene, (E)-	15.46	69	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	112-95-8	Eicosane	15.99	45	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	111-2-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.36	280	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	HLA0058	Friedelin	20.96	240	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	108-88-3	Toluene	3.9	780	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	763-93-9	3-Hexen-2-one	4.6	41	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-11	SW8270	OC-SB-494-6.0/8.0-XXX	16-Nov-10	TIC02	Unknown	6.42	76	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	629-96-9	1-Eicosanol	15.46	1400	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	112-95-8	Eicosane	17.35	610	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	TIC02	Unknown	17.41	880	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	TIC03	Unknown	17.57	510	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	14021-23-9	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	18.55	1000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	1000194-63-7	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	18.72	1900	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	TIC04	Unknown	20.99	880	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-12	SW8270	OC-SB-495-0.0/1.0-XXX	16-Nov-10	TIC01	Unknown	5.59	25000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	630-02-4	Octacosane	14.89	46	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	2136-70-1	Ethanol, 2-(tetradecyloxy)-	15.46	140	JN	ug/kg	1	20-Nov-10

Table 4-2
Tentatively Identified SVOC Compounds
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site

SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	14739-72-1	Heneicosane, 11-pentyl-	15.73	44	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	593-45-3	Octadecane	15.99	87	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	13475-75-7	Pentadecane, 8-hexyl-	16.59	69	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	TIC02	Unknown	16.97	140	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	629-92-5	Nonadecane	17.34	41	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-13	SW8270	OC-SB-495-4.0/6.0-XXX	16-Nov-10	TIC01	Unknown	5.58	22000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-2	SW8270	OC-SB-485-11/13-XXX	15-Nov-10	2885-0-9	1-Octadecanethiol	15.46	55	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-2	SW8270	OC-SB-485-11/13-XXX	15-Nov-10	TIC05	Unknown	15.99	24	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-2	SW8270	OC-SB-485-11/13-XXX	15-Nov-10	301-2-0	9-Octadecenamide, (Z)-	16.27	23	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-2	SW8270	OC-SB-485-11/13-XXX	15-Nov-10	TIC01	Unknown	5.58	23000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-2	SW8270	OC-SB-485-11/13-XXX	15-Nov-10	TIC02	Unknown	6.41	77	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	57-10-3	n-Hexadecanoic acid	13.75	31	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	1000131-11-8	Z-5-Nonadecene	15.46	49	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	TIC04	Unknown	15.87	24	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	763-93-9	3-Hexen-2-one	4.6	42	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	TIC02	Unknown	6.42	83	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-3	SW8270	OC-SB-485-6.0/8.0-XXX	15-Nov-10	104-76-7	1-Hexanol, 2-ethyl-	7.87	40	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	15-Nov-10	57-10-3	n-Hexadecanoic acid	13.75	22	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	15-Nov-10	74685-30-6	5-Eicosene, (E)-	15.46	130	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	15-Nov-10	TIC04	Unknown	16	51	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-5	SW8270	OC-SB-488-0.0/1.0-XXX	15-Nov-10	TIC01	Unknown	5.59	22000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	15-Nov-10	74685-30-6	5-Eicosene, (E)-	15.47	65	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	15-Nov-10	112-84-5	Erucylamide	16.27	35	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	15-Nov-10	TIC03	Unknown	16.97	34	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-6	SW8270	OC-SB-488-7.0/9.0-XXX	15-Nov-10	526-73-8	Benzene, 1,2,3-trimethyl-	7.55	56	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	16-Nov-10	57-10-3	n-Hexadecanoic acid	13.75	29	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	16-Nov-10	TIC01	Unknown	5.59	22000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	16-Nov-10	TIC03	Unknown	7.58	18	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-7	SW8270	OC-SB-490-0.0/1.0-XXX	16-Nov-10	TIC04	Unknown	7.69	20	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	1000216-79-4	Trifluoroacetic acid, n-octadecyl ester	15.47	110	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	297-3-0	Cyclotetracosane	16.01	110	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	TIC04	Unknown	20.96	42	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	TIC01	Unknown	5.59	21000	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	TIC02	Unknown	6.42	78	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-8	SW8270	OC-SB-490-7.0/9.0-XXX	16-Nov-10	108-67-8	Benzene, 1,3,5-trimethyl-	7.55	37	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	57-10-3	n-Hexadecanoic acid	13.75	94	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	74685-30-6	5-Eicosene, (E)-	15.46	220	JN	ug/kg	1	20-Nov-10

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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	HLA0058	1-Heneicosyl formate	16	390	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	TIC02	Unknown	18.71	130	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	HLA0058	Friedelin	20.97	240	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	TIC03	Unknown	22.95	190	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	108-38-3	Benzene, 1,3-dimethyl-	5.95	110	JN	ug/kg	1	20-Nov-10
360-31096-1	360-31096-9	SW8270	OC-SB-494-0.0/1.0-XXX	16-Nov-10	108-67-8	Benzene, 1,3,5-trimethyl-	7.56	120	JN	ug/kg	1	20-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC03	Unknown	12.26	590	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC04	Unknown	12.32	250	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	18435-45-5	1-Nonadecene	17.19	430	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	629-96-9	1-Eicosanol	18.1	650	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	18835-33-1	1-Hexacosene	19.29	380	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.11	1100	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC05	Unknown	23.59	150	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC06	Unknown	23.95	180	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC01	Unknown	7.79	14000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-1	SW8270	OC-SB-479-0.0/1.0-XXX	16-Nov-10	TIC02	Unknown	8.43	250	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	TIC05	Unknown	11.14	32	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	57-10-3	n-Hexadecanoic acid	15.28	20	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	TIC01	Unknown	4.15	20	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	67-66-3	Chloroform	4.73	44	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	141-79-7	3-Penten-2-one, 4-methyl-	7.11	34	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	TIC02	Unknown	7.41	20	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	TIC03	Unknown	7.77	15000	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	111-76-2	Ethanol, 2-butoxy-	8.43	500	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	TIC04	Unknown	8.56	28	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-10	SW8270	OC-SB-502-3.0/5.0-XXX	17-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	160	JN	ug/kg	1	30-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	TIC02	Unknown	11.14	30	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	2136-70-1	Ethanol, 2-(tetradecyloxy)-	17.18	72	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	112-95-8	Eicosane	17.59	24	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	67-66-3	Chloroform	4.76	36	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	71-43-2	Benzene	5.27	48	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	108-88-3	Toluene	6.76	70	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	141-79-7	3-Penten-2-one, 4-methyl-	7.11	30	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	TIC01	Unknown	7.79	13000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	111-76-2	Ethanol, 2-butoxy-	8.43	260	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-2	SW8270	OC-SB-479-8.0/10-XXX	16-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	110	JN	ug/kg	1	29-Nov-10

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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC02	Unknown	16.63	550	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	1000131-11-8	Z-5-Nonadecene	17.19	370	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC03	Unknown	18.05	500	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC04	Unknown	18.1	850	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC05	Unknown	18.65	290	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	630-02-4	Octacosane	19.22	280	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.14	49000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC06	Unknown	20.71	380	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	67-66-3	Chloroform	4.61	920	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-3	SW8270	OC-SB-480-0.0/1.0-XXX	16-Nov-10	TIC01	Unknown	7.67	15000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC02	Unknown	12.26	3600	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC03	Unknown	12.29	780	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC04	Unknown	12.33	2700	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC05	Unknown	16.64	3800	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC06	Unknown	18.06	3500	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.18	140000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC07	Unknown	20.72	2200	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC08	Unknown	21.98	780	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	67-66-3	Chloroform	4.57	960	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-5	SW8270	OC-SB-480-6.0/8.0-XXX	16-Nov-10	TIC01	Unknown	7.66	17000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	1000130-90-8	Z-7-Hexadecenoic acid	15.26	49	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	57-10-3	n-Hexadecanoic acid	15.28	56	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	7/1/3452	1-Eicosene	17.19	140	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	TIC02	Unknown	18.1	84	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	297-3-0	Cyclotetracosane	19.28	91	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	1599-67-3	1-Docosene	20.91	59	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	67-66-3	Chloroform	4.78	41	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	TIC01	Unknown	7.8	15000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	111-76-2	Ethanol, 2-butoxy-	8.44	370	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-6	SW8270	OC-SB-481-0.0/1.0-XXX	17-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	180	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC02	Unknown	12.17	15000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC03	Unknown	12.26	8500	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC04	Unknown	12.29	1800	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC05	Unknown	12.33	4800	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC06	Unknown	16.64	2300	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC07	Unknown	18.06	5700	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.19	190000	JN	ug/kg	5	30-Nov-10

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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC08	Unknown	20.72	2900	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC09	Unknown	21.99	2400	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-7	SW8270	OC-SB-481-7.0/9.0-XXX	17-Nov-10	TIC01	Unknown	7.66	18000	JN	ug/kg	5	30-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC02	Unknown	16.63	130	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	112-92-5	1-Octadecanol	17.19	92	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC03	Unknown	18.05	130	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC04	Unknown	19.82	58	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.17	15000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC05	Unknown	20.72	150	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC06	Unknown	21.99	160	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	TIC01	Unknown	7.8	14000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	111-76-2	Ethanol, 2-butoxy-	8.44	520	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-8	SW8270	OC-SB-500-0.5/3.0-XXX	17-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.73	170	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	629-96-9	1-Eicosanol	17.19	100	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	TIC03	Unknown	18.1	36	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.11	1400	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	67-66-3	Chloroform	4.73	38	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	78-95-5	2-Propanone, 1-chloro-	5.5	21	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	141-79-7	3-Penten-2-one, 4-methyl-	7.11	31	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	TIC01	Unknown	7.78	14000	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	111-76-2	Ethanol, 2-butoxy-	8.43	530	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	TIC02	Unknown	8.56	27	JN	ug/kg	1	29-Nov-10
360-31147-1	360-31147-9	SW8270	OC-SB-501-0.5/3.0-XXX	17-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	180	JN	ug/kg	1	29-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	HLA0058	1-Heneicosyl formate	14.93	260	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	15.55	750	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	16.07	1100	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	1560-88-9	Octadecane, 2-methyl-	16.73	310	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	629-96-9	1-Eicosanol	16.77	990	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	629-99-2	Pentacosane	17.66	320	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	TIC01	Unknown	17.74	330	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	TIC02	Unknown	19.56	390	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	HLA0058	Stigmasterol, 22,23-dihydro-	19.82	340	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-1	SW8270	OC-SB-474-0.0/1.0-XXX	18-Nov-10	HLA0058	Friedelin	22.61	810	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	TIC01	Unknown	12.13	33000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	TIC02	Unknown	12.23	18000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	TIC03	Unknown	12.3	13000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	TIC04	Unknown	16.6	37000	JN	ug/kg	500	30-Nov-10

Table 4-2
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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	27554-26-3	1,2-Benzenedicarboxylic acid, diisooctyl	17.17	15000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.03	130000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	67-66-3	Chloroform	4.44	120000	JN	ug/kg	500	30-Nov-10
360-31167-1	360-31167-10	SW8270	OC-SB-476-8.0/10-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	640	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	13360-61-7	1-Pentadecene	16.41	150	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	TIC01	Unknown	16.61	3400	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	17.15	490	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	TIC02	Unknown	18.01	1200	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	297-3-0	Cyclotetracosane	18.05	550	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	630-3-5	Nonacosane	19.16	310	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.08	55000	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	TIC03	Unknown	20.64	560	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	1000194-63-7	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	23.83	760	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-11	SW8270	OC-SB-477-0.0/1.0-XXX	18-Nov-10	67-66-3	Chloroform	4.43	1500	JN	ug/kg	5	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	TIC01	Unknown	14.33	460	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	7225-64-1	Heptadecane, 9-octyl-	16.42	1100	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	TIC02	Unknown	16.6	490	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	593-45-3	Octadecane	16.77	550	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	629-99-2	Pentacosane	17.14	880	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	630-1-3	Hexacosane	17.55	940	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	593-49-7	Heptacosane	18.01	1000	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	112-95-8	Eicosane	19.15	980	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.03	1800	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	67-66-3	Chloroform	4.5	6600	JN	ug/kg	25	30-Nov-10
360-31167-1	360-31167-12	SW8270	OC-SB-477-10/12-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	740	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	TIC01	Unknown	12.14	110000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	TIC02	Unknown	12.23	60000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	TIC03	Unknown	12.3	47000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	TIC04	Unknown	16.6	200000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	27554-26-3	1,2-Benzenedicarboxylic acid, diisooctyl	17.17	36000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.04	620000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	67-66-3	Chloroform	4.4	190000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	9.49	24000	JN	ug/kg	1000	30-Nov-10
360-31167-1	360-31167-13	SW8270	OC-SB-477-8.0/10-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	940	JN	ug/kg	1	23-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	661-19-8	1-Docosanol	14.94	470	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	TIC02	Unknown	15.18	140	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	1000149-68-9	Phenanthrene-1-carboxylic acid, 1,2,3,4,	15.32	100	JN	ug/kg	1	25-Nov-10

Table 4-2
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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	112-92-5	1-Octadecanol	15.56	1200	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	16.08	1500	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	1000163-47-7	1-Triacontanol	16.39	120	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	56882-9-8	4,9,13,17-Tetramethyl-4,8,12,16-octadeca	16.47	170	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	629-96-9	1-Eicosanol	16.77	120	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	HLA0058	Friedelin	22.66	140	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-14	SW8270	OC-SB-478-0.0/1.0-XXX	18-Nov-10	TIC01	Unknown	7.32	120	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC01	Unknown	12.14	42000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC02	Unknown	12.23	23000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC03	Unknown	12.3	18000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC04	Unknown	16.61	42000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC05	Unknown	18.01	9100	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.06	270000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC06	Unknown	22.68	9600	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	TIC07	Unknown	23.6	16000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	67-66-3	Chloroform	4.42	10000	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	9.49	6600	JN	ug/kg	50	30-Nov-10
360-31167-1	360-31167-15	SW8270	OC-SB-478-10/12-XXX	18-Nov-10	565-77-5	2-Pentene, 2,3,4-trimethyl-	7.35	690	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC01	Unknown	12.14	4800	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC02	Unknown	12.19	340	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC03	Unknown	12.23	3000	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC04	Unknown	12.26	470	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC05	Unknown	12.3	2000	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC06	Unknown	16.61	1900	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC07	Unknown	18.01	1500	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.12	76000	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	TIC08	Unknown	20.65	1000	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-16	SW8270	OC-SB-478-8.0/10-XXX	18-Nov-10	67-66-3	Chloroform	4.56	1700	JN	ug/kg	4	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC01	Unknown	12.14	3400	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC02	Unknown	12.19	240	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC03	Unknown	12.23	2000	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC04	Unknown	12.3	1300	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC05	Unknown	16.6	2000	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC06	Unknown	18.01	390	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	18435-45-5	1-Nonadecene	18.06	240	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.12	30000	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	TIC07	Unknown	20.64	300	JN	ug/kg	2	30-Nov-10

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SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31167-1	360-31167-17	SW8270	OC-SB-497-0.0/1.0-XXX	17-Nov-10	67-66-3	Chloroform	4.66	1200	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	TIC02	Unknown	11.11	33	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	TIC03	Unknown	17.16	40	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	111-2-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	18.72	160	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.03	120	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	67-66-3	Chloroform	4.68	1400	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	TIC01	Unknown	8.39	130	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-18	SW8270	OC-SB-497-11/13-XXX	17-Nov-10	111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.69	65	JN	ug/kg	2	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC01	Unknown	12.14	2200	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC02	Unknown	12.22	1200	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC03	Unknown	12.26	260	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC04	Unknown	12.3	900	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC05	Unknown	16.6	1300	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC06	Unknown	18.73	300	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	TIC07	Unknown	20.63	650	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-19	SW8270	OC-SB-497-6.0/8.0-XXX	17-Nov-10	67-66-3	Chloroform	4.52	3300	JN	ug/kg	10	30-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	57-10-3	n-Hexadecanoic acid	13.71	74	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	149-30-4	2-Mercaptobenzothiazole	13.99	25	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	1599-67-3	1-Docosene	15.55	140	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	7683-64-9	Squalene	16.47	230	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	822-23-1	Acetic acid, octadecyl ester	17.74	33	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	TIC01	Unknown	6.62	29	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	TIC02	Unknown	7.58	120	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	TIC03	Unknown	7.7	40	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	TIC04	Unknown	7.84	60	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-3	SW8270	OC-SB-474-8.0/10-XXX	18-Nov-10	TIC05	Unknown	9.88	49	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	57-10-3	n-Hexadecanoic acid	13.71	140	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	15.56	450	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	16.07	570	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	7683-64-9	Squalene	16.46	140	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	17.28	13000	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	54833-48-6	Heptadecane, 2,6,10,15-tetramethyl-	17.67	140	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	297-3-0	Cyclotetracosane	17.74	150	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	14021-23-9	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	19.35	340	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	TIC01	Unknown	22.62	310	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-4	SW8270	OC-SB-475-0.0/1.0-XXX	18-Nov-10	111-76-2	Ethanol, 2-butoxy-	7.57	140	JN	ug/kg	1	24-Nov-10

Table 4-2
Tentatively Identified SVOC Compounds
Data Validation Report
2010 Remedial Investigation / Feasibility Study
November 2010 OU1 Geoprobe Soil Program
Olin Chemical Superfund Site

SDG	Lab Sample ID	Method	Field Sample ID	Sample Date	CAS #	Analyte	RT	Final Result	Q	Units	DF	Analysis Date
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	57-10-3	n-Hexadecanoic acid	13.71	40	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	1599-67-3	1-Docosene	15.55	150	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	7683-64-9	Squalene	16.47	210	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC05	Unknown	16.76	34	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	17.24	37	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC06	Unknown	17.74	30	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC01	Unknown	7.57	160	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC02	Unknown	7.69	39	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC03	Unknown	7.83	72	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-5	SW8270	OC-SB-475-16/18-XXX	18-Nov-10	TIC04	Unknown	9.88	42	JN	ug/kg	1	24-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	TIC02	Unknown	10.67	120	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	TIC03	Unknown	11.77	69	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	4410-31-5	Mandelamide	11.88	64	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	57-10-3	n-Hexadecanoic acid	13.72	190	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	1000131-9-4	Z-12-Pentacosene	14.94	160	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	TIC04	Unknown	15.17	61	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	1599-67-3	1-Docosene	15.55	400	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	822-23-1	Acetic acid, octadecyl ester	16.08	430	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	7683-64-9	Squalene	16.47	230	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-8	SW8270	OC-SB-476-0.0/1.0-XXX	18-Nov-10	TIC01	Unknown	7.57	130	JN	ug/kg	1	25-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	TIC01	Unknown	12.14	11000	JN	ug/kg	200	30-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	TIC02	Unknown	12.23	6100	JN	ug/kg	200	30-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	TIC03	Unknown	12.3	4600	JN	ug/kg	200	30-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	TIC04	Unknown	16.6	15000	JN	ug/kg	200	30-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	26603-23-6	p,p"-Dioctyldiphenylamine	20.04	58000	JN	ug/kg	200	30-Nov-10
360-31167-1	360-31167-9	SW8270	OC-SB-476-13/15-XXX	18-Nov-10	67-66-3	Chloroform	4.42	45000	JN	ug/kg	200	30-Nov-10

ug/kg = microgram per kilogram
J = value is estimated
N = presumptively present

Prepared by / Date: KJC 12/09/10
Checked by / Date: WDC 12/23/10

VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / (II) / III (circle one)

SITE: Olin Chemical Project #: 61071000 16-12 SDG #: 360-31147-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
			Data completeness	
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☑	☐	☐	Data summaries match EDD	
			Holding Times and Preservation	
☑	☐	☐	Hold times met (14 days with preservation)	
☑	☐	☐	Preserved (waters HCL, soils methanol)	
			Instrument Performance Check (Tune)	
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
			Initial Calibration	
☑	☐	☐	%RSD less than or equal to 30%	
* ☐	☑	☐	RRF greater than or equal to 0.05 →	See attached Form V
			Continuing Calibration	
* ☐	☑	☐	%D less than or equal to 25%	
* ☐	☑	☐	RRF greater than or equal to 0.05.	See attached Form V
			Blank Contamination	Evaluate all blanks for contamination. Highest contaminant level used for action level.
☑	☐	☐	Method blank contamination	
* ☑	☐	☐	Trip blank contamination — Not affecting Results →	Acetone @ 18 ug/kg x10 = 180 ug/kg
☐	☐	☑	Equipment/Rinseate blank contamination	
			Surrogate Recoveries	

VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for OLIN CHEMICAL SUPERFUND SITE

Criteria and Qualifications: REGION I Organics Guideline (1996)

Yes	No	N/A	TIER I / (II) / III (circle one)	
☑	☐	☐	Surrogates percent recovery criteria met (water and soil: 70%-130%)	
			Matrix Spikes and Laboratory Control Samples	
☐	☑	☐	MS/MSD percent recovery criteria met (water and soil: 70%-130%) →	See attached Form III
☑	☐	☐	MS/MSD RPD criteria met (water and soil <30%)	
☐	☑	☐	LCS percent recovery criteria (water and soil: 70%-130%)	See attached Form V
			Field Duplicates	
☑	☐	☐	RPD criteria (water <30%, soils <50%) met	No detections OC-SB-480 6.0/8.0-xyy
			Internal Standard	
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
			Target Compounds	
☑	☐	☐	Reviewed narrative for anomalies	
			Tentatively Identified Compounds (TICs)	
☐	☑	☐	TCL compounds reported as TICs	TIC's Reported in separate Table

Validator's Signature: [signature]

Date: 12/20/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50103.D
Dilution:	1.0			Initial Weight/Volume:	4.52 g
Date Analyzed:	11/22/2010 1943			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.5	3.1
1,1,1-Trichloroethane		ND		2.5	3.1
1,1,2,2-Tetrachloroethane		ND		1.2	3.1
1,1,2-Trichloroethane		ND		1.2	3.1
1,1-Dichloroethane		ND		2.3	3.1
1,1-Dichloroethene		ND		2.0	3.1
1,1-Dichloropropene		ND		1.8	3.1
1,2,3-Trichlorobenzene		ND		1.4	3.1
1,2,3-Trichloropropane		ND		1.5	3.1
1,2,4-Trichlorobenzene		ND		1.2	3.1
1,2,4-Trimethylbenzene		ND UJ		1.7	3.1
1,2-Dibromo-3-Chloropropane		ND		3.4	31
1,2-Dichlorobenzene		ND		1.2	3.1
1,2-Dichloroethane		ND		1.2	3.1
1,2-Dichloropropane		ND		2.0	3.1
1,3,5-Trimethylbenzene		ND		1.8	3.1
1,3-Dichlorobenzene		ND		1.2	3.1
1,3-Dichloropropane		ND		1.4	3.1
1,4-Dichlorobenzene		ND		1.2	3.1
1,4-Dioxane		ND UJ		120	310
2,2-Dichloropropane		ND		2.6	3.1
2-Butanone (MEK)		ND UJ		13	31
2-Chlorotoluene		ND		1.6	3.1
2-Hexanone		ND		17	31
4-Chlorotoluene		ND		1.5	3.1
4-Isopropyltoluene		ND		1.8	3.1
4-Methyl-2-pentanone (MIBK)		ND		13	31
Acetone		ND UJ		21	310
Benzene		ND		2.0	3.1
Bromobenzene		ND		1.2	3.1
Bromoform		ND		2.0	3.1
Bromomethane		ND		2.8	6.1
Carbon disulfide		ND		2.3	3.1
Carbon tetrachloride		ND		2.1	3.1
Chlorobenzene		ND		1.5	3.1
Chlorobromomethane		ND		1.7	3.1
Chlorodibromomethane		ND		1.5	3.1
Chloroethane		ND		2.5	6.1
Chloroform		ND		1.8	3.1
Chloromethane		ND		2.0	6.1
cis-1,2-Dichloroethene		ND		1.4	3.1
cis-1,3-Dichloropropene		ND		1.2	3.1
Dibromomethane		ND		1.5	3.1
Dichlorobromomethane		ND		1.6	3.1
Dichlorodifluoromethane		ND		2.6	6.1
Ethyl ether		ND		1.3	3.1

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50103.D
Dilution:	1.0			Initial Weight/Volume:	4.52 g
Date Analyzed:	11/22/2010 1943			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		2.2	3.1
Ethylene Dibromide	ND		1.4	3.1
Hexachlorobutadiene	ND		1.8	3.1
Isopropyl ether	ND		1.4	3.1
Isopropylbenzene	ND		1.8	3.1
m-Xylene & p-Xylene	ND		4.3	6.1
Methyl tert-butyl ether	ND		1.8	3.1
Methylene Chloride	ND		12	12
n-Butylbenzene	ND		1.5	3.1
N-Propylbenzene	ND		2.1	3.1
Naphthalene	ND		2.8	31
o-Xylene	ND		1.6	3.1
sec-Butylbenzene	ND		1.7	3.1
Styrene	ND		1.2	3.1
Tert-amyl methyl ether	ND		1.8	3.1
Tert-butyl ethyl ether	ND		1.8	3.1
tert-Butylbenzene	ND		1.7	3.1
Tetrachloroethene	ND		2.2	3.1
Tetrahydrofuran	ND UJ		15	31
Toluene	ND		2.2	3.1
trans-1,2-Dichloroethene	ND		2.0	3.1
trans-1,3-Dichloropropene	ND		1.3	3.1
Trichloroethene	ND		2.6	3.1
Trichlorofluoromethane	ND		1.7	6.1
Vinyl chloride	ND		2.1	3.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.8	15
2,4,4-Trimethyl-1-pentene	ND		2.0	6.1
2,4,4-Trimethyl-2-pentene	ND		1.3	6.1
Cyclohexane	ND		1.2	31
Methyl acetate	ND		17	61
Methylcyclohexane	ND		2.0	3.1

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	91		70 - 130

12/20/10 TC

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50103.D
Dilution:	1.0			Initial Weight/Volume:	4.52 g
Date Analyzed:	11/22/2010 1943			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50104.D
Dilution:	1.0			Initial Weight/Volume:	6.11 g
Date Analyzed:	11/22/2010 2007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.1	2.3
1,1,1-Trichloroethane		ND		1.8	2.3
1,1,2,2-Tetrachloroethane		ND		0.90	2.3
1,1,2-Trichloroethane		ND		0.90	2.3
1,1-Dichloroethane		ND		1.7	2.3
1,1-Dichloroethene		ND		1.4	2.3
1,1-Dichloropropene		ND		1.4	2.3
1,2,3-Trichlorobenzene		ND		0.99	2.3
1,2,3-Trichloropropane		ND		1.1	2.3
1,2,4-Trichlorobenzene		ND		0.90	2.3
1,2,4-Trimethylbenzene		ND UJ		1.3	2.3
1,2-Dibromo-3-Chloropropane		ND		2.5	23
1,2-Dichlorobenzene		ND		0.90	2.3
1,2-Dichloroethane		ND		0.90	2.3
1,2-Dichloropropane		ND		1.4	2.3
1,3,5-Trimethylbenzene		ND		1.4	2.3
1,3-Dichlorobenzene		ND		0.90	2.3
1,3-Dichloropropane		ND		1.0	2.3
1,4-Dichlorobenzene		ND		0.90	2.3
1,4-Dioxane		ND UJ		90	230
2,2-Dichloropropane		ND		1.9	2.3
2-Butanone (MEK)		ND UJ		9.8	23
2-Chlorotoluene		ND		1.2	2.3
2-Hexanone		ND		13	23
4-Chlorotoluene		ND		1.1	2.3
4-Isopropyltoluene		ND		1.4	2.3
4-Methyl-2-pentanone (MIBK)		ND		9.2	23
Acetone		~~10~~ ND UJ		16	230
Benzene		ND		1.4	2.3
Bromobenzene		ND		0.90	2.3
Bromoform		ND		1.4	2.3
Bromomethane		ND		2.1	4.5
Carbon disulfide		ND		1.7	2.3
Carbon tetrachloride		ND		1.5	2.3
Chlorobenzene		ND		1.1	2.3
Chlorobromomethane		ND		1.2	2.3
Chlorodibromomethane		ND		1.1	2.3
Chloroethane		ND		1.8	4.5
Chloroform		ND		1.4	2.3
Chloromethane		ND		1.4	4.5
cis-1,2-Dichloroethene		ND		1.1	2.3
cis-1,3-Dichloropropene		ND		0.90	2.3
Dibromomethane		ND		1.1	2.3
Dichlorobromomethane		ND		1.2	2.3
Dichlorodifluoromethane		ND		1.9	4.5
Ethyl ether		ND		0.96	2.3

12/20/10 TC

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50104.D
Dilution:	1.0			Initial Weight/Volume:	6.11 g
Date Analyzed:	11/22/2010 2007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.6	2.3
Ethylene Dibromide		ND		1.0	2.3
Hexachlorobutadiene		ND		1.4	2.3
Isopropyl ether		ND		1.0	2.3
Isopropylbenzene		ND		1.4	2.3
m-Xylene & p-Xylene		ND		3.2	4.5
Methyl tert-butyl ether		ND		1.4	2.3
Methylene Chloride		ND		8.9	9.0
n-Butylbenzene		ND		1.1	2.3
N-Propylbenzene		ND		1.5	2.3
Naphthalene		ND		2.1	23
o-Xylene		ND		1.2	2.3
sec-Butylbenzene		ND		1.3	2.3
Styrene		ND		0.90	2.3
Tert-amyl methyl ether		ND		1.4	2.3
Tert-butyl ethyl ether		ND		1.3	2.3
tert-Butylbenzene		ND		1.3	2.3
Tetrachloroethene		ND		1.6	2.3
Tetrahydrofuran		ND UJ		11	23
Toluene		ND		1.6	2.3
trans-1,2-Dichloroethene		ND		1.4	2.3
trans-1,3-Dichloropropene		ND		0.94	2.3
Trichloroethene		ND		1.9	2.3
Trichlorofluoromethane		ND		1.3	4.5
Vinyl chloride		ND		1.5	2.3
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.3	11
2,4,4-Trimethyl-1-pentene		ND		1.5	4.5
2,4,4-Trimethyl-2-pentene		ND		0.98	4.5
Cyclohexane		ND		0.90	23
Methyl acetate		ND		13	45
Methylcyclohexane		ND		1.4	2.3

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	89		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50104.D
Dilution:	1.0			Initial Weight/Volume:	6.11 g
Date Analyzed:	11/22/2010 2007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50105.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Date Analyzed:	11/22/2010 2032			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND	UJ	100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND	UJ	11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		~~17~~ ND	UJ	17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.0
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.0
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.0
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.0
Ethyl ether		ND		1.1	2.5

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50105.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Date Analyzed:	11/22/2010 2032			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	5.0
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.8	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND	UJ	12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.0
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	5.0
2,4,4-Trimethyl-2-pentene		ND		1.1	5.0
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	50
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50105.D
Dilution:	1.0			Initial Weight/Volume:	5.35 g
Date Analyzed:	11/22/2010 2032			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** 0

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50078.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/19/2010 2029			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		63	130
1,1,1-Trichloroethane		ND		110	130
1,1,2,2-Tetrachloroethane		ND		53	130
1,1,2-Trichloroethane		ND		53	130
1,1-Dichloroethane		ND		100	130
1,1-Dichloroethene		ND		84	130
1,1-Dichloropropene		ND		79	130
1,2,3-Trichlorobenzene		ND		58	130
1,2,3-Trichloropropane		ND		63	130
1,2,4-Trichlorobenzene		ND		53	130
1,2,4-Trimethylbenzene		ND		74	130
1,2-Dibromo-3-Chloropropane		ND		150	1300
1,2-Dichlorobenzene		ND		53	130
1,2-Dichloroethane		ND		53	130
1,2-Dichloropropane		ND		84	130
1,3,5-Trimethylbenzene		ND		79	130
1,3-Dichlorobenzene		ND		53	130
1,3-Dichloropropane		ND		60	130
1,4-Dichlorobenzene		ND		53	130
1,4-Dioxane		ND UJ		5300	13000
2,2-Dichloropropane		ND		110	130
2-Butanone (MEK)		ND		570	1300
2-Chlorotoluene		ND		68	130
2-Hexanone		ND		740	1300
4-Chlorotoluene		ND		63	130
4-Isopropyltoluene		ND		79	130
4-Methyl-2-pentanone (MIBK)		ND		540	1300
Acetone		ND UJ		900	13000
Benzene		ND		84	130
Bromobenzene		ND		53	130
Bromoform		ND		84	130
Bromomethane		ND UJ		120	260
Carbon disulfide		ND		100	130
Carbon tetrachloride		ND		89	130
Chlorobenzene		ND		63	130
Chlorobromomethane		ND		72	130
Chlorodibromomethane		ND		63	130
Chloroethane		ND UJ		110	260
Chloroform		ND		79	130
Chloromethane		ND		84	260
cis-1,2-Dichloroethene		ND		62	130
cis-1,3-Dichloropropene		ND		53	130
Dibromomethane		ND		66	130
Dichlorobromomethane		ND		67	130
Dichlorodifluoromethane		ND		110	260
Ethyl ether		ND		56	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50078.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/19/2010 2029			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		95	130
Ethylene Dibromide		ND		59	130
Hexachlorobutadiene		ND		79	130
Isopropyl ether		ND		59	130
Isopropylbenzene		ND		79	130
m-Xylene & p-Xylene		ND		180	260
Methyl tert-butyl ether		ND		79	130
Methylene Chloride		ND		510	530
n-Butylbenzene		ND		63	130
N-Propylbenzene		ND		89	130
Naphthalene		ND		120	1300
o-Xylene		ND		68	130
sec-Butylbenzene		ND		74	130
Styrene		ND		53	130
Tert-amyl methyl ether		ND		79	130
Tert-butyl ethyl ether		ND		76	130
tert-Butylbenzene		ND		74	130
Tetrachloroethene		ND		95	130
Tetrahydrofuran		ND		650	1300
Toluene		ND		95	130
trans-1,2-Dichloroethene		ND		84	130
trans-1,3-Dichloropropene		ND		55	130
Trichloroethene		ND		110	130
Trichlorofluoromethane		ND		75	260
Vinyl chloride		ND		89	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		76	660
2,4,4-Trimethyl-1-pentene		ND		86	260
2,4,4-Trimethyl-2-pentene		ND		57	260
Cyclohexane		ND		53	1300
Methyl acetate		ND		740	2600
Methylcyclohexane		ND		84	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	88		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50078.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/19/2010 2029			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Tentatively Identified Compounds **Number TIC's Found:** 6

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	10.02	650	T J
	Unknown	10.12	610	T J
	Unknown	10.42	570	T J
	Unknown	14.38	4300	T J
	Unknown	14.70	2700	T J
	Unknown	14.84	1600	T J

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50079.D
Dilution:	1.0			Initial Weight/Volume:	10.50 g
Date Analyzed:	11/19/2010 2053			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		63	130
1,1,1-Trichloroethane		ND		100	130
1,1,2,2-Tetrachloroethane		ND		52	130
1,1,2-Trichloroethane		ND		52	130
1,1-Dichloroethane		ND		99	130
1,1-Dichloroethene		ND		84	130
1,1-Dichloropropene		ND		78	130
1,2,3-Trichlorobenzene		ND		57	130
1,2,3-Trichloropropane		ND		63	130
1,2,4-Trichlorobenzene		ND		52	130
1,2,4-Trimethylbenzene		ND		73	130
1,2-Dibromo-3-Chloropropane		ND		150	1300
1,2-Dichlorobenzene		ND		52	130
1,2-Dichloroethane		ND		52	130
1,2-Dichloropropane		ND		84	130
1,3,5-Trimethylbenzene		ND		78	130
1,3-Dichlorobenzene		ND		52	130
1,3-Dichloropropane		ND		60	130
1,4-Dichlorobenzene		ND		52	130
1,4-Dioxane		ND UJ		5200	13000
2,2-Dichloropropane		ND		110	130
2-Butanone (MEK)		ND		560	1300
2-Chlorotoluene		ND		68	130
2-Hexanone		ND		730	1300
4-Chlorotoluene		ND		63	130
4-Isopropyltoluene		ND		78	130
4-Methyl-2-pentanone (MIBK)		ND		530	1300
Acetone		ND UJ		900	13000
Benzene		ND		84	130
Bromobenzene		ND		52	130
Bromoform		ND		84	130
Bromomethane		ND UJ		120	260
Carbon disulfide		ND		99	130
Carbon tetrachloride		ND		89	130
Chlorobenzene		ND		63	130
Chlorobromomethane		ND		72	130
Chlorodibromomethane		ND		63	130
Chloroethane		ND UJ		100	260
Chloroform		ND		78	130
Chloromethane		ND		84	260
cis-1,2-Dichloroethene		ND		62	130
cis-1,3-Dichloropropene		ND		52	130
Dibromomethane		ND		66	130
Dichlorobromomethane		ND		67	130
Dichlorodifluoromethane		ND		110	260
Ethyl ether		ND		55	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50079.D
Dilution:	1.0			Initial Weight/Volume:	10.50 g
Date Analyzed:	11/19/2010 2053			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		94	130
Ethylene Dibromide		ND		58	130
Hexachlorobutadiene		ND		78	130
Isopropyl ether		ND		58	130
Isopropylbenzene		ND		78	130
m-Xylene & p-Xylene		ND		180	260
Methyl tert-butyl ether		ND		78	130
Methylene Chloride		ND		510	520
n-Butylbenzene		ND		63	130
N-Propylbenzene		ND		89	130
Naphthalene		ND		120	1300
o-Xylene		ND		68	130
sec-Butylbenzene		ND		73	130
Styrene		ND		52	130
Tert-amyl methyl ether		ND		78	130
Tert-butyl ethyl ether		ND		75	130
tert-Butylbenzene		ND		73	130
Tetrachloroethene		ND		94	130
Tetrahydrofuran		ND	UJ	650	1300
Toluene		ND		94	130
trans-1,2-Dichloroethene		ND		84	130
trans-1,3-Dichloropropene		ND		54	130
Trichloroethene		ND		110	130
Trichlorofluoromethane		ND		74	260
Vinyl chloride		ND		89	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		75	650
2,4,4-Trimethyl-1-pentene		ND		86	260
2,4,4-Trimethyl-2-pentene		ND		56	260
Cyclohexane		ND		52	1300
Methyl acetate		ND		730	2600
Methylcyclohexane		ND		84	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	89		70 - 130

12/20/10 TC

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50079.D
Dilution:	1.0			Initial Weight/Volume:	10.50 g
Date Analyzed:	11/19/2010 2053			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Tentatively Identified Compounds **Number TIC's Found:** 7

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	10.02	750	T J
	Unknown	10.07	1100	T J
	Unknown	10.12	700	T J
	Unknown	10.42	620	T J
	Unknown	14.37	4700	T J
	Unknown	14.70	3000	T J
	Unknown	14.84	1800	T J

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50106.D
Dilution:	1.0			Initial Weight/Volume:	5.47 g
Date Analyzed:	11/22/2010 2056			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.4
1,1,1-Trichloroethane		ND		2.0	2.4
1,1,2,2-Tetrachloroethane		ND		0.98	2.4
1,1,2-Trichloroethane		ND		0.98	2.4
1,1-Dichloroethane		ND		1.9	2.4
1,1-Dichloroethene		ND		1.6	2.4
1,1-Dichloropropene		ND		1.5	2.4
1,2,3-Trichlorobenzene		ND		1.1	2.4
1,2,3-Trichloropropane		ND		1.2	2.4
1,2,4-Trichlorobenzene		ND		0.98	2.4
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.4
1,2-Dibromo-3-Chloropropane		ND		2.7	24
1,2-Dichlorobenzene		ND		0.98	2.4
1,2-Dichloroethane		ND		0.98	2.4
1,2-Dichloropropane		ND		1.6	2.4
1,3,5-Trimethylbenzene		ND		1.5	2.4
1,3-Dichlorobenzene		ND		0.98	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.98	2.4
1,4-Dioxane		ND	UJ	98	240
2,2-Dichloropropane		ND		2.1	2.4
2-Butanone (MEK)		ND	UJ	11	24
2-Chlorotoluene		ND		1.3	2.4
2-Hexanone		ND		14	24
4-Chlorotoluene		ND		1.2	2.4
4-Isopropyltoluene		ND		1.5	2.4
4-Methyl-2-pentanone (MIBK)		ND		10	24
Acetone		ND	UJ	17	240
Benzene		ND		1.6	2.4
Bromobenzene		ND		0.98	2.4
Bromoform		ND		1.6	2.4
Bromomethane		ND		2.2	4.9
Carbon disulfide		ND		1.9	2.4
Carbon tetrachloride		ND		1.7	2.4
Chlorobenzene		ND		1.2	2.4
Chlorobromomethane		ND		1.3	2.4
Chlorodibromomethane		ND		1.2	2.4
Chloroethane		ND		2.0	4.9
Chloroform		ND		1.5	2.4
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.2	2.4
cis-1,3-Dichloropropene		ND		0.98	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.3	2.4
Dichlorodifluoromethane		ND		2.1	4.9
Ethyl ether		ND		1.0	2.4

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50106.D
Dilution:	1.0			Initial Weight/Volume:	5.47 g
Date Analyzed:	11/22/2010 2056			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.4
Ethylene Dibromide		ND		1.1	2.4
Hexachlorobutadiene		ND		1.5	2.4
Isopropyl ether		ND		1.1	2.4
Isopropylbenzene		ND		1.5	2.4
m-Xylene & p-Xylene		ND		3.4	4.9
Methyl tert-butyl ether		ND		1.5	2.4
Methylene Chloride		ND		9.6	9.8
n-Butylbenzene		ND		1.2	2.4
N-Propylbenzene		ND		1.7	2.4
Naphthalene		ND		2.2	24
o-Xylene		ND		1.3	2.4
sec-Butylbenzene		ND		1.4	2.4
Styrene		ND		0.98	2.4
Tert-amyl methyl ether		ND		1.5	2.4
Tert-butyl ethyl ether		ND		1.4	2.4
tert-Butylbenzene		ND		1.4	2.4
Tetrachloroethene		ND		1.8	2.4
Tetrahydrofuran		ND VJ		12	24
Toluene		ND		1.8	2.4
trans-1,2-Dichloroethene		ND		1.6	2.4
trans-1,3-Dichloropropene		ND		1.0	2.4
Trichloroethene		ND		2.1	2.4
Trichlorofluoromethane		ND		1.4	4.9
Vinyl chloride		ND		1.7	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.9
2,4,4-Trimethyl-2-pentene		ND		1.1	4.9
Cyclohexane		ND		0.98	24
Methyl acetate		ND		14	49
Methylcyclohexane		ND		1.6	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50106.D
Dilution:	1.0			Initial Weight/Volume:	5.47 g
Date Analyzed:	11/22/2010 2056			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50081.D
Dilution:	1.0			Initial Weight/Volume:	10.53 g
Date Analyzed:	11/19/2010 2141			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		62	130
1,1,1-Trichloroethane		ND		100	130
1,1,2,2-Tetrachloroethane		ND		51	130
1,1,2-Trichloroethane		ND		51	130
1,1-Dichloroethane		ND		98	130
1,1-Dichloroethene		ND		82	130
1,1-Dichloropropene		ND		77	130
1,2,3-Trichlorobenzene		ND		57	130
1,2,3-Trichloropropane		ND		62	130
1,2,4-Trichlorobenzene		ND		51	130
1,2,4-Trimethylbenzene		ND		72	130
1,2-Dibromo-3-Chloropropane		ND		140	1300
1,2-Dichlorobenzene		ND		51	130
1,2-Dichloroethane		ND		51	130
1,2-Dichloropropane		ND		82	130
1,3,5-Trimethylbenzene		ND		77	130
1,3-Dichlorobenzene		ND		51	130
1,3-Dichloropropane		ND		59	130
1,4-Dichlorobenzene		ND		51	130
1,4-Dioxane		ND UJ		5100	13000
2,2-Dichloropropane		ND UJ		110	130
2-Butanone (MEK)		ND		550	1300
2-Chlorotoluene		ND		67	130
2-Hexanone		ND		720	1300
4-Chlorotoluene		ND		62	130
4-Isopropyltoluene		ND		77	130
4-Methyl-2-pentanone (MIBK)		ND		520	1300
Acetone		ND UJ		880	13000
Benzene		ND		82	130
Bromobenzene		ND		51	130
Bromoform		ND		82	130
Bromomethane		ND UJ		120	260
Carbon disulfide		ND		98	130
Carbon tetrachloride		ND		87	130
Chlorobenzene		ND		62	130
Chlorobromomethane		ND		71	130
Chlorodibromomethane		ND		62	130
Chloroethane		ND UJ		100	260
Chloroform		ND		77	130
Chloromethane		ND		82	260
cis-1,2-Dichloroethene		ND		61	130
cis-1,3-Dichloropropene		ND		51	130
Dibromomethane		ND		65	130
Dichlorobromomethane		ND		66	130
Dichlorodifluoromethane		ND		110	260
Ethyl ether		ND		54	130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50081.D
Dilution:	1.0			Initial Weight/Volume:	10.53 g
Date Analyzed:	11/19/2010 2141			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		92	130
Ethylene Dibromide		ND		58	130
Hexachlorobutadiene		ND		77	130
Isopropyl ether		ND		58	130
Isopropylbenzene		ND		77	130
m-Xylene & p-Xylene		ND		180	260
Methyl tert-butyl ether		ND		77	130
Methylene Chloride		ND		500	510
n-Butylbenzene		ND		62	130
N-Propylbenzene		ND		87	130
Naphthalene		ND		120	1300
o-Xylene		ND		67	130
sec-Butylbenzene		ND		72	130
Styrene		ND		51	130
Tert-amyl methyl ether		ND		77	130
Tert-butyl ethyl ether		ND		74	130
tert-Butylbenzene		ND		72	130
Tetrachloroethene		ND		92	130
Tetrahydrofuran		ND	VJ	640	1300
Toluene		ND		92	130
trans-1,2-Dichloroethene		ND		82	130
trans-1,3-Dichloropropene		ND		53	130
Trichloroethene		ND		110	130
Trichlorofluoromethane		ND	UJ	73	260
Vinyl chloride		ND		87	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		74	640
2,4,4-Trimethyl-1-pentene		ND		84	260
2,4,4-Trimethyl-2-pentene		ND		55	260
Cyclohexane		ND		51	1300
Methyl acetate		ND		720	2600
Methylcyclohexane		ND		82	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50081.D
Dilution:	1.0			Initial Weight/Volume:	10.53 g
Date Analyzed:	11/19/2010 2141			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Tentatively Identified Compounds **Number TIC's Found:** 4

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	10.07	790	T J
	Unknown	14.38	4500	T J
	Unknown	14.70	3000	T J
	Unknown	14.84	1800	T J

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50107.D
Dilution:	1.0			Initial Weight/Volume:	5.51 g
Date Analyzed:	11/22/2010 2120			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		0.98	2.5
1,1,2-Trichloroethane		ND		0.98	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		0.98	2.5
1,2,4-Trimethylbenzene		ND UJ		1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		0.98	2.5
1,2-Dichloroethane		ND		0.98	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		0.98	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		0.98	2.5
1,4-Dioxane		ND UJ		98	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND UJ		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		~~34~~ ND	UJ	17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		0.98	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	4.9
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	4.9
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		0.98	2.5
Dibromomethane		ND		1.2	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	4.9
Ethyl ether		ND		1.0	2.5

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50107.D
Dilution:	1.0			Initial Weight/Volume:	5.51 g
Date Analyzed:	11/22/2010 2120			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.4	4.9
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.6	9.8
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		0.98	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND UJ		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	4.9
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.9
2,4,4-Trimethyl-2-pentene		1.2	J	1.1	4.9
Cyclohexane		ND		0.98	25
Methyl acetate		ND		14	49
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	92		70 - 130

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50107.D
Dilution:	1.0			Initial Weight/Volume:	5.51 g
Date Analyzed:	11/22/2010 2120			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50108.D
Dilution:	1.0			Initial Weight/Volume:	5.65 g
Date Analyzed:	11/22/2010 2144			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.4
1,1,1-Trichloroethane		ND		1.9	2.4
1,1,2,2-Tetrachloroethane		ND		0.97	2.4
1,1,2-Trichloroethane		ND		0.97	2.4
1,1-Dichloroethane		ND		1.8	2.4
1,1-Dichloroethene		ND		1.5	2.4
1,1-Dichloropropene		ND		1.5	2.4
1,2,3-Trichlorobenzene		ND		1.1	2.4
1,2,3-Trichloropropane		ND		1.2	2.4
1,2,4-Trichlorobenzene		ND		0.97	2.4
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.4
1,2-Dibromo-3-Chloropropane		ND		2.7	24
1,2-Dichlorobenzene		ND		0.97	2.4
1,2-Dichloroethane		ND		0.97	2.4
1,2-Dichloropropane		ND		1.5	2.4
1,3,5-Trimethylbenzene		ND		1.5	2.4
1,3-Dichlorobenzene		ND		0.97	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.97	2.4
1,4-Dioxane		ND	UJ	97	240
2,2-Dichloropropane		ND		2.0	2.4
2-Butanone (MEK)		ND	UJ	10	24
2-Chlorotoluene		ND		1.3	2.4
2-Hexanone		ND		14	24
4-Chlorotoluene		ND		1.2	2.4
4-Isopropyltoluene		ND		1.5	2.4
4-Methyl-2-pentanone (MIBK)		ND		9.9	24
Acetone		~~19~~ ND	UJ	17	240
Benzene		ND		1.5	2.4
Bromobenzene		ND		0.97	2.4
Bromoform		ND		1.5	2.4
Bromomethane		ND		2.2	4.8
Carbon disulfide		ND		1.8	2.4
Carbon tetrachloride		ND		1.6	2.4
Chlorobenzene		ND		1.2	2.4
Chlorobromomethane		ND		1.3	2.4
Chlorodibromomethane		ND		1.2	2.4
Chloroethane		ND		1.9	4.8
Chloroform		ND		1.5	2.4
Chloromethane		ND		1.5	4.8
cis-1,2-Dichloroethene		ND		1.1	2.4
cis-1,3-Dichloropropene		ND		0.97	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.2	2.4
Dichlorodifluoromethane		ND		2.0	4.8
Ethyl ether		ND		1.0	2.4

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50108.D
Dilution:	1.0			Initial Weight/Volume:	5.65 g
Date Analyzed:	11/22/2010 2144			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.7	2.4
Ethylene Dibromide		ND		1.1	2.4
Hexachlorobutadiene		ND		1.5	2.4
Isopropyl ether		ND		1.1	2.4
Isopropylbenzene		ND		1.5	2.4
m-Xylene & p-Xylene		ND		3.4	4.8
Methyl tert-butyl ether		ND		1.5	2.4
Methylene Chloride		ND		9.5	9.7
n-Butylbenzene		ND		1.2	2.4
N-Propylbenzene		ND		1.6	2.4
Naphthalene		ND		2.2	24
o-Xylene		ND		1.3	2.4
sec-Butylbenzene		ND		1.4	2.4
Styrene		ND		0.97	2.4
Tert-amyl methyl ether		ND		1.5	2.4
Tert-butyl ethyl ether		ND		1.4	2.4
tert-Butylbenzene		ND		1.4	2.4
Tetrachloroethene		ND		1.7	2.4
Tetrahydrofuran		ND UJ		12	24
Toluene		ND		1.7	2.4
trans-1,2-Dichloroethene		ND		1.5	2.4
trans-1,3-Dichloropropene		ND		1.0	2.4
Trichloroethene		ND		2.0	2.4
Trichlorofluoromethane		ND		1.4	4.8
Vinyl chloride		ND		1.6	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.8
2,4,4-Trimethyl-2-pentene		ND		1.0	4.8
Cyclohexane		ND		0.97	24
Methyl acetate		ND		14	48
Methylcyclohexane		ND		1.5	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50108.D
Dilution:	1.0			Initial Weight/Volume:	5.65 g
Date Analyzed:	11/22/2010 2144			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50109.D
Dilution:	1.0			Initial Weight/Volume:	5.97 g
Date Analyzed:	11/22/2010 2208			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.1	2.3
1,1,1-Trichloroethane		ND		1.8	2.3
1,1,2,2-Tetrachloroethane		ND		0.91	2.3
1,1,2-Trichloroethane		ND		0.91	2.3
1,1-Dichloroethane		ND		1.7	2.3
1,1-Dichloroethene		ND		1.5	2.3
1,1-Dichloropropene		ND		1.4	2.3
1,2,3-Trichlorobenzene		ND		1.0	2.3
1,2,3-Trichloropropane		ND		1.1	2.3
1,2,4-Trichlorobenzene		ND		0.91	2.3
1,2,4-Trimethylbenzene		ND	UJ	1.3	2.3
1,2-Dibromo-3-Chloropropane		ND		2.5	23
1,2-Dichlorobenzene		ND		0.91	2.3
1,2-Dichloroethane		ND		0.91	2.3
1,2-Dichloropropane		ND		1.5	2.3
1,3,5-Trimethylbenzene		ND		1.4	2.3
1,3-Dichlorobenzene		ND		0.91	2.3
1,3-Dichloropropane		ND		1.0	2.3
1,4-Dichlorobenzene		ND		0.91	2.3
1,4-Dioxane		ND	UJ	91	230
2,2-Dichloropropane		ND		1.9	2.3
2-Butanone (MEK)		ND	UJ	9.8	23
2-Chlorotoluene		ND		1.2	2.3
2-Hexanone		ND		13	23
4-Chlorotoluene		ND		1.1	2.3
4-Isopropyltoluene		ND		1.4	2.3
4-Methyl-2-pentanone (MIBK)		ND		9.3	23
Acetone		ND	UJ	16	230
Benzene		ND		1.5	2.3
Bromobenzene		ND		0.91	2.3
Bromoform		ND		1.5	2.3
Bromomethane		ND		2.1	4.5
Carbon disulfide		ND		1.7	2.3
Carbon tetrachloride		ND		1.5	2.3
Chlorobenzene		ND		1.1	2.3
Chlorobromomethane		ND		1.3	2.3
Chlorodibromomethane		ND		1.1	2.3
Chloroethane		ND		1.8	4.5
Chloroform		ND		1.4	2.3
Chloromethane		ND		1.5	4.5
cis-1,2-Dichloroethene		ND		1.1	2.3
cis-1,3-Dichloropropene		ND		0.91	2.3
Dibromomethane		ND		1.1	2.3
Dichlorobromomethane		ND		1.2	2.3
Dichlorodifluoromethane		ND		1.9	4.5
Ethyl ether		ND		0.96	2.3

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50109.D
Dilution:	1.0			Initial Weight/Volume:	5.97 g
Date Analyzed:	11/22/2010 2208			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.6	2.3
Ethylene Dibromide		ND		1.0	2.3
Hexachlorobutadiene		ND		1.4	2.3
Isopropyl ether		ND		1.0	2.3
Isopropylbenzene		ND		1.4	2.3
m-Xylene & p-Xylene		ND		3.2	4.5
Methyl tert-butyl ether		ND		1.4	2.3
Methylene Chloride		ND		8.9	9.1
n-Butylbenzene		ND		1.1	2.3
N-Propylbenzene		ND		1.5	2.3
Naphthalene		ND		2.1	23
o-Xylene		ND		1.2	2.3
sec-Butylbenzene		ND		1.3	2.3
Styrene		ND		0.91	2.3
Tert-amyl methyl ether		ND		1.4	2.3
Tert-butyl ethyl ether		ND		1.3	2.3
tert-Butylbenzene		ND		1.3	2.3
Tetrachloroethene		ND		1.6	2.3
Tetrahydrofuran		ND UJ		11	23
Toluene		ND		1.6	2.3
trans-1,2-Dichloroethene		ND		1.5	2.3
trans-1,3-Dichloropropene		ND		0.94	2.3
Trichloroethene		ND		1.9	2.3
Trichlorofluoromethane		ND		1.3	4.5
Vinyl chloride		ND		1.5	2.3
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.3	11
2,4,4-Trimethyl-1-pentene		ND		1.5	4.5
2,4,4-Trimethyl-2-pentene		ND		0.98	4.5
Cyclohexane		ND		0.91	23
Methyl acetate		ND		13	45
Methylcyclohexane		ND		1.5	2.3

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50109.D
Dilution:	1.0			Initial Weight/Volume:	5.97 g
Date Analyzed:	11/22/2010 2208			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-TBK-057**

Lab Sample ID: 360-31147-11
Client Matrix: Solid

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50110.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/22/2010 2232			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND		1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND		100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		18	J	17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.0
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.0
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.0
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.0
Ethyl ether		ND		1.1	2.5

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-TBK-057**

Lab Sample ID: 360-31147-11
Client Matrix: Solid

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50110.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/22/2010 2232			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	5.0
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.8	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.0
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	5.0
2,4,4-Trimethyl-2-pentene		ND		1.1	5.0
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	50
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-20-10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-TBK-057**

Lab Sample ID: 360-31147-11
Client Matrix: Solid

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50110.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/22/2010 2232			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-20-10

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab File ID: V50068.D BFB Injection Date: 11/19/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 16:30

Analysis Batch No.: 66169

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.2	
75	30.0 - 60.0 % of mass 95	42.8	
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 - 120.00 % of mass 95	57.9	
175	5.0 - 9.0 % of mass 174	4.6	(7.9)1
176	95.0 - 101.0 % of mass 174	56.9	(98.4)1
177	5.0 - 9.0 % of mass 176	3.8	(6.7)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66169/3	V50069.D	11/19/2010	16:54
	LCS 360-66168/1-A	V50070.D	11/19/2010	17:18
	LCSD 360-66168/2-A	V50071.D	11/19/2010	17:41
	MB 360-66168/3-A	V50074.D	11/19/2010	18:53
OC-SB-480-6.0/8.0-DUP	360-31147-4	V50078.D	11/19/2010	20:29
OC-SB-480-6.0/8.0-XXX	360-31147-5	V50079.D	11/19/2010	20:53
OC-SB-481-7.0/9.0-XXX	360-31147-7	V50081.D	11/19/2010	21:41
OC-SB-481-7.0/9.0-XXX MS	360-31147-7 MS	V50093.D	11/20/2010	02:31
OC-SB-481-7.0/9.0-XXX MSD	360-31147-7 MSD	V50094.D	11/20/2010	02:55

clean

	LCS	LCSD
Acetone	62	62
Bromomethane	64	64
Chloroethane	42	46

	RRF	%D
Acetone	0.02	-29.3
Tetrahydrofuran	0.037	OK
1,4-Dioxane	0.019	OK

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab File ID: V50096.D BFB Injection Date: 11/22/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 16:55

Analysis Batch No.: 66227

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	43.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	52.2	
175	5.0 - 9.0 % of mass 174	4.1	(7.8)1
176	95.0 - 101.0 % of mass 174	52.1	(99.9)1
177	5.0 - 9.0 % of mass 176	3.8	(7.3)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66227/2	V50097.D	11/22/2010	17:19
	LCS 360-66225/1-A	V50098.D	11/22/2010	17:43
	LCSD 360-66225/2-A	V50099.D	11/22/2010	18:07
	MB 360-66225/3-A	V50102.D	11/22/2010	19:18
OC-SB-479-0.0/1.0-XXX	360-31147-1	V50103.D	11/22/2010	19:43
OC-SB-479-8.0/10-XXX	360-31147-2	V50104.D	11/22/2010	20:07
OC-SB-480-0.0/1.0-XXX	360-31147-3	V50105.D	11/22/2010	20:32
OC-SB-481-0.0/1.0-XXX	360-31147-6	V50106.D	11/22/2010	20:56
OC-SB-500-0.5/3.0-XXX	360-31147-8	V50107.D	11/22/2010	21:20
OC-SB-501-0.5/3.0-XXX	360-31147-9	V50108.D	11/22/2010	21:44
OC-SB-502-3.0/5.0-XXX	360-31147-10	V50109.D	11/22/2010	22:08
OC-TBK-057	360-31147-11	V50110.D	11/22/2010	22:32

	RRF	%RSD
Acetone	.0307	OK
Tetrahydrofuran	0.034	
MEK	0.049	
1,4Dioxane	0.0167	
1,2,4TMB	OK	27%

w/ in 70-130% Limits

tetrahydrofuran @ 15.3J no detects no quals

TC
12/20/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50070.D

Lab ID: LCS 360-66168/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4280	86	70-130	
1,1,1-Trichloroethane	5000	4170	83	70-130	
1,1,2,2-Tetrachloroethane	5000	4350	87	70-130	
1,1,2-Trichloroethane	5000	4150	83	70-130	
1,1-Dichloroethane	5000	4280	86	70-130	
1,1-Dichloroethene	5000	4370	87	70-130	
1,1-Dichloropropene	5000	4480	90	70-130	
1,2,3-Trichlorobenzene	5000	4850	97	70-130	
1,2,3-Trichloropropane	5000	4290	86	70-130	
1,2,4-Trichlorobenzene	5000	4890	98	70-130	
1,2,4-Trimethylbenzene	5000	5890	118	70-130	
1,2-Dibromo-3-Chloropropane	5000	4090	82	70-130	
1,2-Dichlorobenzene	5000	4770	95	70-130	
1,2-Dichloroethane	5000	3930	79	70-130	
1,2-Dichloropropane	5000	4480	90	70-130	
1,3,5-Trimethylbenzene	5000	4290	86	70-130	
1,3-Dichlorobenzene	5000	4350	87	70-130	
1,3-Dichloropropane	5000	4430	89	70-130	
1,4-Dichlorobenzene	5000	4790	96	70-130	
1,4-Dioxane	50000	45100	90	70-130	
2,2-Dichloropropane	5000	3840	77	70-130	
2-Butanone (MEK)	50000	40400	81	70-130	
2-Chlorotoluene	5000	4420	88	70-130	
2-Hexanone	50000	44500	89	70-130	
4-Chlorotoluene	5000	4530	91	70-130	
4-Isopropyltoluene	5000	4590	92	70-130	
4-Methyl-2-pentanone (MIBK)	50000	42200	84	70-130	
Acetone	50000	31200	62	70-130	*
Benzene	5000	4570	91	70-130	
Bromobenzene	5000	4320	86	70-130	
Bromoform	5000	4270	85	70-130	
Bromomethane	5000	3190	64	70-130	*
Carbon disulfide	5000	4590	92	70-130	
Carbon tetrachloride	5000	4110	82	70-130	
Chlorobenzene	5000	4840	97	70-130	
Chlorobromomethane	5000	4480	90	70-130	
Chlorodibromomethane	5000	4030	81	70-130	
Chloroethane	5000	2110	42	70-130	*
Chloroform	5000	4150	83	70-130	
Chloromethane	5000	5020	100	70-130	
cis-1,2-Dichloroethene	5000	4130	83	70-130	
cis-1,3-Dichloropropene	5000	4460	89	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/20/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50071.D

Lab ID: LCSD 360-66168/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4290	86	0	20	70-130	
1,1,1-Trichloroethane	5000	4360	87	4	20	70-130	
1,1,2,2-Tetrachloroethane	5000	4310	86	1	20	70-130	
1,1,2-Trichloroethane	5000	4210	84	1	20	70-130	
1,1-Dichloroethane	5000	4430	89	3	20	70-130	
1,1-Dichloroethene	5000	4510	90	3	20	70-130	
1,1-Dichloropropene	5000	4600	92	3	20	70-130	
1,2,3-Trichlorobenzene	5000	5040	101	4	20	70-130	
1,2,3-Trichloropropane	5000	4200	84	2	20	70-130	
1,2,4-Trichlorobenzene	5000	5070	101	4	20	70-130	
1,2,4-Trimethylbenzene	5000	5970	119	1	20	70-130	
1,2-Dibromo-3-Chloropropane	5000	4050	81	1	20	70-130	
1,2-Dichlorobenzene	5000	4780	96	0	20	70-130	
1,2-Dichloroethane	5000	4080	82	4	20	70-130	
1,2-Dichloropropane	5000	4510	90	1	20	70-130	
1,3,5-Trimethylbenzene	5000	4330	87	1	20	70-130	
1,3-Dichlorobenzene	5000	4420	88	2	20	70-130	
1,3-Dichloropropane	5000	4450	89	0	20	70-130	
1,4-Dichlorobenzene	5000	4750	95	1	20	70-130	
1,4-Dioxane	50000	40200	80	12	20	70-130	
2,2-Dichloropropane	5000	4050	81	5	20	70-130	
2-Butanone (MEK)	50000	40300	81	0	20	70-130	
2-Chlorotoluene	5000	4530	91	2	20	70-130	
2-Hexanone	50000	45400	91	2	20	70-130	
4-Chlorotoluene	5000	4580	92	1	20	70-130	
4-Isopropyltoluene	5000	4640	93	1	20	70-130	
4-Methyl-2-pentanone (MIBK)	50000	42200	84	0	20	70-130	
Acetone	50000	31100	62	0	20	70-130	*
Benzene	5000	4660	93	2	20	70-130	
Bromobenzene	5000	4340	87	0	20	70-130	
Bromoform	5000	4140	83	3	20	70-130	
Bromomethane	5000	3200	64	1	20	70-130	*
Carbon disulfide	5000	4730	95	3	20	70-130	
Carbon tetrachloride	5000	4210	84	2	20	70-130	
Chlorobenzene	5000	4860	97	0	20	70-130	
Chlorobromomethane	5000	4530	91	1	20	70-130	
Chlorodibromomethane	5000	4090	82	1	20	70-130	
Chloroethane	5000	2300	46	8	20	70-130	*
Chloroform	5000	4250	85	2	20	70-130	
Chloromethane	5000	5150	103	2	20	70-130	
cis-1,2-Dichloroethene	5000	4220	84	2	20	70-130	
cis-1,3-Dichloropropene	5000	4630	93	4	20	70-130	

Column to be used to flag recovery and RPD values

TC
12/20/10

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50093.D

Lab ID: 360-31147-7 MS Client ID: OC-SB-481-7.0/9.0-XXX MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5160	ND	4490	87	70-130	
1,1,1-Trichloroethane	5160	ND	4140	80	70-130	
1,1,2,2-Tetrachloroethane	5160	ND	4810	93	70-130	
1,1,2-Trichloroethane	5160	ND	4810	93	70-130	
1,1-Dichloroethane	5160	ND	4520	88	70-130	
1,1-Dichloroethene	5160	ND	4170	81	70-130	
1,1-Dichloropropene	5160	ND	4510	87	70-130	
1,2,3-Trichlorobenzene	5160	ND	5460	106	70-130	
1,2,3-Trichloropropane	5160	ND	4730	92	70-130	
1,2,4-Trichlorobenzene	5160	ND	5430	105	70-130	
1,2,4-Trimethylbenzene	5160	ND	5760	112	70-130	
1,2-Dibromo-3-Chloropropane	5160	ND	4720	91	70-130	
1,2-Dichlorobenzene	5160	ND	5250	102	70-130	
1,2-Dichloroethane	5160	ND	4350	84	70-130	
1,2-Dichloropropane	5160	ND	4890	95	70-130	
1,3,5-Trimethylbenzene	5160	ND	4410	86	70-130	
1,3-Dichlorobenzene	5160	ND	4570	89	70-130	
1,3-Dichloropropane	5160	ND	5130	99	70-130	
1,4-Dichlorobenzene	5160	ND	5110	99	70-130	
1,4-Dioxane	51600	ND	45000	87	70-130	
2,2-Dichloropropane	5160	ND	3380	65	70-130	F
2-Butanone (MEK)	51600	ND	40800	79	70-130	
2-Chlorotoluene	5160	ND	4680	91	70-130	
2-Hexanone	51600	ND	46200	90	70-130	
4-Chlorotoluene	5160	ND	4740	92	70-130	
4-Isopropyltoluene	5160	ND	4550	88	70-130	
4-Methyl-2-pentanone (MIBK)	51600	ND	43400	84	70-130	
Acetone	51600	ND	35700	69	70-130	F
Benzene	5160	ND	4980	96	70-130	
Bromobenzene	5160	ND	4620	90	70-130	
Bromoform	5160	ND	4630	90	70-130	
Bromomethane	5160	ND	3260	63	70-130	F
Carbon disulfide	5160	ND	4520	88	70-130	
Carbon tetrachloride	5160	ND	3840	74	70-130	
Chlorobenzene	5160	ND	5300	103	70-130	
Chlorobromomethane	5160	ND	4870	94	70-130	
Chlorodibromomethane	5160	ND	4420	86	70-130	
Chloroethane	5160	ND	2220	43	70-130	F
Chloroform	5160	ND	4410	86	70-130	
Chloromethane	5160	ND	5030	98	70-130	
cis-1,2-Dichloroethene	5160	ND	4350	84	70-130	
cis-1,3-Dichloropropene	5160	ND	4930	96	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/2/10

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50093.D

Lab ID: 360-31147-7 MS Client ID: OC-SB-481-7.0/9.0-XXX MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Dibromomethane	5160	ND	5130	99	70-130	
Dichlorobromomethane	5160	ND	4290	83	70-130	
Dichlorodifluoromethane	5160	ND	3810	74	70-130	
Ethyl ether	5160	ND	4290	83	70-130	
Ethylbenzene	5160	ND	5110	99	70-130	
Ethylene Dibromide	5160	ND	4860	94	70-130	
Hexachlorobutadiene	5160	ND	4640	90	70-130	
Isopropyl ether	5160	ND	4550	88	70-130	
Isopropylbenzene	5160	ND	4530	88	70-130	
m-Xylene & p-Xylene	10300	ND	10200	99	70-130	
Methyl tert-butyl ether	5160	ND	4460	86	70-130	
Methylene Chloride	5160	ND	4920	95	70-130	
n-Butylbenzene	5160	ND	5130	99	70-130	
N-Propylbenzene	5160	ND	4810	93	70-130	
Naphthalene	5160	ND	5390	105	70-130	
o-Xylene	5160	ND	4980	96	70-130	
sec-Butylbenzene	5160	ND	4290	83	70-130	
Styrene	5160	ND	4910	95	70-130	
Tert-amyl methyl ether	5160	ND	4550	88	70-130	
Tert-butyl ethyl ether	5160	ND	4420	86	70-130	
tert-Butylbenzene	5160	ND	4600	89	70-130	
Tetrachloroethene	5160	ND	4700	91	70-130	
Tetrahydrofuran	51600	ND	47600	92	70-130	
Toluene	5160	ND	5140	100	70-130	
trans-1,2-Dichloroethene	5160	ND	4480	87	70-130	
trans-1,3-Dichloropropene	5160	ND	4770	92	70-130	
Trichloroethene	5160	ND	4770	92	70-130	
Trichlorofluoromethane	5160	ND	3230	63	70-130	F
Vinyl chloride	5160	ND	4210	82	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	5160	ND	3830	74	70-130	
2,4,4-Trimethyl-1-pentene	5160	ND	3750	73	70-130	
2,4,4-Trimethyl-2-pentene	5160	ND	4350	84	70-130	
Cyclohexane	5160	ND	3970	77	70-130	
Methyl acetate	51600	ND	46300	90	70-130	
Methylcyclohexane	5160	ND	3990	77	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

12/20/10
TC

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50094.D

Lab ID: 360-31147-7 MSD Client ID: OC-SB-481-7.0/9.0-XXX MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	4480	3860	86	15	30	70-130	
1,1,1-Trichloroethane	4480	3580	80	14	30	70-130	
1,1,2,2-Tetrachloroethane	4480	3900	87	21	30	70-130	
1,1,2-Trichloroethane	4480	3850	86	22	30	70-130	
1,1-Dichloroethane	4480	3900	87	15	30	70-130	
1,1-Dichloroethene	4480	3470	77	18	30	70-130	
1,1-Dichloropropene	4480	3710	83	19	30	70-130	
1,2,3-Trichlorobenzene	4480	4430	99	21	30	70-130	
1,2,3-Trichloropropane	4480	3940	88	18	30	70-130	
1,2,4-Trichlorobenzene	4480	4420	99	20	30	70-130	
1,2,4-Trimethylbenzene	4480	4860	108	17	30	70-130	
1,2-Dibromo-3-Chloropropane	4480	3900	87	19	30	70-130	
1,2-Dichlorobenzene	4480	4390	98	18	30	70-130	
1,2-Dichloroethane	4480	3650	81	18	30	70-130	
1,2-Dichloropropane	4480	4070	91	18	30	70-130	
1,3,5-Trimethylbenzene	4480	3750	84	16	30	70-130	
1,3-Dichlorobenzene	4480	3890	87	16	30	70-130	
1,3-Dichloropropane	4480	4050	90	23	30	70-130	
1,4-Dichlorobenzene	4480	4230	94	19	30	70-130	
1,4-Dioxane	44800	37600	84	18	30	70-130	
2,2-Dichloropropane	4480	3120	70	8	30	70-130	
2-Butanone (MEK)	44800	36700	82	11	30	70-130	
2-Chlorotoluene	4480	3880	87	19	30	70-130	
2-Hexanone	44800	41000	91	12	30	70-130	
4-Chlorotoluene	4480	3910	87	19	30	70-130	
4-Isopropyltoluene	4480	3860	86	16	30	70-130	
4-Methyl-2-pentanone (MIBK)	44800	39500	88	10	30	70-130	
Acetone	44800	31600	71	12	30	70-130	
Benzene	4480	4130	92	19	30	70-130	
Bromobenzene	4480	3850	86	18	30	70-130	
Bromoform	4480	3700	83	22	30	70-130	
Bromomethane	4480	3110	69	5	30	70-130	F
Carbon disulfide	4480	3800	85	17	30	70-130	
Carbon tetrachloride	4480	3380	75	13	30	70-130	
Chlorobenzene	4480	4300	96	21	30	70-130	
Chlorobromomethane	4480	4110	92	17	30	70-130	
Chlorodibromomethane	4480	3670	82	19	30	70-130	
Chloroethane	4480	2230	50	0	30	70-130	F
Chloroform	4480	3730	83	17	30	70-130	
Chloromethane	4480	4430	99	13	30	70-130	
cis-1,2-Dichloroethene	4480	3780	84	14	30	70-130	
cis-1,3-Dichloropropene	4480	3930	88	23	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/20/10

12/02/2010

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50094.D

Lab ID: 360-31147-7 MSD Client ID: OC-SB-481-7.0/9.0-XXX MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	4480	4190	93	20	30	70-130	
Dichlorobromomethane	4480	3560	79	19	30	70-130	
Dichlorodifluoromethane	4480	3430	77	11	30	70-130	
Ethyl ether	4480	3470	77	21	30	70-130	
Ethylbenzene	4480	4260	95	18	30	70-130	
Ethylene Dibromide	4480	3880	87	22	30	70-130	
Hexachlorobutadiene	4480	3620	81	25	30	70-130	
Isopropyl ether	4480	3970	89	14	30	70-130	
Isopropylbenzene	4480	3840	86	17	30	70-130	
m-Xylene & p-Xylene	8970	8430	94	19	30	70-130	
Methyl tert-butyl ether	4480	3930	88	13	30	70-130	
Methylene Chloride	4480	4190	94	16	30	70-130	
n-Butylbenzene	4480	4230	94	19	30	70-130	
N-Propylbenzene	4480	3990	89	19	30	70-130	
Naphthalene	4480	4410	98	20	30	70-130	
o-Xylene	4480	4220	94	16	30	70-130	
sec-Butylbenzene	4480	3620	81	17	30	70-130	
Styrene	4480	4000	89	21	30	70-130	
Tert-amyl methyl ether	4480	3950	88	14	30	70-130	
Tert-butyl ethyl ether	4480	3900	87	13	30	70-130	
tert-Butylbenzene	4480	3840	86	18	30	70-130	
Tetrachloroethene	4480	3830	85	20	30	70-130	
Tetrahydrofuran	44800	40500	90	16	30	70-130	
Toluene	4480	4210	94	20	30	70-130	
trans-1,2-Dichloroethene	4480	3770	84	17	30	70-130	
trans-1,3-Dichloropropene	4480	3770	84	23	30	70-130	
Trichloroethene	4480	3960	88	19	30	70-130	
Trichlorofluoromethane	4480	2990	67	8	30	70-130	F
Vinyl chloride	4480	3790	85	11	30	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	4480	3250	72	16	30	70-130	
2,4,4-Trimethyl-1-pentene	4480	3300	74	13	30	70-130	
2,4,4-Trimethyl-2-pentene	4480	3580	80	19	30	70-130	
Cyclohexane	4480	3660	82	8	30	70-130	
Methyl acetate	44800	40400	90	14	30	70-130	
Methylcyclohexane	4480	3640	81	9	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/20/10

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31147-1 Analy Batch No.: 64639

SDG No.: 360-31147-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD05 360-64639/5	V49628.D
Level 2	STD1 360-64639/6	V49629.D
Level 3	STD5 360-64639/7	V49630.D
Level 4	STD10 360-64639/8	V49631.D
Level 5	STD20 360-64639/9	V49632.D
Level 6	STD40 360-64639/10	V49633.D
Level 7	STD80 360-64639/11	V49634.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3935 0.3859	0.4338 0.3940	0.4132	0.4170	0.4116	Ave		0.4070			0.1000	4.1		15.0			
Chloromethane	0.5853 0.5760	0.5341 0.5920	0.6001	0.6055	0.6007	Ave		0.5848			0.1000	4.2		15.0			
Vinyl chloride	0.3856 0.4232	0.3999 0.4374	0.4715	0.4711	0.4575	Ave		0.4352			0.1000	7.8		15.0			
Bromomethane	0.2549 0.2347	0.2234 0.2245	0.2662	0.2708	0.2620	Ave		0.2481			0.1000	8.1		15.0			
Chloroethane	0.2792 0.2173	0.2489 0.1992	0.2664	0.2639	0.2545	Ave		0.2471			0.1000	12.0		15.0			
Trichlorofluoromethane	0.3978 0.4099	0.3985 0.4097	0.4458	0.4645	0.4533	Ave		0.4256			0.1000	6.6		15.0			
Ethyl ether	0.2101 0.2034	0.1920 0.2013	0.2154	0.1932	0.1907	Ave		0.2009				4.7		15.0			
1,1-Dichloroethene	0.3339 0.2745	0.2816 0.2778	0.3253	0.3008	0.2974	Ave		0.2988			0.1000	7.8		15.0			
Carbon disulfide	1.0424 1.0619	0.9916 1.0808	1.2539	1.1788	1.1668	Ave		1.1109			0.1000	8.3		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1714 0.1814	0.1646 0.1862	0.2089	0.1940	0.1945	Ave		0.1859				8.1		15.0			
Methylene Chloride	0.5333 0.3138	0.4296 0.3198	0.3823	0.3371	0.3292	Lin1F		0.3239							0.9960		0.9900
Acetone	0.0752 0.0403	0.0602 0.0390	0.0528	0.0394	0.0391	Lin1F		0.0401							0.9910		0.9900
trans-1,2-Dichloroethene	0.5063 0.5122	0.4859 0.5219	0.5836	0.5476	0.5441	Ave		0.5288			0.1000	6.1		15.0			
Methyl acetate	0.1288 0.1150	0.1137 0.1114	0.1268	0.1120	0.1081	Ave		0.1165				6.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

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TC

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31147-1 Analy Batch No.: 64639

SDG No.: 360-31147-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl tert-butyl ether	0.5586 0.5687	0.5948 0.5709	0.6440	0.5840	0.5604	Ave		0.5831			0.1000	5.1		15.0			
Isopropyl ether	1.1667 1.2157	1.1494 1.2497	1.3359	1.2388	1.2208	Ave		1.2253				5.0		15.0			
1,1-Dichloroethane	0.6290 0.6163	0.5832 0.6448	0.6720	0.6375	0.6333	Ave		0.6309			0.2000	4.3		15.0			
Tert-butyl ethyl ether	0.9140 0.8638	0.8808 0.8560	1.0160	0.9108	0.8846	Ave		0.9037				6.0		15.0			
1,4-Dioxane	+++++ 0.0197	+++++ 0.0190	0.0226	0.0201	0.0199	Ave		0.0203				6.8		15.0			
cis-1,2-Dichloroethene	0.4910 0.4764	0.4629 0.4967	0.5174	0.4907	0.4893	Ave		0.4892			0.1000	3.5		15.0			
2,2-Dichloropropane	0.3693 0.3747	0.4074 0.3473	0.4536	0.4295	0.4005	Ave		0.3975				9.3		15.0			
Chlorobromomethane	0.1517 0.1452	0.1309 0.1460	0.1612	0.1485	0.1438	Ave		0.1468				6.2		15.0			
Cyclohexane	0.6760 0.6337	0.6181 0.6251	0.7838	0.7044	0.6816	Ave		0.6747				8.6		15.0			
Chloroform	0.7019 0.5495	0.5778 0.5683	0.6262	0.5728	0.5685	Lin	0.0430	0.5642							1.0000		0.9900
Carbon tetrachloride	0.3681 0.3396	0.3303 0.3588	0.3738	0.3676	0.3674	Ave		0.3579			0.1000	4.6		15.0			
Tetrahydrofuran	0.0677 0.0418	0.0495 0.0403	0.0470	0.0412	0.0387	Lin1F		0.0409							0.9970		0.9900
1,1,1-Trichloroethane	0.4037 0.4226	0.4196 0.4431	0.4692	0.4515	0.4488	Ave		0.4369			0.1000	5.2		15.0			
2-Butanone (MEK)	0.0635 0.0645	0.0630 0.0647	0.0652	0.0599	0.0573	Lin2F		0.0626							0.9970		0.9900
1,1-Dichloropropene	0.4267 0.4393	0.3842 0.4560	0.4566	0.4338	0.4467	Ave		0.4348				5.7		15.0			
Benzene	1.1641 1.2296	1.1438 1.2546	1.2749	1.2250	1.2358	Ave		1.2182			0.5000	3.9		15.0			
Tert-amyl methyl ether	0.6760 0.6609	0.6121 0.6732	0.7426	0.6721	0.6493	Ave		0.6694				5.8		15.0			
1,2-Dichloroethane	0.2527 0.2662	0.2387 0.2747	0.2681	0.2445	0.2506	Ave		0.2565			0.1000	5.2		15.0			
2,4,4-Trimethyl-1-pentene	0.3379 0.2406	0.2948 0.2443	0.2969	0.2738	0.2695	Ave		0.2797				12.0		15.0			
Trichloroethene	0.3541 0.3006	0.3037 0.2834	0.3073	0.2909	0.3027	Ave		0.3061			0.2000	7.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

12/20/10
TC

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66169/3 Calibration Date: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50069.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.3671	0.1000	18.0	20.0	-9.8	20.0
Chloromethane	Ave	0.5848	0.5696	0.1000	19.5	20.0	-2.6	20.0
Vinyl chloride	Ave	0.4352	0.4079	0.1000	18.7	20.0	-6.3	20.0
Bromomethane	Ave	0.2481	0.2221	0.1000	17.9	20.0	-10.5	20.0
Chloroethane	Ave	0.2471	0.1999	0.1000	16.2	20.0	-19.1	20.0
Trichlorofluoromethane	Ave	0.4256	0.3566	0.1000	16.8	20.0	-16.2	20.0
Ethyl ether	Ave	0.2009	0.1807		18.0	20.0	-10.1	20.0
1,1-Dichloroethene	Ave	0.2988	0.2777	0.1000	18.6	20.0	-7.1	20.0
Carbon disulfide	Ave	1.111	0.8814	0.1000	15.9	20.0	-20.7*	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1752		18.9	20.0	-5.7	20.0
Methylene Chloride	Lin1F		0.3105	0.1000	19.2	20.0	-4.2	20.0
Acetone	Lin1F		0.0283*	0.1000	141	200	-29.3*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4603	0.1000	17.4	20.0	-12.9	20.0
Methyl acetate	Ave	0.1165	0.0884		152	200	-24.1*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.4975	0.1000	17.1	20.0	-14.7	20.0
Isopropyl ether	Ave	1.225	1.093		17.8	20.0	-10.8	20.0
1,1-Dichloroethane	Ave	0.6309	0.5457	0.2000	17.3	20.0	-13.5	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7444		16.5	20.0	-17.6	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4115	0.1000	16.8	20.0	-15.9	20.0
2,2-Dichloropropane	Ave	0.3975	0.3374		17.0	20.0	-15.1	20.0
Chlorobromomethane	Ave	0.1468	0.1325		18.1	20.0	-9.7	20.0
Cyclohexane	Ave	0.6747	0.5771		17.1	20.0	-14.5	20.0
Chloroform	Lin		0.4679	0.2000	16.5	20.0	-17.4	20.0
Carbon tetrachloride	Ave	0.3579	0.2942	0.1000	16.4	20.0	-17.8	20.0
Tetrahydrofuran	Lin1F		0.0370		181	200	-9.4	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3665	0.1000	16.8	20.0	-16.1	20.0
2-Butanone (MEK)	Lin2F		0.0540*	0.1000	172	200	-13.8	20.0
1,1-Dichloropropene	Ave	0.4348	0.3929		18.1	20.0	-9.6	20.0
Benzene	Ave	1.218	1.196	0.5000	19.6	20.0	-1.9	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5888		17.6	20.0	-12.1	20.0
1,2-Dichloroethane	Ave	0.2565	0.2069	0.1000	16.1	20.0	-19.3	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2233		16.0	20.0	-20.2*	20.0
Methylcyclohexane	Ave	0.5609	0.4874		17.4	20.0	-13.1	20.0
Trichloroethene	Ave	0.3061	0.2662	0.2000	17.4	20.0	-13.0	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1650		19.2	20.0	-4.1	20.0
Dibromomethane	Ave	0.1094	0.1016		18.6	20.0	-7.2	20.0
1,2-Dichloropropane	Ave	0.2611	0.2332	0.1000	17.9	20.0	-10.7	20.0
Dichlorobromomethane	Ave	0.3171	0.2576	0.2000	16.2	20.0	-18.8	20.0
1,4-Dioxane	Ave	0.0203	0.0190		188	200	-6.2	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3333	0.2000	18.6	20.0	-7.1	20.0

12/20/10 TC

FORM VII 8260C

12/02/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66227/2 Calibration Date: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50097.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.4013	0.1000	19.7	20.0	-1.4	20.0
Chloromethane	Ave	0.5848	0.5949	0.1000	20.3	20.0	1.7	20.0
Vinyl chloride	Ave	0.4352	0.4258	0.1000	19.6	20.0	-2.2	20.0
Bromomethane	Ave	0.2481	0.2123	0.1000	17.1	20.0	-14.4	20.0
Chloroethane	Ave	0.2471	0.2124	0.1000	17.2	20.0	-14.0	20.0
Trichlorofluoromethane	Ave	0.4256	0.3946	0.1000	18.5	20.0	-7.3	20.0
Ethyl ether	Ave	0.2009	0.1824		18.2	20.0	-9.2	20.0
1,1-Dichloroethene	Ave	0.2988	0.3050	0.1000	20.4	20.0	2.1	20.0
Carbon disulfide	Ave	1.111	0.9692	0.1000	17.4	20.0	-12.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1830		19.7	20.0	-1.5	20.0
Methylene Chloride	Lin1F		0.3111	0.1000	19.2	20.0	-4.0	20.0
Acetone	Lin1F		0.0307*	0.1000	153	200	-23.5*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4830	0.1000	18.3	20.0	-8.7	20.0
Methyl acetate	Ave	0.1165	0.0885		152	200	-24.0*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.4780	0.1000	16.4	20.0	-18.0	20.0
Isopropyl ether	Ave	1.225	1.063		17.3	20.0	-13.3	20.0
1,1-Dichloroethane	Ave	0.6309	0.5663	0.2000	18.0	20.0	-10.2	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7326		16.2	20.0	-18.9	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4231	0.1000	17.3	20.0	-13.5	20.0
2,2-Dichloropropane	Ave	0.3975	0.3216		16.2	20.0	-19.1	20.0
Chlorobromomethane	Ave	0.1468	0.1356		18.5	20.0	-7.6	20.0
Cyclohexane	Ave	0.6747	0.6000		17.8	20.0	-11.1	20.0
Chloroform	Lin		0.4832	0.2000	17.1	20.0	-14.7	20.0
Carbon tetrachloride	Ave	0.3579	0.3217	0.1000	18.0	20.0	-10.1	20.0
Tetrahydrofuran	Lin1F		0.0342		167	200	-16.3	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3925	0.1000	18.0	20.0	-10.2	20.0
2-Butanone (MEK)	Lin2F		0.0494*	0.1000	158	200	-21.1*	20.0
1,1-Dichloropropene	Ave	0.4348	0.4159		19.1	20.0	-4.3	20.0
Benzene	Ave	1.218	1.191	0.5000	19.6	20.0	-2.2	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5604		16.7	20.0	-16.3	20.0
1,2-Dichloroethane	Ave	0.2565	0.2118	0.1000	16.5	20.0	-17.4	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2393		17.1	20.0	-14.4	20.0
Trichloroethene	Ave	0.3061	0.2794	0.2000	18.3	20.0	-8.7	20.0
Methylcyclohexane	Ave	0.5609	0.4986		17.8	20.0	-11.1	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1683		19.6	20.0	-2.2	20.0
Dibromomethane	Ave	0.1094	0.1016		18.6	20.0	-7.1	20.0
1,2-Dichloropropane	Ave	0.2611	0.2377	0.1000	18.2	20.0	-9.0	20.0
Dichlorobromomethane	Ave	0.3171	0.2647	0.2000	16.7	20.0	-16.5	20.0
1,4-Dioxane	Ave	0.0203	0.0167		165	200	-17.5	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3435	0.2000	19.1	20.0	-4.3	20.0

12/20/10 TC

FORM VII 8260C

12/02/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66227/2 Calibration Date: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50097.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6841	0.4000	20.7	20.0	3.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1015	0.1000	167	200	-16.4	20.0
Tetrachloroethene	Lin2F		0.1759*	0.2000	19.3	20.0	-3.3	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2273	0.1000	18.3	20.0	-8.4	20.0
1,1,2-Trichloroethane	Lin1F		0.1045	0.1000	17.1	20.0	-14.5	20.0
Chlorodibromomethane	Ave	0.1690	0.1472	0.1000	17.4	20.0	-12.9	20.0
1,3-Dichloropropane	Ave	0.2536	0.2324		18.3	20.0	-8.4	20.0
Ethylene Dibromide	Ave	0.1272	0.1125		17.7	20.0	-11.5	20.0
2-Hexanone	Lin2F		0.0629*	0.1000	176	200	-11.8	20.0
Chlorobenzene	Ave	0.9897	0.9892	0.5000	20.0	20.0	-0.0	20.0
Ethylbenzene	Ave	1.973	2.060	0.1000	20.9	20.0	4.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3421		17.8	20.0	-10.9	20.0
m-Xylene & p-Xylene	Ave	1.506	1.560	0.1000	41.4	40.0	3.6	20.0
o-Xylene	Ave	1.683	1.680	0.3000	20.0	20.0	-0.2	20.0
Styrene	Ave	1.175	1.130	0.3000	19.2	20.0	-3.9	20.0
Bromoform	Ave	0.4674	0.4422	0.1000	18.9	20.0	-5.4	20.0
Isopropylbenzene	Ave	2.074	1.989	0.1000	19.2	20.0	-4.1	20.0
Bromobenzene	Ave	0.8055	0.7083		17.6	20.0	-12.1	20.0
N-Propylbenzene	Ave	2.457	2.430		19.8	20.0	-1.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8844	0.3000	18.8	20.0	-6.2	20.0
2-Chlorotoluene	Ave	1.633	1.505		18.4	20.0	-7.8	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.526		18.3	20.0	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0580		17.7	20.0	-11.7	20.0
4-Chlorotoluene	Ave	1.467	1.368		18.6	20.0	-6.8	20.0
tert-Butylbenzene	Ave	1.418	1.369		19.3	20.0	-3.4	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.173		25.4	20.0	27.0*	20.0
sec-Butylbenzene	Ave	2.295	2.173		18.9	20.0	-5.3	20.0
4-Isopropyltoluene	Ave	1.765	1.692		19.2	20.0	-4.1	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7429	0.6000	18.1	20.0	-9.7	20.0
1,4-Dichlorobenzene	Ave	2.723	2.742	0.5000	20.1	20.0	0.7	20.0
n-Butylbenzene	Ave	6.254	7.122		22.8	20.0	13.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.466	0.4000	20.6	20.0	3.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1230	0.0500	18.4	20.0	-7.9	20.0
Hexachlorobutadiene	Ave	0.9293	0.9641		20.7	20.0	3.7	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.551	0.2000	21.2	20.0	5.8	20.0
Naphthalene	Ave	2.231	2.322		20.8	20.0	4.1	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.170		21.1	20.0	5.7	20.0
Dibromofluoromethane	Ave	0.2449	0.2333		19.1	20.0	-4.7	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9109		20.6	20.0	2.8	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5119		20.2	20.0	0.8	20.0

12/20/10
TC

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low

GC Column (1): RTX-VMS ID: 0.25 (um)

Client Sample ID	Lab Sample ID	DBFM #	TOL #	BFB #
OC-SB-479-0.0/1.0-XXX	360-31147-1	91	95	99
OC-SB-479-8.0/10-XXX	360-31147-2	89	96	100
OC-SB-480-0.0/1.0-XXX	360-31147-3	91	97	99
OC-SB-480-6.0/8.0-DUP	360-31147-4	88	96	99
OC-SB-480-6.0/8.0-XXX	360-31147-5	89	96	99
OC-SB-481-0.0/1.0-XXX	360-31147-6	90	96	98
OC-SB-481-7.0/9.0-XXX	360-31147-7	90	96	100
OC-SB-500-0.5/3.0-XXX	360-31147-8	92	96	101
OC-SB-501-0.5/3.0-XXX	360-31147-9	90	96	99
OC-SB-502-3.0/5.0-XXX	360-31147-10	91	96	98
OC-TBK-057	360-31147-11	90	96	99
	MB 360-66168/3-A	89	97	97
	MB 360-66225/3-A	90	95	101
	LCS 360-66168/1-A	93	102	100
	LCS 360-66225/1-A	96	103	102
	LCSD 360-66168/2-A	94	104	99
	LCSD 360-66225/2-A	95	104	102
OC-SB-481-7.0/9.0-XXX MS	360-31147-7 MS	90	102	97
OC-SB-481-7.0/9.0-XXX MSD	360-31147-7 MSD	92	101	97

	QC LIMITS
DBFM = Dibromofluoromethane	70-130
TOL = Toluene-d8 (Surr)	70-130
BFB = 4-Bromofluorobenzene	70-130

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50070.D

Lab ID: LCS 360-66168/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	5000	4450	89	70-130	
Dichlorobromomethane	5000	3970	79	70-130	
Dichlorodifluoromethane	5000	4370	87	70-130	
Ethyl ether	5000	3800	76	70-130	
Ethylbenzene	5000	4840	97	70-130	
Ethylene Dibromide	5000	4170	83	70-130	
Hexachlorobutadiene	5000	4650	93	70-130	
Isopropyl ether	5000	4290	86	70-130	
Isopropylbenzene	5000	4470	89	70-130	
m-Xylene & p-Xylene	10000	9590	96	70-130	
Methyl tert-butyl ether	5000	4070	81	70-130	
Methylene Chloride	5000	4690	94	70-130	
n-Butylbenzene	5000	5190	104	70-130	
N-Propylbenzene	5000	4730	95	70-130	
Naphthalene	5000	4580	92	70-130	
o-Xylene	5000	4660	93	70-130	
sec-Butylbenzene	5000	4390	88	70-130	
Styrene	5000	4540	91	70-130	
Tert-amyl methyl ether	5000	4140	83	70-130	
Tert-butyl ethyl ether	5000	4060	81	70-130	
tert-Butylbenzene	5000	4580	92	70-130	
Tetrachloroethene	5000	4410	88	70-130	
Tetrahydrofuran	50000	43800	88	70-130	
Toluene	5000	4760	95	70-130	
trans-1,2-Dichloroethene	5000	4310	86	70-130	
trans-1,3-Dichloropropene	5000	4240	85	70-130	
Trichloroethene	5000	4360	87	70-130	
Trichlorofluoromethane	5000	3570	71	70-130	
Vinyl chloride	5000	4490	90	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	5000	4340	87	70-130	
2,4,4-Trimethyl-1-pentene	5000	4210	84	70-130	
2,4,4-Trimethyl-2-pentene	5000	4700	94	70-130	
Cyclohexane	5000	4330	87	70-130	
Methyl acetate	50000	38800	78	70-130	
Methylcyclohexane	5000	4360	87	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50098.D

Lab ID: LCS 360-66225/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	100	89.3	89	70-130	
1,1,1-Trichloroethane	100	89.1	89	70-130	
1,1,2,2-Tetrachloroethane	100	90.1	90	70-130	
1,1,2-Trichloroethane	100	85.1	85	70-130	
1,1-Dichloroethane	100	89.5	90	70-130	
1,1-Dichloroethene	100	94.2	94	70-130	
1,1-Dichloropropene	100	93.6	94	70-130	
1,2,3-Trichlorobenzene	100	104	104	70-130	
1,2,3-Trichloropropane	100	83.8	84	70-130	
1,2,4-Trichlorobenzene	100	105	105	70-130	
1,2,4-Trimethylbenzene	100	121	121	70-130	
1,2-Dibromo-3-Chloropropane	100	92.4	92	70-130	
1,2-Dichlorobenzene	100	99.8	100	70-130	
1,2-Dichloroethane	100	83.1	83	70-130	
1,2-Dichloropropane	100	90.6	91	70-130	
1,3,5-Trimethylbenzene	100	88.4	88	70-130	
1,3-Dichlorobenzene	100	90.8	91	70-130	
1,3-Dichloropropane	100	91.5	92	70-130	
1,4-Dichlorobenzene	100	97.4	97	70-130	
1,4-Dioxane	1000	814	81	70-130	
2,2-Dichloropropane	100	87.0	87	70-130	
2-Butanone (MEK)	1000	841	84	70-130	
2-Chlorotoluene	100	91.3	91	70-130	
2-Hexanone	1000	973	97	70-130	
4-Chlorotoluene	100	94.1	94	70-130	
4-Isopropyltoluene	100	95.5	95	70-130	
4-Methyl-2-pentanone (MIBK)	1000	904	90	70-130	
Acetone	1000	703	70	70-130	
Benzene	100	93.9	94	70-130	
Bromobenzene	100	87.5	87	70-130	
Bromoform	100	91.4	91	70-130	
Bromomethane	100	87.0	87	70-130	
Carbon disulfide	100	101	101	70-130	
Carbon tetrachloride	100	87.9	88	70-130	
Chlorobenzene	100	98.6	99	70-130	
Chlorobromomethane	100	91.0	91	70-130	
Chlorodibromomethane	100	86.8	87	70-130	
Chloroethane	100	76.7	77	70-130	
Chloroform	100	86.3	86	70-130	
Chloromethane	100	87.9	88	70-130	
cis-1,2-Dichloroethene	100	85.8	86	70-130	
cis-1,3-Dichloropropene	100	92.9	93	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50098.D

Lab ID: LCS 360-66225/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	100	95.0	95	70-130	
Dichlorobromomethane	100	83.1	83	70-130	
Dichlorodifluoromethane	100	74.2	74	70-130	
Ethyl ether	100	90.1	90	70-130	
Ethylbenzene	100	98.7	99	70-130	
Ethylene Dibromide	100	89.3	89	70-130	
Hexachlorobutadiene	100	99.4	99	70-130	
Isopropyl ether	100	88.2	88	70-130	
Isopropylbenzene	100	92.8	93	70-130	
m-Xylene & p-Xylene	200	197	98	70-130	
Methyl tert-butyl ether	100	86.6	87	70-130	
Methylene Chloride	100	95.4	95	70-130	
n-Butylbenzene	100	106	106	70-130	
N-Propylbenzene	100	96.1	96	70-130	
Naphthalene	100	97.7	98	70-130	
o-Xylene	100	96.2	96	70-130	
sec-Butylbenzene	100	90.1	90	70-130	
Styrene	100	93.5	93	70-130	
Tert-amyl methyl ether	100	86.6	87	70-130	
Tert-butyl ethyl ether	100	85.4	85	70-130	
tert-Butylbenzene	100	94.6	95	70-130	
Tetrachloroethene	100	95.9	96	70-130	
Tetrahydrofuran	1000	901	90	70-130	
Toluene	100	98.1	98	70-130	
trans-1,2-Dichloroethene	100	91.2	91	70-130	
trans-1,3-Dichloropropene	100	89.7	90	70-130	
Trichloroethene	100	90.8	91	70-130	
Trichlorofluoromethane	100	76.5	77	70-130	
Vinyl chloride	100	88.2	88	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	100	99.6	100	70-130	
2,4,4-Trimethyl-1-pentene	100	91.6	92	70-130	
2,4,4-Trimethyl-2-pentene	100	104	104	70-130	
Cyclohexane	100	93.5	94	70-130	
Methyl acetate	1000	798	80	70-130	
Methylcyclohexane	100	91.8	92	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50071.D

Lab ID: LCSD 360-66168/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	5000	4600	92	3	20	70-130	
Dichlorobromomethane	5000	4050	81	2	20	70-130	
Dichlorodifluoromethane	5000	4500	90	3	20	70-130	
Ethyl ether	5000	3810	76	0	20	70-130	
Ethylbenzene	5000	4890	98	1	20	70-130	
Ethylene Dibromide	5000	4270	85	2	20	70-130	
Hexachlorobutadiene	5000	4800	96	3	20	70-130	
Isopropyl ether	5000	4350	87	1	20	70-130	
Isopropylbenzene	5000	4530	91	2	20	70-130	
m-Xylene & p-Xylene	10000	9640	96	1	20	70-130	
Methyl tert-butyl ether	5000	4150	83	2	20	70-130	
Methylene Chloride	5000	4780	96	2	20	70-130	
n-Butylbenzene	5000	5220	104	1	20	70-130	
N-Propylbenzene	5000	4780	96	1	20	70-130	
Naphthalene	5000	4750	95	4	20	70-130	
o-Xylene	5000	4700	94	1	20	70-130	
sec-Butylbenzene	5000	4450	89	1	20	70-130	
Styrene	5000	4530	91	0	20	70-130	
Tert-amyl methyl ether	5000	4280	86	3	20	70-130	
Tert-butyl ethyl ether	5000	4190	84	3	20	70-130	
tert-Butylbenzene	5000	4560	91	0	20	70-130	
Tetrachloroethene	5000	4660	93	5	20	70-130	
Tetrahydrofuran	50000	44900	90	2	20	70-130	
Toluene	5000	4800	96	1	20	70-130	
trans-1,2-Dichloroethene	5000	4470	89	4	20	70-130	
trans-1,3-Dichloropropene	5000	4260	85	1	20	70-130	
Trichloroethene	5000	4470	89	2	20	70-130	
Trichlorofluoromethane	5000	3760	75	5	20	70-130	
Vinyl chloride	5000	4590	92	2	20	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	5000	4440	89	2	20	70-130	
2,4,4-Trimethyl-1-pentene	5000	4400	88	4	20	70-130	
2,4,4-Trimethyl-2-pentene	5000	4990	100	6	20	70-130	
Cyclohexane	5000	4490	90	4	20	70-130	
Methyl acetate	50000	38800	78	0	20	70-130	
Methylcyclohexane	5000	4490	90	3	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50099.D

Lab ID: LCSD 360-66225/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	100	89.4	89	0	20	70-130	
1,1,1-Trichloroethane	100	88.3	88	1	20	70-130	
1,1,2,2-Tetrachloroethane	100	86.4	86	4	20	70-130	
1,1,2-Trichloroethane	100	84.8	85	0	20	70-130	
1,1-Dichloroethane	100	88.0	88	2	20	70-130	
1,1-Dichloroethene	100	93.6	94	1	20	70-130	
1,1-Dichloropropene	100	90.9	91	3	20	70-130	
1,2,3-Trichlorobenzene	100	98.3	98	5	20	70-130	
1,2,3-Trichloropropane	100	88.9	89	6	20	70-130	
1,2,4-Trichlorobenzene	100	100	100	5	20	70-130	
1,2,4-Trimethylbenzene	100	122	122	1	20	70-130	
1,2-Dibromo-3-Chloropropane	100	90.7	91	2	20	70-130	
1,2-Dichlorobenzene	100	97.4	97	2	20	70-130	
1,2-Dichloroethane	100	81.2	81	2	20	70-130	
1,2-Dichloropropane	100	91.0	91	0	20	70-130	
1,3,5-Trimethylbenzene	100	89.3	89	1	20	70-130	
1,3-Dichlorobenzene	100	91.3	91	0	20	70-130	
1,3-Dichloropropane	100	89.4	89	2	20	70-130	
1,4-Dichlorobenzene	100	95.3	95	2	20	70-130	
1,4-Dioxane	1000	848	85	4	20	70-130	
2,2-Dichloropropane	100	83.2	83	4	20	70-130	
2-Butanone (MEK)	1000	840	84	0	20	70-130	
2-Chlorotoluene	100	91.3	91	0	20	70-130	
2-Hexanone	1000	963	96	1	20	70-130	
4-Chlorotoluene	100	94.5	95	0	20	70-130	
4-Isopropyltoluene	100	95.4	95	0	20	70-130	
4-Methyl-2-pentanone (MIBK)	1000	892	89	1	20	70-130	
Acetone	1000	757	76	7	20	70-130	
Benzene	100	92.3	92	2	20	70-130	
Bromobenzene	100	87.5	87	0	20	70-130	
Bromoform	100	87.7	88	4	20	70-130	
Bromomethane	100	82.3	82	6	20	70-130	
Carbon disulfide	100	99.9	100	1	20	70-130	
Carbon tetrachloride	100	86.1	86	2	20	70-130	
Chlorobenzene	100	99.1	99	0	20	70-130	
Chlorobromomethane	100	91.9	92	1	20	70-130	
Chlorodibromomethane	100	85.1	85	2	20	70-130	
Chloroethane	100	74.6	75	3	20	70-130	
Chloroform	100	85.8	86	1	20	70-130	
Chloromethane	100	85.2	85	3	20	70-130	
cis-1,2-Dichloroethene	100	84.8	85	1	20	70-130	
cis-1,3-Dichloropropene	100	90.8	91	2	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: V50099.D

Lab ID: LCSD 360-66225/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	100	93.7	94	1	20	70-130	
Dichlorobromomethane	100	81.5	82	2	20	70-130	
Dichlorodifluoromethane	100	72.2	72	3	20	70-130	
Ethyl ether	100	89.6	90	1	20	70-130	
Ethylbenzene	100	98.5	99	0	20	70-130	
Ethylene Dibromide	100	86.2	86	3	20	70-130	
Hexachlorobutadiene	100	93.9	94	6	20	70-130	
Isopropyl ether	100	87.7	88	1	20	70-130	
Isopropylbenzene	100	92.6	93	0	20	70-130	
m-Xylene & p-Xylene	200	198	99	1	20	70-130	
Methyl tert-butyl ether	100	84.6	85	2	20	70-130	
Methylene Chloride	100	95.8	96	0	20	70-130	
n-Butylbenzene	100	103	103	4	20	70-130	
N-Propylbenzene	100	95.8	96	0	20	70-130	
Naphthalene	100	92.8	93	5	20	70-130	
o-Xylene	100	96.3	96	0	20	70-130	
sec-Butylbenzene	100	90.6	91	1	20	70-130	
Styrene	100	93.1	93	0	20	70-130	
Tert-amyl methyl ether	100	85.0	85	2	20	70-130	
Tert-butyl ethyl ether	100	84.3	84	1	20	70-130	
tert-Butylbenzene	100	93.0	93	2	20	70-130	
Tetrachloroethene	100	93.4	93	3	20	70-130	
Tetrahydrofuran	1000	889	89	1	20	70-130	
Toluene	100	96.3	96	2	20	70-130	
trans-1,2-Dichloroethene	100	88.5	88	3	20	70-130	
trans-1,3-Dichloropropene	100	87.7	88	2	20	70-130	
Trichloroethene	100	89.8	90	1	20	70-130	
Trichlorofluoromethane	100	73.7	74	4	20	70-130	
Vinyl chloride	100	84.7	85	4	20	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	100	97.1	97	3	20	70-130	
2,4,4-Trimethyl-1-pentene	100	88.2	88	4	20	70-130	
2,4,4-Trimethyl-2-pentene	100	101	101	2	20	70-130	
Cyclohexane	100	92.2	92	1	20	70-130	
Methyl acetate	1000	806	81	1	20	70-130	
Methylcyclohexane	100	90.9	91	1	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab File ID: V50074.D Lab Sample ID: MB 360-66168/3-A

Matrix: Solid Heated Purge:(Y/N) N

Instrument ID: HP #1 GC/MS Date Analyzed: 11/19/2010 18:53

GC Column: RTX-VMS ID: 0.25(um)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 360-66168/1-A	V50070.D	11/19/2010 17:18
	LCSD 360-66168/2-A	V50071.D	11/19/2010 17:41
OC-SB-480-6.0/8.0-DUP	360-31147-4	V50078.D	11/19/2010 20:29
OC-SB-480-6.0/8.0-XXX	360-31147-5	V50079.D	11/19/2010 20:53
OC-SB-481-7.0/9.0-XXX	360-31147-7	V50081.D	11/19/2010 21:41
OC-SB-481-7.0/9.0-XXX MS	360-31147-7 MS	V50093.D	11/20/2010 02:31
OC-SB-481-7.0/9.0-XXX MSD	360-31147-7 MSD	V50094.D	11/20/2010 02:55

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab File ID: V50102.D Lab Sample ID: MB 360-66225/3-A

Matrix: Solid Heated Purge:(Y/N) N

Instrument ID: HP #1 GC/MS Date Analyzed: 11/22/2010 19:18

GC Column: RTX-VMS ID: 0.25(um)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 360-66225/1-A	V50098.D	11/22/2010 17:43
	LCSD 360-66225/2-A	V50099.D	11/22/2010 18:07
OC-SB-479-0.0/1.0-XXX	360-31147-1	V50103.D	11/22/2010 19:43
OC-SB-479-8.0/10-XXX	360-31147-2	V50104.D	11/22/2010 20:07
OC-SB-480-0.0/1.0-XXX	360-31147-3	V50105.D	11/22/2010 20:32
OC-SB-481-0.0/1.0-XXX	360-31147-6	V50106.D	11/22/2010 20:56
OC-SB-500-0.5/3.0-XXX	360-31147-8	V50107.D	11/22/2010 21:20
OC-SB-501-0.5/3.0-XXX	360-31147-9	V50108.D	11/22/2010 21:44
OC-SB-502-3.0/5.0-XXX	360-31147-10	V50109.D	11/22/2010 22:08
OC-TBK-057	360-31147-11	V50110.D	11/22/2010 22:32

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab File ID: V49627.D BFB Injection Date: 10/19/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 15:27

Analysis Batch No.: 64639

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.5	
75	30.0 - 60.0 % of mass 95	45.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	64.3	
175	5.0 - 9.0 % of mass 174	5.3	(8.2)1
176	95.0 - 101.0 % of mass 174	62.1	(96.6)1
177	5.0 - 9.0 % of mass 176	3.9	(6.3)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD05 360-64639/5	V49628.D	10/19/2010	15:51
	STD1 360-64639/6	V49629.D	10/19/2010	16:15
	STD5 360-64639/7	V49630.D	10/19/2010	16:57
	STD10 360-64639/8	V49631.D	10/19/2010	17:20
	STD20 360-64639/9	V49632.D	10/19/2010	17:44
	STD40 360-64639/10	V49633.D	10/19/2010	18:08
	STD80 360-64639/11	V49634.D	10/19/2010	18:32

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Sample No.: CCVIS 360-66169/3 Date Analyzed: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50069.D Heated Purge: (Y/N) N

Calibration ID: 9957

		12DCE		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		12764	6.22	260301	6.43	151696	8.84
UPPER LIMIT		25528	6.72	520602	6.93	303392	9.34
LOWER LIMIT		6382	5.72	130151	5.93	75848	8.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66168/1-A		12312	6.21	250537	6.44	144756	8.85
LCSD 360-66168/2-A		12017	6.21	247018	6.43	145208	8.84
MB 360-66168/3-A		11992	6.21	265276	6.43	150688	8.84
360-31147-4	OC-SB-480-6.0/8.0-DUP	13724	6.21	303756	6.43	175963	8.84
360-31147-5	OC-SB-480-6.0/8.0-XXX	13006	6.21	282707	6.43	163766	8.84
360-31147-7	OC-SB-481-7.0/9.0-XXX	12708	6.21	265625	6.43	153621	8.84
360-31147-7 MS	OC-SB-481-7.0/9.0-XXX MS	12056	6.22	255374	6.44	148957	8.85
360-31147-7 MSD	OC-SB-481-7.0/9.0-XXX MSD	11490	6.22	241733	6.44	141627	8.85

12DCE = 1,2-Dichloroethane-d4 ISTD
FB = Fluorobenzene
CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Sample No.: CCVIS 360-66169/3 Date Analyzed: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50069.D Heated Purge: (Y/N) N

Calibration ID: 9957

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		40978	10.68				
UPPER LIMIT		81956	11.18				
LOWER LIMIT		20489	10.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66168/1-A		38299	10.68				
LCSD 360-66168/2-A		38769	10.68				
MB 360-66168/3-A		40726	10.68				
360-31147-4	OC-SB-480-6.0/8.0-DUP	47660	10.68				
360-31147-5	OC-SB-480-6.0/8.0-XXX	44520	10.68				
360-31147-7	OC-SB-481-7.0/9.0-XXX	42521	10.68				
360-31147-7 MS	OC-SB-481-7.0/9.0-XXX MS	38301	10.69				
360-31147-7 MSD	OC-SB-481-7.0/9.0-XXX MSD	37341	10.69				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Sample No.: CCVIS 360-66227/2 Date Analyzed: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50097.D Heated Purge: (Y/N) N

Calibration ID: 9957

		12DCE		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		14043	6.22	268365	6.44	155102	8.85
UPPER LIMIT		28086	6.72	536730	6.94	310204	9.35
LOWER LIMIT		7022	5.72	134183	5.94	77551	8.35
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66225/1-A		13502	6.21	262449	6.44	153834	8.85
LCSD 360-66225/2-A		12957	6.21	253143	6.44	146910	8.85
MB 360-66225/3-A		11938	6.22	262737	6.45	149382	8.85
360-31147-1	OC-SB-479-0.0/1.0-XXX	12657	6.23	280551	6.45	160957	8.86
360-31147-2	OC-SB-479-8.0/10-XXX	12449	6.22	280546	6.44	160993	8.85
360-31147-3	OC-SB-480-0.0/1.0-XXX	13297	6.22	283671	6.44	166301	8.85
360-31147-6	OC-SB-481-0.0/1.0-XXX	12323	6.22	279754	6.44	161011	8.85
360-31147-8	OC-SB-500-0.5/3.0-XXX	13748	6.22	282080	6.44	164295	8.85
360-31147-9	OC-SB-501-0.5/3.0-XXX	13243	6.22	287265	6.45	166330	8.85
360-31147-10	OC-SB-502-3.0/5.0-XXX	13127	6.22	276686	6.44	159229	8.85
360-31147-11	OC-TBK-057	12375	6.22	273816	6.44	159993	8.85

12DCE = 1,2-Dichloroethane-d4 ISTD
FB = Fluorobenzene
CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Sample No.: CCVIS 360-66227/2 Date Analyzed: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50097.D Heated Purge: (Y/N) N

Calibration ID: 9957

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		40279	10.69				
UPPER LIMIT		80558	11.19				
LOWER LIMIT		20140	10.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66225/1-A		40818	10.69				
LCSD 360-66225/2-A		39952	10.69				
MB 360-66225/3-A		40809	10.68				
360-31147-1	OC-SB-479-0.0/1.0-XXX	44407	10.69				
360-31147-2	OC-SB-479-8.0/10-XXX	44682	10.69				
360-31147-3	OC-SB-480-0.0/1.0-XXX	44667	10.69				
360-31147-6	OC-SB-481-0.0/1.0-XXX	42914	10.69				
360-31147-8	OC-SB-500-0.5/3.0-XXX	46279	10.69				
360-31147-9	OC-SB-501-0.5/3.0-XXX	45173	10.69				
360-31147-10	OC-SB-502-3.0/5.0-XXX	43099	10.69				
360-31147-11	OC-TBK-057	42438	10.69				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31147-1 Analy Batch No.: 64639

SDG No.: 360-31147-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.6302 0.5057	0.5422 0.4539	0.6376	0.5918	0.5651	Ave		0.5609				12.0		15.0			
2,4,4-Trimethyl-2-pentene	0.1788 0.1635	0.1486 0.1556	0.1989	0.1795	0.1798	Ave		0.1721				10.0		15.0			
Dibromomethane	0.1116 0.1139	0.0988 0.1157	0.1113	0.1064	0.1080	Ave		0.1094				5.2		15.0			
1,2-Dichloropropane	0.2842 0.2539	0.2611 0.2474	0.2660	0.2581	0.2570	Ave		0.2611			0.1000	4.5		15.0			
Dichlorobromomethane	0.3455 0.3229	0.2876 0.3351	0.3208	0.2988	0.3092	Ave		0.3171			0.2000	6.4		15.0			
cis-1,3-Dichloropropene	0.3482 0.3919	0.3158 0.4084	0.3396	0.3447	0.3637	Ave		0.3589			0.2000	8.9		15.0			
Toluene	0.6683 0.6769	0.6021 0.6928	0.6557	0.6600	0.6792	Ave		0.6621			0.4000	4.4		15.0			
4-Methyl-2-pentanone (MIBK)	0.1202 0.1231	0.1142 0.1125	0.1366	0.1247	0.1193	Ave		0.1215			0.1000	6.5		15.0			
Tetrachloroethene	0.1688 0.1823	0.1732 0.1815	0.1906	0.1875	0.1891	Lin2F		0.1819							0.9980		0.9900
trans-1,3-Dichloropropene	0.2631 0.2649	0.2203 0.2616	0.2380	0.2455	0.2439	Ave		0.2482			0.1000	6.6		15.0			
1,1,2-Trichloroethane	0.1701 0.1211	0.1226 0.1260	0.1171	0.1143	0.1140	Lin1F		0.1223							0.9980		0.9900
Chlorodibromomethane	0.1657 0.1812	0.1499 0.1896	0.1663	0.1643	0.1661	Ave		0.1690			0.1000	7.6		15.0			
1,3-Dichloropropane	0.2540 0.2734	0.2376 0.2849	0.2421	0.2386	0.2449	Ave		0.2536				7.3		15.0			
Ethylene Dibromide	0.1254 0.1387	0.1260 0.1408	0.1180	0.1200	0.1213	Ave		0.1272				7.1		15.0			
2-Hexanone	0.0677 0.0768	0.0678 0.0759	0.0719	0.0710	0.0677	Lin2F		0.0712							0.9960		0.9900
Chlorobenzene	1.0627 0.9706	0.9713 0.8717	1.0399	1.0334	0.9781	Ave		0.9897			0.5000	6.5		15.0			
Ethylbenzene	2.1702 1.8831	1.9278 1.6648	2.1443	2.0671	1.9570	Ave		1.9735			0.1000	8.8		15.0			
1,1,1,2-Tetrachloroethane	0.4041 0.3748	0.3529 0.3524	0.4316	0.3970	0.3751	Ave		0.3840				7.5		15.0			
m-Xylene & p-Xylene	1.6041 1.4464	1.4824 1.2541	1.6401	1.5967	1.5190	Ave		1.5061			0.1000	8.7		15.0			
o-Xylene	1.7538 1.6426	1.6111 1.5033	1.8534	1.7395	1.6805	Ave		1.6834			0.3000	6.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31147-1 Analy Batch No.: 64639

SDG No.: 360-31147-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Styrene	1.2526 1.1571	1.1382 1.0605	1.2406	1.2195	1.1584	Ave		1.1753			0.3000	5.7		15.0			
Bromoform	0.4503 0.4884	0.4070 0.5244	0.4807	0.4610	0.4602	Ave		0.4674			0.1000	7.8		15.0			
Isopropylbenzene	2.0977 1.9899	1.9733 1.8033	2.3384	2.2169	2.1003	Ave		2.0742			0.1000	8.4		15.0			
Bromobenzene	0.9254 0.7523	0.8493 0.6343	0.8605	0.8339	0.7828	Ave		0.8055				12.0		15.0			
N-Propylbenzene	2.6345 2.2976	2.4737 1.9633	2.7220	2.6229	2.4885	Ave		2.4575				11.0		15.0			
1,1,2,2-Tetrachloroethane	1.0444 0.8807	0.9559 0.8996	1.0437	0.9058	0.8693	Ave		0.9428			0.3000	7.9		15.0			
2-Chlorotoluene	1.8050 1.5148	1.6546 1.2827	1.8250	1.7386	1.6097	Ave		1.6329				12.0		15.0			
1,3,5-Trimethylbenzene	1.8425 1.5324	1.6848 1.2880	1.8913	1.7871	1.6734	Ave		1.6714				12.0		15.0			
1,2,3-Trichloropropane	0.0688 0.0627	0.0763 0.0558	0.0702	0.0666	0.0597	Ave		0.0657				11.0		15.0			
4-Chlorotoluene	1.5858 1.4350	1.4261 1.2970	1.5566	1.5253	1.4434	Ave		1.4670				6.7		15.0			
tert-Butylbenzene	1.4423 1.3828	1.3481 1.2109	1.5691	1.5216	1.4497	Ave		1.4178				8.4		15.0			
1,2,4-Trimethylbenzene	1.8537 1.6176	1.6847 1.4089	1.8972	1.8102	1.7048	Ave		1.7110				9.7		15.0			
sec-Butylbenzene	2.4617 2.1517	2.2481 1.8752	2.5731	2.4344	2.3187	Ave		2.2947				10.0		15.0			
4-Isopropyltoluene	1.8471 1.6602	1.7523 1.4307	1.9824	1.8948	1.7861	Ave		1.7648				10.0		15.0			
1,3-Dichlorobenzene	0.8884 0.7706	0.8439 0.6817	0.9072	0.8653	0.8043	Ave		0.8231			0.6000	9.5		15.0			
1,4-Dichlorobenzene	2.9281 2.6648	2.6230 2.6276	2.8210	2.6997	2.6969	Ave		2.7230			0.5000	4.1		15.0			
n-Butylbenzene	5.9340 6.1834	5.7271 5.9156	6.8181	6.5415	6.6550	Ave		6.2535				6.7		15.0			
1,2-Dichlorobenzene	2.4372 2.3768	2.2345 2.3063	2.5624	2.3941	2.4143	Ave		2.3894			0.4000	4.3		15.0			
1,2-Dibromo-3-Chloropropane	0.1081 0.1429	0.1404 0.1325	0.1502	0.1315	0.1288	Ave		0.1335			0.0500	10.0		15.0			
Hexachlorobutadiene	0.8455 0.9800	0.7323 0.9263	1.0598	0.9539	1.0073	Ave		0.9293				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31147-1 Analy Batch No.: 64639

SDG No.: 360-31147-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trichlorobenzene	1.3308 1.5398	1.2432 1.4548	1.6417	1.5254	1.5291	Ave		1.4664				9.3		15.0			
Naphthalene	2.1295 2.3739	1.8952 2.2375	2.4784	2.2292	2.2730	Ave		2.2310				8.3		15.0			
1,2,3-Trichlorobenzene	1.0451 1.1525	0.9495 1.0860	1.2307	1.1257	1.1583	Ave		1.1068			0.2000	8.2		15.0			
Dibromofluoromethane	0.2370 0.2495	0.2402 0.2577	0.2465	0.2413	0.2420	Ave		0.2449				2.9		15.0			
Toluene-d8 (Surr)	0.8087 0.9412	0.8314 1.0360	0.8346	0.8647	0.8865	Ave		0.8862				8.9		15.0			
4-Bromofluorobenzene	0.5134 0.5176	0.5214 0.5062	0.4999	0.5100	0.4859	Ave		0.5078				2.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66169/3 Calibration Date: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50069.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6695	0.4000	20.2	20.0	1.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1075	0.1000	177	200	-11.5	20.0
Tetrachloroethene	Lin2F		0.1661*	0.2000	18.3	20.0	-8.7	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2197	0.1000	17.7	20.0	-11.5	20.0
1,1,2-Trichloroethane	Lin1F		0.1056	0.1000	17.3	20.0	-13.7	20.0
Chlorodibromomethane	Ave	0.1690	0.1432	0.1000	16.9	20.0	-15.3	20.0
1,3-Dichloropropane	Ave	0.2536	0.2360		18.6	20.0	-7.0	20.0
Ethylene Dibromide	Ave	0.1272	0.1138		17.9	20.0	-10.5	20.0
2-Hexanone	Lin2F		0.0674*	0.1000	189	200	-5.3	20.0
Chlorobenzene	Ave	0.9897	0.9609	0.5000	19.4	20.0	-2.9	20.0
Ethylbenzene	Ave	1.973	2.022	0.1000	20.5	20.0	2.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3383		17.6	20.0	-11.9	20.0
m-Xylene & p-Xylene	Ave	1.506	1.535	0.1000	40.8	40.0	1.9	20.0
o-Xylene	Ave	1.683	1.653	0.3000	19.6	20.0	-1.8	20.0
Styrene	Ave	1.175	1.104	0.3000	18.8	20.0	-6.1	20.0
Bromoform	Ave	0.4674	0.4150	0.1000	17.8	20.0	-11.2	20.0
Isopropylbenzene	Ave	2.074	1.901	0.1000	18.3	20.0	-8.4	20.0
Bromobenzene	Ave	0.8055	0.7086		17.6	20.0	-12.0	20.0
N-Propylbenzene	Ave	2.457	2.363		19.2	20.0	-3.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8785	0.3000	18.6	20.0	-6.8	20.0
2-Chlorotoluene	Ave	1.633	1.474		18.1	20.0	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.466		17.5	20.0	-12.3	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0596		18.1	20.0	-9.4	20.0
4-Chlorotoluene	Ave	1.467	1.342		18.3	20.0	-8.5	20.0
tert-Butylbenzene	Ave	1.418	1.324		18.7	20.0	-6.6	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.078		24.3	20.0	21.5*	20.0
sec-Butylbenzene	Ave	2.295	2.078		18.1	20.0	-9.4	20.0
4-Isopropyltoluene	Ave	1.765	1.615		18.3	20.0	-8.5	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7323	0.6000	17.8	20.0	-11.0	20.0
1,4-Dichlorobenzene	Ave	2.723	2.613	0.5000	19.2	20.0	-4.0	20.0
n-Butylbenzene	Ave	6.254	6.561		21.0	20.0	4.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.357	0.4000	19.7	20.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1224	0.0500	18.3	20.0	-8.3	20.0
Hexachlorobutadiene	Ave	0.9293	0.8751		18.8	20.0	-5.8	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.500	0.2000	20.5	20.0	2.3	20.0
Naphthalene	Ave	2.231	2.308		20.7	20.0	3.5	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.146		20.7	20.0	3.6	20.0
Dibromofluoromethane	Ave	0.2449	0.2313		18.9	20.0	-5.5	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9056		20.4	20.0	2.2	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5096		20.1	20.0	0.4	20.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31147-1

SDG No.: 360-31147-1

Client Sample ID: | Lab Sample ID: MB 360-66168/3-A

Matrix: Solid | Lab File ID: V50074.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 10(g) | Date Analyzed: 11/19/2010 18:53

Soil Aliquot Vol: 100 (uL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66169 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	60
71-55-6	1,1,1-Trichloroethane	ND		120	100
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	50
79-00-5	1,1,2-Trichloroethane	ND		120	50
75-34-3	1,1-Dichloroethane	ND		120	95
75-35-4	1,1-Dichloroethene	ND		120	80
563-58-6	1,1-Dichloropropene	ND		120	75
87-61-6	1,2,3-Trichlorobenzene	ND		120	55
96-18-4	1,2,3-Trichloropropane	ND		120	60
120-82-1	1,2,4-Trichlorobenzene	ND		120	50
95-63-6	1,2,4-Trimethylbenzene	ND		120	70
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1200	140
95-50-1	1,2-Dichlorobenzene	ND		120	50
107-06-2	1,2-Dichloroethane	ND		120	50
78-87-5	1,2-Dichloropropane	ND		120	80
108-67-8	1,3,5-Trimethylbenzene	ND		120	75
541-73-1	1,3-Dichlorobenzene	ND		120	50
142-28-9	1,3-Dichloropropane	ND		120	57
106-46-7	1,4-Dichlorobenzene	ND		120	50
123-91-1	1,4-Dioxane	ND		12000	5000
594-20-7	2,2-Dichloropropane	ND		120	100
78-93-3	2-Butanone (MEK)	ND		1200	540
95-49-8	2-Chlorotoluene	ND		120	65
591-78-6	2-Hexanone	ND		1200	700
106-43-4	4-Chlorotoluene	ND		120	60
99-87-6	4-Isopropyltoluene	ND		120	75
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1200	510
67-64-1	Acetone	ND		12000	860
71-43-2	Benzene	ND		120	80
108-86-1	Bromobenzene	ND		120	50
75-25-2	Bromoform	ND		120	80
74-83-9	Bromomethane	ND		250	120
75-15-0	Carbon disulfide	ND		120	95
56-23-5	Carbon tetrachloride	ND		120	85
108-90-7	Chlorobenzene	ND		120	60
74-97-5	Chlorobromomethane	ND		120	69

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield
Job No.: 360-31147-1
SDG No.: 360-31147-1
Client Sample ID:
Lab Sample ID: MB 360-66168/3-A
Matrix: Solid
Lab File ID: V50074.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 10(g)
Date Analyzed: 11/19/2010 18:53
Soil Aliquot Vol: 100 (uL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66169
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Chlorodibromomethane	ND		120	60
75-00-3	Chloroethane	ND		250	100
67-66-3	Chloroform	ND		120	75
74-87-3	Chloromethane	ND		250	80
156-59-2	cis-1,2-Dichloroethene	ND		120	59
10061-01-5	cis-1,3-Dichloropropene	ND		120	50
74-95-3	Dibromomethane	ND		120	63
75-27-4	Dichlorobromomethane	ND		120	64
75-71-8	Dichlorodifluoromethane	ND		250	100
60-29-7	Ethyl ether	ND		120	53
100-41-4	Ethylbenzene	ND		120	90
106-93-4	Ethylene Dibromide	ND		120	56
87-68-3	Hexachlorobutadiene	ND		120	75
108-20-3	Isopropyl ether	ND		120	56
98-82-8	Isopropylbenzene	ND		120	75
179601-23-1	m-Xylene & p-Xylene	ND		250	180
1634-04-4	Methyl tert-butyl ether	ND		120	75
75-09-2	Methylene Chloride	ND		500	490
104-51-8	n-Butylbenzene	ND		120	60
103-65-1	N-Propylbenzene	ND		120	85
91-20-3	Naphthalene	ND		1200	120
95-47-6	o-Xylene	ND		120	65
135-98-8	sec-Butylbenzene	ND		120	70
100-42-5	Styrene	ND		120	50
994-05-8	Tert-amyl methyl ether	ND		120	75
637-92-3	Tert-butyl ethyl ether	ND		120	72
98-06-6	tert-Butylbenzene	ND		120	70
127-18-4	Tetrachloroethene	ND		120	90
109-99-9	Tetrahydrofuran	ND		1200	620
108-88-3	Toluene	ND		120	90
156-60-5	trans-1,2-Dichloroethene	ND		120	80
10061-02-6	trans-1,3-Dichloropropene	ND		120	52
79-01-6	Trichloroethene	ND		120	100
75-69-4	Trichlorofluoromethane	ND		250	71
75-01-4	Vinyl chloride	ND		120	85
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		620	72

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield
Job No.: 360-31147-1
SDG No.: 360-31147-1
Client Sample ID:
Lab Sample ID: MB 360-66168/3-A
Matrix: Solid
Lab File ID: V50074.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 10(g)
Date Analyzed: 11/19/2010 18:53
Soil Aliquot Vol: 100 (uL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66169
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-39-1	2,4,4-Trimethyl-1-pentene	ND		250	82
107-40-4	2,4,4-Trimethyl-2-pentene	ND		250	54
110-82-7	Cyclohexane	ND		1200	50
79-20-9	Methyl acetate	ND		2500	700
108-87-2	Methylcyclohexane	ND		120	80

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene	97		70-130
2037-26-5	Toluene-d8 (Surr)	97		70-130
1868-53-7	Dibromofluoromethane	89		70-130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Westfield
Job No.: 360-31147-1
SDG No.: 360-31147-1
Client Sample ID:
Lab Sample ID: MB 360-66168/3-A
Matrix: Solid
Lab File ID: V50074.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 10(g)
Date Analyzed: 11/19/2010 18:53
Soil Aliquot Vol: 100 (uL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66169
Units: ug/Kg
Number TICs Found: 0
TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31147-1

SDG No.: 360-31147-1

Client Sample ID: | Lab Sample ID: MB 360-66225/3-A

Matrix: Solid | Lab File ID: V50102.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/22/2010 19:18

Soil Aliquot Vol: 5 (mL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66227 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.5	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.5	2.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.5	1.0
79-00-5	1,1,2-Trichloroethane	ND		2.5	1.0
75-34-3	1,1-Dichloroethane	ND		2.5	1.9
75-35-4	1,1-Dichloroethene	ND		2.5	1.6
563-58-6	1,1-Dichloropropene	ND		2.5	1.5
87-61-6	1,2,3-Trichlorobenzene	ND		2.5	1.1
96-18-4	1,2,3-Trichloropropane	ND		2.5	1.2
120-82-1	1,2,4-Trichlorobenzene	ND		2.5	1.0
95-63-6	1,2,4-Trimethylbenzene	ND		2.5	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	ND		25	2.8
95-50-1	1,2-Dichlorobenzene	ND		2.5	1.0
107-06-2	1,2-Dichloroethane	ND		2.5	1.0
78-87-5	1,2-Dichloropropane	ND		2.5	1.6
108-67-8	1,3,5-Trimethylbenzene	ND		2.5	1.5
541-73-1	1,3-Dichlorobenzene	ND		2.5	1.0
142-28-9	1,3-Dichloropropane	ND		2.5	1.1
106-46-7	1,4-Dichlorobenzene	ND		2.5	1.0
123-91-1	1,4-Dioxane	ND		250	100
594-20-7	2,2-Dichloropropane	ND		2.5	2.1
78-93-3	2-Butanone (MEK)	ND		25	11
95-49-8	2-Chlorotoluene	ND		2.5	1.3
591-78-6	2-Hexanone	ND		25	14
106-43-4	4-Chlorotoluene	ND		2.5	1.2
99-87-6	4-Isopropyltoluene	ND		2.5	1.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		25	10
67-64-1	Acetone	ND		250	17
71-43-2	Benzene	ND		2.5	1.6
108-86-1	Bromobenzene	ND		2.5	1.0
75-25-2	Bromoform	ND		2.5	1.6
74-83-9	Bromomethane	ND		5.0	2.3
75-15-0	Carbon disulfide	ND		2.5	1.9
56-23-5	Carbon tetrachloride	ND		2.5	1.7
108-90-7	Chlorobenzene	ND		2.5	1.2
74-97-5	Chlorobromomethane	ND		2.5	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31147-1

SDG No.: 360-31147-1

Client Sample ID: | Lab Sample ID: MB 360-66225/3-A

Matrix: Solid | Lab File ID: V50102.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/22/2010 19:18

Soil Aliquot Vol: 5 (mL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66227 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Chlorodibromomethane	ND		2.5	1.2
75-00-3	Chloroethane	ND		5.0	2.0
67-66-3	Chloroform	ND		2.5	1.5
74-87-3	Chloromethane	ND		5.0	1.6
156-59-2	cis-1,2-Dichloroethene	ND		2.5	1.2
10061-01-5	cis-1,3-Dichloropropene	ND		2.5	1.0
74-95-3	Dibromomethane	ND		2.5	1.3
75-27-4	Dichlorobromomethane	ND		2.5	1.3
75-71-8	Dichlorodifluoromethane	ND		5.0	2.1
60-29-7	Ethyl ether	ND		2.5	1.1
100-41-4	Ethylbenzene	ND		2.5	1.8
106-93-4	Ethylene Dibromide	ND		2.5	1.1
87-68-3	Hexachlorobutadiene	ND		2.5	1.5
108-20-3	Isopropyl ether	ND		2.5	1.1
98-82-8	Isopropylbenzene	ND		2.5	1.5
179601-23-1	m-Xylene & p-Xylene	ND		5.0	3.5
1634-04-4	Methyl tert-butyl ether	ND		2.5	1.5
75-09-2	Methylene Chloride	ND		10	9.8
104-51-8	n-Butylbenzene	ND		2.5	1.2
103-65-1	N-Propylbenzene	ND		2.5	1.7
91-20-3	Naphthalene	ND		25	2.3
95-47-6	o-Xylene	ND		2.5	1.3
135-98-8	sec-Butylbenzene	ND		2.5	1.4
100-42-5	Styrene	ND		2.5	1.0
994-05-8	Tert-amyl methyl ether	ND		2.5	1.5
637-92-3	Tert-butyl ethyl ether	ND		2.5	1.4
98-06-6	tert-Butylbenzene	ND		2.5	1.4
127-18-4	Tetrachloroethene	ND		2.5	1.8
109-99-9	Tetrahydrofuran	15.3	J	25	12
108-88-3	Toluene	ND		2.5	1.8
156-60-5	trans-1,2-Dichloroethene	ND		2.5	1.6
10061-02-6	trans-1,3-Dichloropropene	ND		2.5	1.0
79-01-6	Trichloroethene	ND		2.5	2.1
75-69-4	Trichlorofluoromethane	ND		5.0	1.4
75-01-4	Vinyl chloride	ND		2.5	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		12	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31147-1

SDG No.: 360-31147-1

Client Sample ID: | Lab Sample ID: MB 360-66225/3-A

Matrix: Solid | Lab File ID: V50102.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/22/2010 19:18

Soil Aliquot Vol: 5 (mL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66227 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-39-1	2,4,4-Trimethyl-1-pentene	ND		5.0	1.6
107-40-4	2,4,4-Trimethyl-2-pentene	ND		5.0	1.1
110-82-7	Cyclohexane	ND		25	1.0
79-20-9	Methyl acetate	ND		50	14
108-87-2	Methylcyclohexane	ND		2.5	1.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene	101		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130
1868-53-7	Dibromofluoromethane	90		70-130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Westfield
Job No.: 360-31147-1
SDG No.: 360-31147-1
Client Sample ID:
Lab Sample ID: MB 360-66225/3-A
Matrix: Solid
Lab File ID: V50102.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 5(g)
Date Analyzed: 11/22/2010 19:18
Soil Aliquot Vol: 5 (mL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66227
Units: ug/Kg
Number TICs Found: 0
TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I-TIC 8260C

VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for OLIN CHEMICAL SUPERFUND SITE

Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / (II) / III (circle one)

SITE: Olin Chemical Project #: 61071000 16-12 SDG #: 360-31167-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
			Data completeness	
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☑	☐	☐	Data summaries match EDD	
			Holding Times and Preservation	
☑	☐	☐	Hold times met (14 days with preservation)	
☑	☐	☐	Preserved (waters HCL, soils methanol)	
			Instrument Performance Check (Tune)	
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
			Initial Calibration	
☑	☐	☐	%RSD less than or equal to 30%	
* ☐	☑	☐	RRF greater than or equal to 0.05 J/UJ	tetrahydrofuran, acetone, 1,4-Dioxane
			Continuing Calibration	
* ☐	☑	☐	%D less than or equal to 25%	see attached Form V for details
* ☐	☑	☐	RRF greater than or equal to 0.05.	
			Blank Contamination	Evaluate all blanks for contamination. Highest contaminant level used for action level.
☑	☐	☐	Method blank contamination	
☐	☑	☐	Trip blank contamination	→ Acetone; tetrahydrofuran in method blanks but not in associated samples
☐	☐	☑	Equipment/Rinseate blank contamination	
			Surrogate Recoveries	

VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for OLIN CHEMICAL SUPERFUND SITE

Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / (II) / III (circle one)

Yes	No	N/A		
☑	☐	☐	Surrogates percent recovery criteria met (water and soil: 70%-130%)	OC-SB-475-10/18-XXX MS MSD
			Matrix Spikes and Laboratory Control Samples	Dichlorodifluoromethane 64 68
☐	☑	☐	MS/MSD percent recovery criteria met (water and soil: 70%-130%)	trichlorofluoromethane 65 67
☑	☐	☐	MS/MSD RPD criteria met (water and soil <30%)	
☐	☑	☐	LCS percent recovery criteria (water and soil: 70%-130%)	see attached Form V for outliers
			Field Duplicates	2,2,4-trimethyl-1-pentene RPD= 69%
☐	☑	☐	RPD criteria (water <30%, soils <50%) met	2,2,4-trimethyl-2-pentene RPD= 100% J Qual FS & FD
			Internal Standard	
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
			Target Compounds	
☑	☐	☐	Reviewed narrative for anomalies	
			Tentatively Identified Compounds (TICs)	No TIC's were detected in Samples
☐	☑	☐	TCL compounds reported as TICs	

Validator's Signature: [signature]

Date: 12/19/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50111.D
Dilution:	1.0			Initial Weight/Volume:	4.64 g
Date Analyzed:	11/22/2010 2256			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.5	3.1
1,1,1-Trichloroethane		ND		2.5	3.1
1,1,2,2-Tetrachloroethane		ND		1.3	3.1
1,1,2-Trichloroethane		ND		1.3	3.1
1,1-Dichloroethane		ND		2.4	3.1
1,1-Dichloroethene		ND		2.0	3.1
1,1-Dichloropropene		ND		1.9	3.1
1,2,3-Trichlorobenzene		ND		1.4	3.1
1,2,3-Trichloropropane		ND		1.5	3.1
1,2,4-Trichlorobenzene		ND		1.3	3.1
1,2,4-Trimethylbenzene		ND	UJ	1.8	3.1
1,2-Dibromo-3-Chloropropane		ND		3.5	31
1,2-Dichlorobenzene		ND		1.3	3.1
1,2-Dichloroethane		ND		1.3	3.1
1,2-Dichloropropane		ND		2.0	3.1
1,3,5-Trimethylbenzene		ND		1.9	3.1
1,3-Dichlorobenzene		ND		1.3	3.1
1,3-Dichloropropane		ND		1.4	3.1
1,4-Dichlorobenzene		ND		1.3	3.1
1,4-Dioxane		ND	UJ	130	310
2,2-Dichloropropane		ND		2.6	3.1
2-Butanone (MEK)		ND	UJ	14	31
2-Chlorotoluene		ND		1.6	3.1
2-Hexanone		ND		18	31
4-Chlorotoluene		ND		1.5	3.1
4-Isopropyltoluene		ND		1.9	3.1
4-Methyl-2-pentanone (MIBK)		ND		13	31
Acetone		23	J	22	310
Benzene		ND		2.0	3.1
Bromobenzene		ND		1.3	3.1
Bromoform		ND		2.0	3.1
Bromomethane		ND		2.9	6.3
Carbon disulfide		ND		2.4	3.1
Carbon tetrachloride		ND		2.1	3.1
Chlorobenzene		ND		1.5	3.1
Chlorobromomethane		ND		1.7	3.1
Chlorodibromomethane		ND		1.5	3.1
Chloroethane		ND		2.5	6.3
Chloroform		ND		1.9	3.1
Chloromethane		ND		2.0	6.3
cis-1,2-Dichloroethene		ND		1.5	3.1
cis-1,3-Dichloropropene		ND		1.3	3.1
Dibromomethane		ND		1.6	3.1
Dichlorobromomethane		ND		1.6	3.1
Dichlorodifluoromethane		ND		2.6	6.3
Ethyl ether		ND		1.3	3.1

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50111.D
Dilution:	1.0			Initial Weight/Volume:	4.64 g
Date Analyzed:	11/22/2010 2256			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.3	3.1
Ethylene Dibromide		ND		1.4	3.1
Hexachlorobutadiene		ND		1.9	3.1
Isopropyl ether		ND		1.4	3.1
Isopropylbenzene		ND		1.9	3.1
m-Xylene & p-Xylene		ND		4.4	6.3
Methyl tert-butyl ether		ND		1.9	3.1
Methylene Chloride		ND		12	13
n-Butylbenzene		ND		1.5	3.1
N-Propylbenzene		ND		2.1	3.1
Naphthalene		ND		2.9	31
o-Xylene		ND		1.6	3.1
sec-Butylbenzene		ND		1.8	3.1
Styrene		ND		1.3	3.1
Tert-amyl methyl ether		ND		1.9	3.1
Tert-butyl ethyl ether		ND		1.8	3.1
tert-Butylbenzene		ND		1.8	3.1
Tetrachloroethene		ND		2.3	3.1
Tetrahydrofuran		ND UJ		16	31
Toluene		ND		2.3	3.1
trans-1,2-Dichloroethene		ND		2.0	3.1
trans-1,3-Dichloropropene		ND		1.3	3.1
Trichloroethene		ND		2.6	3.1
Trichlorofluoromethane		ND		1.8	6.3
Vinyl chloride		ND		2.1	3.1
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.8	16
2,4,4-Trimethyl-1-pentene		ND		2.1	6.3
2,4,4-Trimethyl-2-pentene		ND		1.4	6.3
Cyclohexane		ND		1.3	31
Methyl acetate		ND		18	63
Methylcyclohexane		ND		2.0	3.1

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	88		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50111.D
Dilution:	1.0			Initial Weight/Volume:	4.64 g
Date Analyzed:	11/22/2010 2256			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50112.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Date Analyzed:	11/22/2010 2319			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.3	2.6
1,1,1-Trichloroethane		ND		2.1	2.6
1,1,2,2-Tetrachloroethane		ND		1.0	2.6
1,1,2-Trichloroethane		ND		1.0	2.6
1,1-Dichloroethane		ND		2.0	2.6
1,1-Dichloroethene		ND		1.7	2.6
1,1-Dichloropropene		ND		1.6	2.6
1,2,3-Trichlorobenzene		ND		1.2	2.6
1,2,3-Trichloropropane		ND		1.3	2.6
1,2,4-Trichlorobenzene		ND		1.0	2.6
1,2,4-Trimethylbenzene		ND	VJ	1.5	2.6
1,2-Dibromo-3-Chloropropane		ND		2.9	26
1,2-Dichlorobenzene		ND		1.0	2.6
1,2-Dichloroethane		ND		1.0	2.6
1,2-Dichloropropane		ND		1.7	2.6
1,3,5-Trimethylbenzene		ND		1.6	2.6
1,3-Dichlorobenzene		ND		1.0	2.6
1,3-Dichloropropane		ND		1.2	2.6
1,4-Dichlorobenzene		ND		1.0	2.6
1,4-Dioxane		ND	VJ	100	260
2,2-Dichloropropane		ND		2.2	2.6
2-Butanone (MEK)		ND	VJ	11	26
2-Chlorotoluene		ND		1.4	2.6
2-Hexanone		ND		15	26
4-Chlorotoluene		ND		1.3	2.6
4-Isopropyltoluene		ND		1.6	2.6
4-Methyl-2-pentanone (MIBK)		ND		11	26
Acetone		ND	VJ	18	260
Benzene		ND		1.7	2.6
Bromobenzene		ND		1.0	2.6
Bromoform		ND		1.7	2.6
Bromomethane		ND		2.4	5.2
Carbon disulfide		ND		2.0	2.6
Carbon tetrachloride		ND		1.8	2.6
Chlorobenzene		ND		1.3	2.6
Chlorobromomethane		ND		1.4	2.6
Chlorodibromomethane		ND		1.3	2.6
Chloroethane		ND		2.1	5.2
Chloroform		ND		1.6	2.6
Chloromethane		ND		1.7	5.2
cis-1,2-Dichloroethene		ND		1.2	2.6
cis-1,3-Dichloropropene		ND		1.0	2.6
Dibromomethane		ND		1.3	2.6
Dichlorobromomethane		ND		1.3	2.6
Dichlorodifluoromethane		ND		2.2	5.2
Ethyl ether		ND		1.1	2.6

TC

12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50112.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Date Analyzed:	11/22/2010 2319			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.9	2.6
Ethylene Dibromide		ND		1.2	2.6
Hexachlorobutadiene		ND		1.6	2.6
Isopropyl ether		ND		1.2	2.6
Isopropylbenzene		ND		1.6	2.6
m-Xylene & p-Xylene		ND		3.7	5.2
Methyl tert-butyl ether		ND		1.6	2.6
Methylene Chloride		ND		10	10
n-Butylbenzene		ND		1.3	2.6
N-Propylbenzene		ND		1.8	2.6
Naphthalene		ND		2.4	26
o-Xylene		ND		1.4	2.6
sec-Butylbenzene		ND		1.5	2.6
Styrene		ND		1.0	2.6
Tert-amyl methyl ether		ND		1.6	2.6
Tert-butyl ethyl ether		ND		1.5	2.6
tert-Butylbenzene		ND		1.5	2.6
Tetrachloroethene		ND		1.9	2.6
Tetrahydrofuran		ND	UJ	13	26
Toluene		ND		1.9	2.6
trans-1,2-Dichloroethene		ND		1.7	2.6
trans-1,3-Dichloropropene		ND		1.1	2.6
Trichloroethene		ND		2.2	2.6
Trichlorofluoromethane		ND		1.5	5.2
Vinyl chloride		ND		1.8	2.6
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.5	13
2,4,4-Trimethyl-1-pentene		ND		1.7	5.2
2,4,4-Trimethyl-2-pentene		ND		1.1	5.2
Cyclohexane		ND		1.0	26
Methyl acetate		ND		15	52
Methylcyclohexane		ND		1.7	2.6

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	88		70 - 130

TC
12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50112.D
Dilution:	1.0			Initial Weight/Volume:	5.73 g
Date Analyzed:	11/22/2010 2319			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC
12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50113.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Date Analyzed:	11/22/2010 2343			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.2	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND	UJ	100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND	UJ	11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		18	J	17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.1
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.1
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.1
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.1
Ethyl ether		ND		1.1	2.5

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50113.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Date Analyzed:	11/22/2010 2343			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.6	5.1
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		10	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.5	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND UJ		13	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.1	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.1
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.5	13
2,4,4-Trimethyl-1-pentene		ND		1.7	5.1
2,4,4-Trimethyl-2-pentene		ND		1.1	5.1
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	51
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	87		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50113.D
Dilution:	1.0			Initial Weight/Volume:	5.86 g
Date Analyzed:	11/22/2010 2343			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50114.D
Dilution:	1.0			Initial Weight/Volume:	4.88 g
Date Analyzed:	11/23/2010 0007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.4	2.8
1,1,1-Trichloroethane		ND		2.3	2.8
1,1,2,2-Tetrachloroethane		ND		1.1	2.8
1,1,2-Trichloroethane		ND		1.1	2.8
1,1-Dichloroethane		ND		2.2	2.8
1,1-Dichloroethene		ND		1.8	2.8
1,1-Dichloropropene		ND		1.7	2.8
1,2,3-Trichlorobenzene		ND		1.3	2.8
1,2,3-Trichloropropane		ND		1.4	2.8
1,2,4-Trichlorobenzene		ND		1.1	2.8
1,2,4-Trimethylbenzene		ND	UJ	1.6	2.8
1,2-Dibromo-3-Chloropropane		ND		3.2	28
1,2-Dichlorobenzene		ND		1.1	2.8
1,2-Dichloroethane		ND		1.1	2.8
1,2-Dichloropropane		ND		1.8	2.8
1,3,5-Trimethylbenzene		ND		1.7	2.8
1,3-Dichlorobenzene		ND		1.1	2.8
1,3-Dichloropropane		ND		1.3	2.8
1,4-Dichlorobenzene		ND		1.1	2.8
1,4-Dioxane		ND	UJ	110	280
2,2-Dichloropropane		ND		2.4	2.8
2-Butanone (MEK)		ND	UJ	12	28
2-Chlorotoluene		ND		1.5	2.8
2-Hexanone		ND		16	28
4-Chlorotoluene		ND		1.4	2.8
4-Isopropyltoluene		ND		1.7	2.8
4-Methyl-2-pentanone (MIBK)		ND		12	28
Acetone		21	J	20	280
Benzene		ND		1.8	2.8
Bromobenzene		ND		1.1	2.8
Bromoform		ND		1.8	2.8
Bromomethane		ND		2.6	5.7
Carbon disulfide		ND		2.2	2.8
Carbon tetrachloride		ND		1.9	2.8
Chlorobenzene		ND		1.4	2.8
Chlorobromomethane		ND		1.6	2.8
Chlorodibromomethane		ND		1.4	2.8
Chloroethane		ND		2.3	5.7
Chloroform		ND		1.7	2.8
Chloromethane		ND		1.8	5.7
cis-1,2-Dichloroethene		ND		1.3	2.8
cis-1,3-Dichloropropene		ND		1.1	2.8
Dibromomethane		ND		1.4	2.8
Dichlorobromomethane		ND		1.5	2.8
Dichlorodifluoromethane		ND		2.4	5.7
Ethyl ether		ND		1.2	2.8

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50114.D
Dilution:	1.0			Initial Weight/Volume:	4.88 g
Date Analyzed:	11/23/2010 0007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.0	2.8
Ethylene Dibromide		ND		1.3	2.8
Hexachlorobutadiene		ND		1.7	2.8
Isopropyl ether		ND		1.3	2.8
Isopropylbenzene		ND		1.7	2.8
m-Xylene & p-Xylene		ND		4.0	5.7
Methyl tert-butyl ether		ND		1.7	2.8
Methylene Chloride		ND		11	11
n-Butylbenzene		ND		1.4	2.8
N-Propylbenzene		ND		1.9	2.8
Naphthalene		ND		2.6	28
o-Xylene		ND		1.5	2.8
sec-Butylbenzene		ND		1.6	2.8
Styrene		ND		1.1	2.8
Tert-amyl methyl ether		ND		1.7	2.8
Tert-butyl ethyl ether		ND		1.6	2.8
tert-Butylbenzene		ND		1.6	2.8
Tetrachloroethene		ND		2.0	2.8
Tetrahydrofuran		ND VJ		14	28
Toluene		ND		2.0	2.8
trans-1,2-Dichloroethene		ND		1.8	2.8
trans-1,3-Dichloropropene		ND		1.2	2.8
Trichloroethene		ND		2.4	2.8
Trichlorofluoromethane		ND		1.6	5.7
Vinyl chloride		ND		1.9	2.8
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.6	14
2,4,4-Trimethyl-1-pentene		ND		1.9	5.7
2,4,4-Trimethyl-2-pentene		ND		1.2	5.7
Cyclohexane		ND		1.1	28
Methyl acetate		ND		16	57
Methylcyclohexane		ND		1.8	2.8

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	89		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50114.D
Dilution:	1.0			Initial Weight/Volume:	4.88 g
Date Analyzed:	11/23/2010 0007			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50151.D
Dilution:	1.0			Initial Weight/Volume:	5.34 g
Date Analyzed:	11/23/2010 1750			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.3	2.6
1,1,1-Trichloroethane		ND		2.1	2.6
1,1,2,2-Tetrachloroethane		ND		1.0	2.6
1,1,2-Trichloroethane		ND		1.0	2.6
1,1-Dichloroethane		ND		2.0	2.6
1,1-Dichloroethene		ND		1.7	2.6
1,1-Dichloropropene		ND		1.6	2.6
1,2,3-Trichlorobenzene		ND		1.1	2.6
1,2,3-Trichloropropane		ND		1.3	2.6
1,2,4-Trichlorobenzene		ND		1.0	2.6
1,2,4-Trimethylbenzene		ND	UJ	1.5	2.6
1,2-Dibromo-3-Chloropropane		ND		2.9	26
1,2-Dichlorobenzene		ND		1.0	2.6
1,2-Dichloroethane		ND		1.0	2.6
1,2-Dichloropropane		ND		1.7	2.6
1,3,5-Trimethylbenzene		ND		1.6	2.6
1,3-Dichlorobenzene		ND		1.0	2.6
1,3-Dichloropropane		ND		1.2	2.6
1,4-Dichlorobenzene		ND		1.0	2.6
1,4-Dioxane		ND	UJ	100	260
2,2-Dichloropropane		ND		2.2	2.6
2-Butanone (MEK)		ND		11	26
2-Chlorotoluene		ND		1.4	2.6
2-Hexanone		ND		15	26
4-Chlorotoluene		ND		1.3	2.6
4-Isopropyltoluene		ND		1.6	2.6
4-Methyl-2-pentanone (MIBK)		ND		11	26
Acetone		ND	J	18	260
Benzene		ND		1.7	2.6
Bromobenzene		ND		1.0	2.6
Bromoform		ND		1.7	2.6
Bromomethane		ND		2.4	5.2
Carbon disulfide		ND		2.0	2.6
Carbon tetrachloride		ND		1.8	2.6
Chlorobenzene		ND		1.3	2.6
Chlorobromomethane		ND		1.4	2.6
Chlorodibromomethane		ND		1.3	2.6
Chloroethane		ND		2.1	5.2
Chloroform		ND		1.6	2.6
Chloromethane		ND		1.7	5.2
cis-1,2-Dichloroethene		ND		1.2	2.6
cis-1,3-Dichloropropene		ND		1.0	2.6
Dibromomethane		ND		1.3	2.6
Dichlorobromomethane		ND		1.3	2.6
Dichlorodifluoromethane		ND	UJ	2.2	5.2
Ethyl ether		ND		1.1	2.6

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50151.D
Dilution:	1.0			Initial Weight/Volume:	5.34 g
Date Analyzed:	11/23/2010 1750			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.9	2.6
Ethylene Dibromide		ND		1.2	2.6
Hexachlorobutadiene		ND		1.6	2.6
Isopropyl ether		ND		1.2	2.6
Isopropylbenzene		ND		1.6	2.6
m-Xylene & p-Xylene		ND		3.6	5.2
Methyl tert-butyl ether		ND		1.6	2.6
Methylene Chloride		ND		10	10
n-Butylbenzene		ND		1.3	2.6
N-Propylbenzene		ND		1.8	2.6
Naphthalene		ND		2.4	26
o-Xylene		ND		1.4	2.6
sec-Butylbenzene		ND		1.5	2.6
Styrene		ND		1.0	2.6
Tert-amyl methyl ether		ND		1.6	2.6
Tert-butyl ethyl ether		ND		1.5	2.6
tert-Butylbenzene		ND		1.5	2.6
Tetrachloroethene		ND		1.9	2.6
Tetrahydrofuran		ND UJ		13	26
Toluene		ND		1.9	2.6
trans-1,2-Dichloroethene		ND		1.7	2.6
trans-1,3-Dichloropropene		ND		1.1	2.6
Trichloroethene		ND		2.2	2.6
Trichlorofluoromethane		ND		1.5	5.2
Vinyl chloride		ND		1.8	2.6
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.5	13
2,4,4-Trimethyl-1-pentene		ND		1.7	5.2
2,4,4-Trimethyl-2-pentene		ND		1.1	5.2
Cyclohexane		ND		1.0	26
Methyl acetate		ND		15	52
Methylcyclohexane		ND		1.7	2.6

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	93		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50151.D
Dilution:	1.0			Initial Weight/Volume:	5.34 g
Date Analyzed:	11/23/2010 1750			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50090.D
Dilution:	1.0			Initial Weight/Volume:	10.64 g
Date Analyzed:	11/20/2010 0118			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		65	130
1,1,1-Trichloroethane	ND		110	130
1,1,2,2-Tetrachloroethane	ND		54	130
1,1,2-Trichloroethane	ND		54	130
1,1-Dichloroethane	ND		100	130
1,1-Dichloroethene	ND		86	130
1,1-Dichloropropene	ND		81	130
1,2,3-Trichlorobenzene	ND		59	130
1,2,3-Trichloropropane	ND		65	130
1,2,4-Trichlorobenzene	ND		54	130
1,2,4-Trimethylbenzene	ND		75	130
1,2-Dibromo-3-Chloropropane	ND		150	1300
1,2-Dichlorobenzene	ND		54	130
1,2-Dichloroethane	ND		54	130
1,2-Dichloropropane	ND		86	130
1,3,5-Trimethylbenzene	ND		81	130
1,3-Dichlorobenzene	ND		54	130
1,3-Dichloropropane	ND		61	130
1,4-Dichlorobenzene	ND		54	130
1,4-Dioxane	ND UJ		5400	13000
2,2-Dichloropropane	ND		110	130
2-Butanone (MEK)	ND		580	1300
2-Chlorotoluene	ND		70	130
2-Hexanone	ND		750	1300
4-Chlorotoluene	ND		65	130
4-Isopropyltoluene	ND		81	130
4-Methyl-2-pentanone (MIBK)	ND		550	1300
Acetone	ND UJ	✓	930	13000
Benzene	ND		86	130
Bromobenzene	ND		54	130
Bromoform	ND		86	130
Bromomethane	ND UJ	✓	120	270
Carbon disulfide	ND		100	130
Carbon tetrachloride	ND		91	130
Chlorobenzene	ND		65	130
Chlorobromomethane	ND		74	130
Chlorodibromomethane	ND		65	130
Chloroethane	ND UJ	✓	110	270
Chloroform	ND		81	130
Chloromethane	ND		86	270
cis-1,2-Dichloroethene	ND		63	130
cis-1,3-Dichloropropene	ND		54	130
Dibromomethane	ND		68	130
Dichlorobromomethane	ND		69	130
Dichlorodifluoromethane	ND UJ		110	270
Ethyl ether	ND		57	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50090.D
Dilution:	1.0			Initial Weight/Volume:	10.64 g
Date Analyzed:	11/20/2010 0118			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		97	130
Ethylene Dibromide		ND		60	130
Hexachlorobutadiene		ND		81	130
Isopropyl ether		ND		60	130
Isopropylbenzene		ND		81	130
m-Xylene & p-Xylene		ND		190	270
Methyl tert-butyl ether		ND		81	130
Methylene Chloride		ND		530	540
n-Butylbenzene		ND		65	130
N-Propylbenzene		ND		91	130
Naphthalene		ND		120	1300
o-Xylene		ND		70	130
sec-Butylbenzene		ND		75	130
Styrene		ND		54	130
Tert-amyl methyl ether		ND		81	130
Tert-butyl ethyl ether		ND		77	130
tert-Butylbenzene		ND		75	130
Tetrachloroethene		ND		97	130
Tetrahydrofuran		ND VJ		670	1300
Toluene		ND		97	130
trans-1,2-Dichloroethene		ND		86	130
trans-1,3-Dichloropropene		ND		56	130
Trichloroethene		ND		110	130
Trichlorofluoromethane		ND		76	270
Vinyl chloride		ND		91	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		77	670
2,4,4-Trimethyl-2-pentene		4300 J		58	270
Cyclohexane		ND		54	1300
Methyl acetate		ND		750	2700
Methylcyclohexane		ND		86	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	101		70 - 130
Dibromofluoromethane	95		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169	Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168	Lab File ID:	V50090.D
Dilution:	1.0		Initial Weight/Volume:	10.64 g
Date Analyzed:	11/20/2010 0118		Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935			

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50130.D
Dilution:	5.0			Initial Weight/Volume:	10.64 g
Date Analyzed:	11/23/2010 0633	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		36000 J		440	1300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50091.D
Dilution:	1.0			Initial Weight/Volume:	10.80 g
Date Analyzed:	11/20/2010 0142			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		65	130
1,1,1-Trichloroethane		ND		110	130
1,1,2,2-Tetrachloroethane		ND		54	130
1,1,2-Trichloroethane		ND		54	130
1,1-Dichloroethane		ND		100	130
1,1-Dichloroethene		ND		86	130
1,1-Dichloropropene		ND		81	130
1,2,3-Trichlorobenzene		ND		59	130
1,2,3-Trichloropropane		ND		65	130
1,2,4-Trichlorobenzene		ND		54	130
1,2,4-Trimethylbenzene		ND		75	130
1,2-Dibromo-3-Chloropropane		ND		150	1300
1,2-Dichlorobenzene		ND		54	130
1,2-Dichloroethane		ND		54	130
1,2-Dichloropropane		ND		86	130
1,3,5-Trimethylbenzene		ND		81	130
1,3-Dichlorobenzene		ND		54	130
1,3-Dichloropropane		ND		61	130
1,4-Dichlorobenzene		ND		54	130
1,4-Dioxane		ND UJ		5400	13000
2,2-Dichloropropane		ND		110	130
2-Butanone (MEK)		ND		580	1300
2-Chlorotoluene		ND		70	130
2-Hexanone		ND		750	1300
4-Chlorotoluene		ND		65	130
4-Isopropyltoluene		ND		81	130
4-Methyl-2-pentanone (MIBK)		ND		550	1300
Acetone		ND UJ		930	13000
Benzene		ND		86	130
Bromobenzene		ND		54	130
Bromoform		ND		86	130
Bromomethane		ND UJ		120	270
Carbon disulfide		ND		100	130
Carbon tetrachloride		ND		91	130
Chlorobenzene		ND		65	130
Chlorobromomethane		ND		74	130
Chlorodibromomethane		ND		65	130
Chloroethane		ND UJ		110	270
Chloroform		ND		81	130
Chloromethane		ND		86	270
cis-1,2-Dichloroethene		ND		63	130
cis-1,3-Dichloropropene		ND		54	130
Dibromomethane		ND		68	130
Dichlorobromomethane		ND		69	130
Dichlorodifluoromethane		ND		110	270
Ethyl ether		ND		57	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50091.D
Dilution:	1.0			Initial Weight/Volume:	10.80 g
Date Analyzed:	11/20/2010 0142			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		97	130
Ethylene Dibromide		ND		60	130
Hexachlorobutadiene		ND		81	130
Isopropyl ether		ND		60	130
Isopropylbenzene		ND		81	130
m-Xylene & p-Xylene		ND		190	270
Methyl tert-butyl ether		ND		81	130
Methylene Chloride		ND		530	540
n-Butylbenzene		ND		65	130
N-Propylbenzene		ND		91	130
Naphthalene		ND		120	1300
o-Xylene		ND		70	130
sec-Butylbenzene		ND		75	130
Styrene		ND		54	130
Tert-amyl methyl ether		ND		81	130
Tert-butyl ethyl ether		ND		77	130
tert-Butylbenzene		ND		75	130
Tetrachloroethene		ND		97	130
Tetrahydrofuran		ND UJ		670	1300
Toluene		ND		97	130
trans-1,2-Dichloroethene		ND		86	130
trans-1,3-Dichloropropene		ND		56	130
Trichloroethene		ND		110	130
Trichlorofluoromethane		ND		76	270
Vinyl chloride		ND		91	130
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		77	670
2,4,4-Trimethyl-2-pentene		13000 J		58	270
Cyclohexane		ND		54	1300
Methyl acetate		ND		750	2700
Methylcyclohexane		ND		86	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	104		70 - 130
Dibromofluoromethane	100		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66169		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66168		Lab File ID:	V50091.D
Dilution:	1.0			Initial Weight/Volume:	10.80 g
Date Analyzed:	11/20/2010 0142			Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 0935				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50131.D
Dilution:	5.0			Initial Weight/Volume:	10.80 g
Date Analyzed:	11/23/2010 0657	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/19/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		74000 J		440	1300

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	99		70 - 130
Dibromofluoromethane	92		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50115.D
Dilution:	1.0			Initial Weight/Volume:	3.42 g
Date Analyzed:	11/23/2010 0031			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		2.0	4.1
1,1,1-Trichloroethane		ND		3.3	4.1
1,1,2,2-Tetrachloroethane		ND		1.7	4.1
1,1,2-Trichloroethane		ND		1.7	4.1
1,1-Dichloroethane		ND		3.1	4.1
1,1-Dichloroethene		ND		2.6	4.1
1,1-Dichloropropene		ND		2.5	4.1
1,2,3-Trichlorobenzene		ND		1.8	4.1
1,2,3-Trichloropropane		ND		2.0	4.1
1,2,4-Trichlorobenzene		ND		1.7	4.1
1,2,4-Trimethylbenzene		ND VJ		2.3	4.1
1,2-Dibromo-3-Chloropropane		ND		4.6	41
1,2-Dichlorobenzene		ND		1.7	4.1
1,2-Dichloroethane		ND		1.7	4.1
1,2-Dichloropropane		ND		2.6	4.1
1,3,5-Trimethylbenzene		ND		2.5	4.1
1,3-Dichlorobenzene		ND		1.7	4.1
1,3-Dichloropropane		ND		1.9	4.1
1,4-Dichlorobenzene		ND		1.7	4.1
1,4-Dioxane		ND VJ		170	410
2,2-Dichloropropane		ND		3.5	4.1
2-Butanone (MEK)		ND VJ		18	41
2-Chlorotoluene		ND		2.2	4.1
2-Hexanone		ND		23	41
4-Chlorotoluene		ND		2.0	4.1
4-Isopropyltoluene		ND		2.5	4.1
4-Methyl-2-pentanone (MIBK)		ND		17	41
Acetone		40 J	J	28	410
Benzene		ND		2.6	4.1
Bromobenzene		ND		1.7	4.1
Bromoform		ND		2.6	4.1
Bromomethane		ND		3.8	8.3
Carbon disulfide		ND		3.1	4.1
Carbon tetrachloride		ND		2.8	4.1
Chlorobenzene		ND		2.0	4.1
Chlorobromomethane		ND		2.3	4.1
Chlorodibromomethane		ND		2.0	4.1
Chloroethane		ND		3.3	8.3
Chloroform		ND		2.5	4.1
Chloromethane		ND		2.6	8.3
cis-1,2-Dichloroethene		ND		2.0	4.1
cis-1,3-Dichloropropene		ND		1.7	4.1
Dibromomethane		ND		2.1	4.1
Dichlorobromomethane		ND		2.1	4.1
Dichlorodifluoromethane		ND		3.5	8.3
Ethyl ether		ND		1.8	4.1

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50115.D
Dilution:	1.0			Initial Weight/Volume:	3.42 g
Date Analyzed:	11/23/2010 0031			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		3.0	4.1
Ethylene Dibromide		ND		1.9	4.1
Hexachlorobutadiene		ND		2.5	4.1
Isopropyl ether		ND		1.9	4.1
Isopropylbenzene		ND		2.5	4.1
m-Xylene & p-Xylene		ND		5.8	8.3
Methyl tert-butyl ether		ND		2.5	4.1
Methylene Chloride		ND		16	17
n-Butylbenzene		ND		2.0	4.1
N-Propylbenzene		ND		2.8	4.1
Naphthalene		ND		3.8	41
o-Xylene		ND		2.2	4.1
sec-Butylbenzene		ND		2.3	4.1
Styrene		ND		1.7	4.1
Tert-amyl methyl ether		ND		2.5	4.1
Tert-butyl ethyl ether		ND		2.4	4.1
tert-Butylbenzene		ND		2.3	4.1
Tetrachloroethene		ND		3.0	4.1
Tetrahydrofuran		ND UJ		21	41
Toluene		ND		3.0	4.1
trans-1,2-Dichloroethene		ND		2.6	4.1
trans-1,3-Dichloropropene		ND		1.7	4.1
Trichloroethene		ND		3.5	4.1
Trichlorofluoromethane		ND		2.3	8.3
Vinyl chloride		ND		2.8	4.1
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		2.4	21
2,4,4-Trimethyl-1-pentene		ND		2.7	8.3
2,4,4-Trimethyl-2-pentene		ND		1.8	8.3
Cyclohexane		ND		1.7	41
Methyl acetate		ND		23	83
Methylcyclohexane		ND		2.6	4.1

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	92		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66227		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66225		Lab File ID:	V50115.D
Dilution:	1.0			Initial Weight/Volume:	3.42 g
Date Analyzed:	11/23/2010 0031			Final Weight/Volume:	5 g
Date Prepared:	11/22/2010 0929				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50132.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0722			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		59	120
1,1,1-Trichloroethane		ND		99	120
1,1,2,2-Tetrachloroethane		ND		50	120
1,1,2-Trichloroethane		ND		50	120
1,1-Dichloroethane		ND		94	120
1,1-Dichloroethene		ND		79	120
1,1-Dichloropropene		ND		74	120
1,2,3-Trichlorobenzene		ND		54	120
1,2,3-Trichloropropane		ND		59	120
1,2,4-Trichlorobenzene		ND		50	120
1,2,4-Trimethylbenzene		ND		69	120
1,2-Dibromo-3-Chloropropane		ND		140	1200
1,2-Dichlorobenzene		ND		50	120
1,2-Dichloroethane		ND		50	120
1,2-Dichloropropane		ND		79	120
1,3,5-Trimethylbenzene		ND		74	120
1,3-Dichlorobenzene		ND		50	120
1,3-Dichloropropane		ND		56	120
1,4-Dichlorobenzene		ND		50	120
1,4-Dioxane		ND UJ		5000	12000
2,2-Dichloropropane		ND		100	120
2-Butanone (MEK)		ND		530	1200
2-Chlorotoluene		ND		64	120
2-Hexanone		ND		690	1200
4-Chlorotoluene		ND		59	120
4-Isopropyltoluene		ND		74	120
4-Methyl-2-pentanone (MIBK)		ND		510	1200
Acetone		1100 J		850	12000
Benzene		ND		79	120
Bromobenzene		ND		50	120
Bromoform		ND		79	120
Bromomethane		ND UJ		110	250
Carbon disulfide		ND		94	120
Carbon tetrachloride		ND		84	120
Chlorobenzene		ND		59	120
Chlorobromomethane		ND		68	120
Chlorodibromomethane		ND		59	120
Chloroethane		ND UJ		99	250
Chloroform		ND		74	120
Chloromethane		ND		79	250
cis-1,2-Dichloroethene		ND		58	120
cis-1,3-Dichloropropene		ND		50	120
Dibromomethane		ND		62	120
Dichlorobromomethane		ND		63	120
Dichlorodifluoromethane		ND UJ		100	250
Ethyl ether		ND		53	120

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50132.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0722			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		89	120
Ethylene Dibromide	ND		55	120
Hexachlorobutadiene	ND		74	120
Isopropyl ether	ND		55	120
Isopropylbenzene	ND		74	120
m-Xylene & p-Xylene	ND		170	250
Methyl tert-butyl ether	ND		74	120
Methylene Chloride	ND		490	500
n-Butylbenzene	ND		59	120
N-Propylbenzene	ND		84	120
Naphthalene	ND		110	1200
o-Xylene	ND		64	120
sec-Butylbenzene	ND		69	120
Styrene	ND		50	120
Tert-amyl methyl ether	ND		74	120
Tert-butyl ethyl ether	ND		71	120
tert-Butylbenzene	ND		69	120
Tetrachloroethene	ND		89	120
Tetrahydrofuran	ND UJ		610	1200
Toluene	ND		89	120
trans-1,2-Dichloroethene	ND		79	120
trans-1,3-Dichloropropene	ND		52	120
Trichloroethene	ND		100	120
Trichlorofluoromethane	ND UJ	—	70	250
Vinyl chloride	ND		84	120
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		71	620
Cyclohexane	ND		50	1200
Methyl acetate	ND		690	2500
Methylcyclohexane	ND		79	120

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	111		70 - 130
Dibromofluoromethane	110		70 - 130

TC 12/20/10

Analytical Data

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50132.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0722			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50176.D
Dilution:	10			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/24/2010 1440	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		130000		810	2500
2,4,4-Trimethyl-2-pentene		23000		530	2500

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	98		70 - 130
Dibromofluoromethane	92		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50133.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/23/2010 0746			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		65	140
1,1,1-Trichloroethane		ND		110	140
1,1,2,2-Tetrachloroethane		ND		54	140
1,1,2-Trichloroethane		ND		54	140
1,1-Dichloroethane		ND		100	140
1,1-Dichloroethene		ND		86	140
1,1-Dichloropropene		ND		81	140
1,2,3-Trichlorobenzene		ND		59	140
1,2,3-Trichloropropane		ND		65	140
1,2,4-Trichlorobenzene		ND		54	140
1,2,4-Trimethylbenzene		ND		76	140
1,2-Dibromo-3-Chloropropane		ND		150	1400
1,2-Dichlorobenzene		ND		54	140
1,2-Dichloroethane		ND		54	140
1,2-Dichloropropane		ND		86	140
1,3,5-Trimethylbenzene		ND		81	140
1,3-Dichlorobenzene		ND		54	140
1,3-Dichloropropane		ND		62	140
1,4-Dichlorobenzene		ND		54	140
1,4-Dioxane		ND UJ		5400	14000
2,2-Dichloropropane		ND		110	140
2-Butanone (MEK)		ND		580	1400
2-Chlorotoluene		ND		70	140
2-Hexanone		ND		760	1400
4-Chlorotoluene		ND		65	140
4-Isopropyltoluene		ND		81	140
4-Methyl-2-pentanone (MIBK)		ND		550	1400
Acetone		1600 J	✓	930	14000
Benzene		ND		86	140
Bromobenzene		ND		54	140
Bromoform		ND		86	140
Bromomethane		ND UJ	✓	120	270
Carbon disulfide		ND		100	140
Carbon tetrachloride		ND		92	140
Chlorobenzene		ND		65	140
Chlorobromomethane		ND		75	140
Chlorodibromomethane		ND		65	140
Chloroethane		ND UJ	✓	110	270
Chloroform		ND		81	140
Chloromethane		ND		86	270
cis-1,2-Dichloroethene		ND		64	140
cis-1,3-Dichloropropene		ND		54	140
Dibromomethane		ND		68	140
Dichlorobromomethane		ND		69	140
Dichlorodifluoromethane		ND UJ	✓	110	270
Ethyl ether		ND		57	140

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50133.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/23/2010 0746			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		97	140
Ethylene Dibromide		ND		61	140
Hexachlorobutadiene		ND		81	140
Isopropyl ether		ND		61	140
Isopropylbenzene		ND		81	140
m-Xylene & p-Xylene		ND		190	270
Methyl tert-butyl ether		ND		81	140
Methylene Chloride		ND		530	540
n-Butylbenzene		ND		65	140
N-Propylbenzene		ND		92	140
Naphthalene		ND		120	1400
o-Xylene		ND		70	140
sec-Butylbenzene		ND		76	140
Styrene		ND		54	140
Tert-amyl methyl ether		ND		81	140
Tert-butyl ethyl ether		ND		78	140
tert-Butylbenzene		ND		76	140
Tetrachloroethene		ND		97	140
Tetrahydrofuran		ND	UJ	670	1400
Toluene		ND		97	140
trans-1,2-Dichloroethene		ND		86	140
trans-1,3-Dichloropropene		ND		56	140
Trichloroethene		ND		110	140
Trichlorofluoromethane		ND	UJ	77	270
Vinyl chloride		ND		92	140
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		78	680
Cyclohexane		ND		54	1400
Methyl acetate		ND		760	2700
Methylcyclohexane		ND		86	140

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	115		70 - 130
Dibromofluoromethane	118		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50133.D
Dilution:	1.0			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/23/2010 0746			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	640	T J N

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50177.D
Dilution:	25			Initial Weight/Volume:	10.60 g
Date Analyzed:	11/24/2010 1504	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		230000		2200	6800
2,4,4-Trimethyl-2-pentene		27000		1500	6800

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50152.D
Dilution:	1.0			Initial Weight/Volume:	4.33 g
Date Analyzed:	11/23/2010 1813			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.5	3.2
1,1,1-Trichloroethane		ND		2.6	3.2
1,1,2,2-Tetrachloroethane		ND		1.3	3.2
1,1,2-Trichloroethane		ND		1.3	3.2
1,1-Dichloroethane		ND		2.4	3.2
1,1-Dichloroethene		ND		2.0	3.2
1,1-Dichloropropene		ND		1.9	3.2
1,2,3-Trichlorobenzene		ND		1.4	3.2
1,2,3-Trichloropropane		ND		1.5	3.2
1,2,4-Trichlorobenzene		ND		1.3	3.2
1,2,4-Trimethylbenzene		ND	UJ	1.8	3.2
1,2-Dibromo-3-Chloropropane		ND		3.6	32
1,2-Dichlorobenzene		ND		1.3	3.2
1,2-Dichloroethane		ND		1.3	3.2
1,2-Dichloropropane		ND		2.0	3.2
1,3,5-Trimethylbenzene		ND		1.9	3.2
1,3-Dichlorobenzene		ND		1.3	3.2
1,3-Dichloropropane		ND		1.5	3.2
1,4-Dichlorobenzene		ND		1.3	3.2
1,4-Dioxane		ND	UJ	130	320
2,2-Dichloropropane		ND		2.7	3.2
2-Butanone (MEK)		ND		14	32
2-Chlorotoluene		ND		1.7	3.2
2-Hexanone		ND		18	32
4-Chlorotoluene		ND		1.5	3.2
4-Isopropyltoluene		ND		1.9	3.2
4-Methyl-2-pentanone (MIBK)		ND		13	32
Acetone		ND	UJ	22	320
Benzene		ND		2.0	3.2
Bromobenzene		ND		1.3	3.2
Bromoform		ND		2.0	3.2
Bromomethane		ND		2.9	6.4
Carbon disulfide		ND		2.4	3.2
Carbon tetrachloride		ND		2.2	3.2
Chlorobenzene		ND		1.5	3.2
Chlorobromomethane		ND		1.8	3.2
Chlorodibromomethane		ND		1.5	3.2
Chloroethane		ND		2.6	6.4
Chloroform		ND		1.9	3.2
Chloromethane		ND		2.0	6.4
cis-1,2-Dichloroethene		ND		1.5	3.2
cis-1,3-Dichloropropene		ND		1.3	3.2
Dibromomethane		ND		1.6	3.2
Dichlorobromomethane		ND		1.6	3.2
Dichlorodifluoromethane		ND		2.7	6.4
Ethyl ether		ND		1.4	3.2

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50152.D
Dilution:	1.0			Initial Weight/Volume:	4.33 g
Date Analyzed:	11/23/2010 1813			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.3	3.2
Ethylene Dibromide		ND		1.4	3.2
Hexachlorobutadiene		ND		1.9	3.2
Isopropyl ether		ND		1.4	3.2
Isopropylbenzene		ND		1.9	3.2
m-Xylene & p-Xylene		ND		4.5	6.4
Methyl tert-butyl ether		ND		1.9	3.2
Methylene Chloride		ND		13	13
n-Butylbenzene		ND		1.5	3.2
N-Propylbenzene		ND		2.2	3.2
Naphthalene		ND		2.9	32
o-Xylene		ND		1.7	3.2
sec-Butylbenzene		ND		1.8	3.2
Styrene		ND		1.3	3.2
Tert-amyl methyl ether		ND		1.9	3.2
Tert-butyl ethyl ether		ND		1.8	3.2
tert-Butylbenzene		ND		1.8	3.2
Tetrachloroethene		ND		2.3	3.2
Tetrahydrofuran		ND UJ		16	32
Toluene		ND		2.3	3.2
trans-1,2-Dichloroethene		ND		2.0	3.2
trans-1,3-Dichloropropene		ND		1.3	3.2
Trichloroethene		ND		2.7	3.2
Trichlorofluoromethane		ND		1.8	6.4
Vinyl chloride		ND		2.2	3.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.8	16
2,4,4-Trimethyl-1-pentene		ND		2.1	6.4
2,4,4-Trimethyl-2-pentene		ND		1.4	6.4
Cyclohexane		ND		1.3	32
Methyl acetate		ND		18	64
Methylcyclohexane		ND		2.0	3.2

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66263		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66285		Lab File ID:	V50152.D
Dilution:	1.0			Initial Weight/Volume:	4.33 g
Date Analyzed:	11/23/2010 1813			Final Weight/Volume:	5 g
Date Prepared:	11/23/2010 0928				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50135.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0834			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		62	130
1,1,1-Trichloroethane		ND		100	130
1,1,2,2-Tetrachloroethane		ND		51	130
1,1,2-Trichloroethane		ND		51	130
1,1-Dichloroethane		ND		98	130
1,1-Dichloroethene		ND		82	130
1,1-Dichloropropene		ND		77	130
1,2,3-Trichlorobenzene		ND		56	130
1,2,3-Trichloropropane		ND		62	130
1,2,4-Trichlorobenzene		ND		51	130
1,2,4-Trimethylbenzene		ND		72	130
1,2-Dibromo-3-Chloropropane		ND		140	1300
1,2-Dichlorobenzene		ND		51	130
1,2-Dichloroethane		ND		51	130
1,2-Dichloropropane		ND		82	130
1,3,5-Trimethylbenzene		ND		77	130
1,3-Dichlorobenzene		ND		51	130
1,3-Dichloropropane		ND		59	130
1,4-Dichlorobenzene		ND		51	130
1,4-Dioxane		ND VJ		5100	13000
2,2-Dichloropropane		ND		110	130
2-Butanone (MEK)		ND		550	1300
2-Chlorotoluene		ND		67	130
2-Hexanone		ND		720	1300
4-Chlorotoluene		ND		62	130
4-Isopropyltoluene		85	J	77	130
4-Methyl-2-pentanone (MIBK)		ND		520	1300
Acetone		1500 J	J	880	13000
Benzene		ND		82	130
Bromobenzene		ND		51	130
Bromoform		ND		82	130
Bromomethane		ND VJ	J	120	260
Carbon disulfide		ND		98	130
Carbon tetrachloride		ND		87	130
Chlorobenzene		ND		62	130
Chlorobromomethane		ND		71	130
Chlorodibromomethane		ND		62	130
Chloroethane		ND VJ	J	100	260
Chloroform		ND		77	130
Chloromethane		ND		82	260
cis-1,2-Dichloroethene		ND		61	130
cis-1,3-Dichloropropene		ND		51	130
Dibromomethane		ND		65	130
Dichlorobromomethane		ND		66	130
Dichlorodifluoromethane		ND VJ	J	110	260
Ethyl ether		ND		54	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50135.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0834			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		92	130
Ethylene Dibromide	ND		57	130
Hexachlorobutadiene	ND		77	130
Isopropyl ether	ND		57	130
Isopropylbenzene	ND		77	130
m-Xylene & p-Xylene	ND		180	260
Methyl tert-butyl ether	ND		77	130
Methylene Chloride	ND		500	510
n-Butylbenzene	ND		62	130
N-Propylbenzene	ND		87	130
Naphthalene	ND		120	1300
o-Xylene	ND		67	130
sec-Butylbenzene	ND		72	130
Styrene	ND		51	130
Tert-amyl methyl ether	ND		77	130
Tert-butyl ethyl ether	ND		74	130
tert-Butylbenzene	ND		72	130
Tetrachloroethene	ND		92	130
Tetrahydrofuran	ND	UJ	640	1300
Toluene	ND		92	130
trans-1,2-Dichloroethene	ND		82	130
trans-1,3-Dichloropropene	ND		53	130
Trichloroethene	ND		110	130
Trichlorofluoromethane	ND	UJ	73	260
Vinyl chloride	ND		87	130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		74	640
Cyclohexane	ND		51	1300
Methyl acetate	ND		720	2600
Methylcyclohexane	ND		82	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	122		70 - 130
Dibromofluoromethane	127		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50135.D
Dilution:	1.0			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/23/2010 0834			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	740	T J N

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50178.D
Dilution:	25			Initial Weight/Volume:	11.54 g
Date Analyzed:	11/24/2010 1528	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		390000		2100	6400
2,4,4-Trimethyl-2-pentene		53000		1400	6400

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130
Dibromofluoromethane	93		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50136.D
Dilution:	1.0			Initial Weight/Volume:	9.83 g
Date Analyzed:	11/23/2010 0858			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		69	140
1,1,1-Trichloroethane		ND		120	140
1,1,2,2-Tetrachloroethane		ND		58	140
1,1,2-Trichloroethane		ND		58	140
1,1-Dichloroethane		ND		110	140
1,1-Dichloroethene		ND		92	140
1,1-Dichloropropene		ND		86	140
1,2,3-Trichlorobenzene		ND		63	140
1,2,3-Trichloropropane		ND		69	140
1,2,4-Trichlorobenzene		ND		58	140
1,2,4-Trimethylbenzene		ND		81	140
1,2-Dibromo-3-Chloropropane		ND		160	1400
1,2-Dichlorobenzene		ND		58	140
1,2-Dichloroethane		ND		58	140
1,2-Dichloropropane		ND		92	140
1,3,5-Trimethylbenzene		ND		86	140
1,3-Dichlorobenzene		ND		58	140
1,3-Dichloropropane		ND		66	140
1,4-Dichlorobenzene		ND		58	140
1,4-Dioxane		ND UJ		5800	14000
2,2-Dichloropropane		ND		120	140
2-Butanone (MEK)		ND		620	1400
2-Chlorotoluene		ND		75	140
2-Hexanone		ND		810	1400
4-Chlorotoluene		ND		69	140
4-Isopropyltoluene		ND		86	140
4-Methyl-2-pentanone (MIBK)		ND		590	1400
Acetone		1500 J		990	14000
Benzene		ND		92	140
Bromobenzene		ND		58	140
Bromoform		ND		92	140
Bromomethane		ND UJ		130	290
Carbon disulfide		ND		110	140
Carbon tetrachloride		ND		98	140
Chlorobenzene		ND		69	140
Chlorobromomethane		ND		79	140
Chlorodibromomethane		ND		69	140
Chloroethane		ND UJ		120	290
Chloroform		ND		86	140
Chloromethane		ND		92	290
cis-1,2-Dichloroethene		ND		68	140
cis-1,3-Dichloropropene		ND		58	140
Dibromomethane		ND		73	140
Dichlorobromomethane		ND		74	140
Dichlorodifluoromethane		ND UJ		120	290
Ethyl ether		ND		61	140

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50136.D
Dilution:	1.0			Initial Weight/Volume:	9.83 g
Date Analyzed:	11/23/2010 0858			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		100	140
Ethylene Dibromide		ND		65	140
Hexachlorobutadiene		ND		86	140
Isopropyl ether		ND		65	140
Isopropylbenzene		ND		86	140
m-Xylene & p-Xylene		ND		200	290
Methyl tert-butyl ether		ND		86	140
Methylene Chloride		ND		560	580
n-Butylbenzene		ND		69	140
N-Propylbenzene		ND		98	140
Naphthalene		ND		130	1400
o-Xylene		ND		75	140
sec-Butylbenzene		ND		81	140
Styrene		ND		58	140
Tert-amyl methyl ether		ND		86	140
Tert-butyl ethyl ether		ND		83	140
tert-Butylbenzene		ND		81	140
Tetrachloroethene		ND		100	140
Tetrahydrofuran		ND VJ		710	1400
Toluene		ND		100	140
trans-1,2-Dichloroethene		ND		92	140
trans-1,3-Dichloropropene		ND		60	140
Trichloroethene		ND		120	140
Trichlorofluoromethane		ND VJ		82	290
Vinyl chloride		ND		98	140
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		83	720
2,4,4-Trimethyl-2-pentene		14000		62	290
Cyclohexane		ND		58	1400
Methyl acetate		ND		810	2900
Methylcyclohexane		ND		92	140

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	113		70 - 130
Dibromofluoromethane	115		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66242		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66237		Lab File ID:	V50136.D
Dilution:	1.0			Initial Weight/Volume:	9.83 g
Date Analyzed:	11/23/2010 0858			Final Weight/Volume:	10 g
Date Prepared:	11/22/2010 1140				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
565-77-5	2-Pentene, 2,3,4-trimethyl-	7.36	940	T J N

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50182.D
Dilution:	25			Initial Weight/Volume:	9.83 g
Date Analyzed:	11/24/2010 1703	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/23/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		180000		2400	7200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	89		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50190.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Date Analyzed:	11/24/2010 2014			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.8	3.8
1,1,1-Trichloroethane		ND		3.1	3.8
1,1,2,2-Tetrachloroethane		ND		1.5	3.8
1,1,2-Trichloroethane		ND		1.5	3.8
1,1-Dichloroethane		ND		2.9	3.8
1,1-Dichloroethene		ND		2.5	3.8
1,1-Dichloropropene		ND		2.3	3.8
1,2,3-Trichlorobenzene		ND		1.7	3.8
1,2,3-Trichloropropane		ND		1.8	3.8
1,2,4-Trichlorobenzene		ND		1.5	3.8
1,2,4-Trimethylbenzene		ND	UJ	2.1	3.8
1,2-Dibromo-3-Chloropropane		ND		4.3	38
1,2-Dichlorobenzene		ND		1.5	3.8
1,2-Dichloroethane		ND		1.5	3.8
1,2-Dichloropropane		ND		2.5	3.8
1,3,5-Trimethylbenzene		ND		2.3	3.8
1,3-Dichlorobenzene		ND		1.5	3.8
1,3-Dichloropropane		ND		1.7	3.8
1,4-Dichlorobenzene		ND		1.5	3.8
1,4-Dioxane		ND	UJ	150	380
2,2-Dichloropropane		ND		3.2	3.8
2-Butanone (MEK)		ND		17	38
2-Chlorotoluene		ND		2.0	3.8
2-Hexanone		ND		21	38
4-Chlorotoluene		ND		1.8	3.8
4-Isopropyltoluene		ND		2.3	3.8
4-Methyl-2-pentanone (MIBK)		ND		16	38
Acetone		ND	UJ	26	380
Benzene		ND		2.5	3.8
Bromobenzene		ND		1.5	3.8
Bromoform		ND		2.5	3.8
Bromomethane		ND		3.5	7.7
Carbon disulfide		ND		2.9	3.8
Carbon tetrachloride		ND		2.6	3.8
Chlorobenzene		ND		1.8	3.8
Chlorobromomethane		ND		2.1	3.8
Chlorodibromomethane		ND		1.8	3.8
Chloroethane		ND		3.1	7.7
Chloroform		ND		2.3	3.8
Chloromethane		ND		2.5	7.7
cis-1,2-Dichloroethene		ND		1.8	3.8
cis-1,3-Dichloropropene		ND		1.5	3.8
Dibromomethane		ND		1.9	3.8
Dichlorobromomethane		ND		2.0	3.8
Dichlorodifluoromethane		ND		3.2	7.7
Ethyl ether		ND		1.6	3.8

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50190.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Date Analyzed:	11/24/2010 2014			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.8	3.8
Ethylene Dibromide		ND		1.7	3.8
Hexachlorobutadiene		ND		2.3	3.8
Isopropyl ether		ND		1.7	3.8
Isopropylbenzene		ND		2.3	3.8
m-Xylene & p-Xylene		ND		5.4	7.7
Methyl tert-butyl ether		ND		2.3	3.8
Methylene Chloride		ND		15	15
n-Butylbenzene		ND		1.8	3.8
N-Propylbenzene		ND		2.6	3.8
Naphthalene		ND		3.5	38
o-Xylene		ND		2.0	3.8
sec-Butylbenzene		ND		2.1	3.8
Styrene		ND		1.5	3.8
Tert-amyl methyl ether		ND		2.3	3.8
Tert-butyl ethyl ether		ND		2.2	3.8
tert-Butylbenzene		ND		2.1	3.8
Tetrachloroethene		ND		2.8	3.8
Tetrahydrofuran		ND VJ		19	38
Toluene		ND		2.8	3.8
trans-1,2-Dichloroethene		ND		2.5	3.8
trans-1,3-Dichloropropene		ND		1.6	3.8
Trichloroethene		ND		3.2	3.8
Trichlorofluoromethane		ND		2.2	7.7
Vinyl chloride		ND		2.6	3.8
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		2.2	19
2,4,4-Trimethyl-1-pentene		ND		2.5	7.7
2,4,4-Trimethyl-2-pentene		ND		1.7	7.7
Cyclohexane		ND		1.5	38
Methyl acetate		ND		21	77
Methylcyclohexane		ND		2.5	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50190.D
Dilution:	1.0			Initial Weight/Volume:	4.11 g
Date Analyzed:	11/24/2010 2014			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50170.D
Dilution:	1.0			Initial Weight/Volume:	10.63 g
Date Analyzed:	11/24/2010 1218			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		66	140
1,1,1-Trichloroethane		ND		110	140
1,1,2,2-Tetrachloroethane		ND		55	140
1,1,2-Trichloroethane		ND		55	140
1,1-Dichloroethane		ND		100	140
1,1-Dichloroethene		ND		88	140
1,1-Dichloropropene		ND		83	140
1,2,3-Trichlorobenzene		ND		61	140
1,2,3-Trichloropropane		ND		66	140
1,2,4-Trichlorobenzene		ND		55	140
1,2,4-Trimethylbenzene		ND	UJ	77	140
1,2-Dibromo-3-Chloropropane		ND		150	1400
1,2-Dichlorobenzene		ND		55	140
1,2-Dichloroethane		ND		55	140
1,2-Dichloropropane		ND		88	140
1,3,5-Trimethylbenzene		ND		83	140
1,3-Dichlorobenzene		ND		55	140
1,3-Dichloropropane		ND		63	140
1,4-Dichlorobenzene		ND		55	140
1,4-Dioxane		ND	UJ	5500	14000
2,2-Dichloropropane		ND		120	140
2-Butanone (MEK)		ND		600	1400
2-Chlorotoluene		ND		72	140
2-Hexanone		ND		770	1400
4-Chlorotoluene		ND		66	140
4-Isopropyltoluene		ND		83	140
4-Methyl-2-pentanone (MIBK)		ND		560	1400
Acetone		ND	UJ	950	14000
Benzene		ND		88	140
Bromobenzene		ND		55	140
Bromoform		ND		88	140
Bromomethane		ND	UJ	130	280
Carbon disulfide		ND		100	140
Carbon tetrachloride		ND		94	140
Chlorobenzene		ND		66	140
Chlorobromomethane		ND		76	140
Chlorodibromomethane		ND		66	140
Chloroethane		ND	UJ	110	280
Chloroform		ND		83	140
Chloromethane		ND		88	280
cis-1,2-Dichloroethene		ND		65	140
cis-1,3-Dichloropropene		ND		55	140
Dibromomethane		ND		70	140
Dichlorobromomethane		ND		71	140
Dichlorodifluoromethane		ND		120	280
Ethyl ether		ND		58	140

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50170.D
Dilution:	1.0			Initial Weight/Volume:	10.63 g
Date Analyzed:	11/24/2010 1218			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		99	140
Ethylene Dibromide		ND		62	140
Hexachlorobutadiene		ND		83	140
Isopropyl ether		ND		62	140
Isopropylbenzene		ND		83	140
m-Xylene & p-Xylene		ND		190	280
Methyl tert-butyl ether		ND		83	140
Methylene Chloride		ND		540	550
n-Butylbenzene		ND		66	140
N-Propylbenzene		ND		94	140
Naphthalene		ND		130	1400
o-Xylene		ND		72	140
sec-Butylbenzene		ND		77	140
Styrene		ND		55	140
Tert-amyl methyl ether		ND		83	140
Tert-butyl ethyl ether		ND		79	140
tert-Butylbenzene		ND		77	140
Tetrachloroethene		ND		99	140
Tetrahydrofuran		ND vJ		680	1400
Toluene		ND		99	140
trans-1,2-Dichloroethene		ND		88	140
trans-1,3-Dichloropropene		ND		57	140
Trichloroethene		ND		120	140
Trichlorofluoromethane		ND vJ		78	280
Vinyl chloride		ND		94	140
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		79	690
Cyclohexane		ND		55	1400
Methyl acetate		ND		770	2800
Methylcyclohexane		ND		88	140

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	120		70 - 130
Dibromofluoromethane	126		70 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50170.D
Dilution:	1.0			Initial Weight/Volume:	10.63 g
Date Analyzed:	11/24/2010 1218			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
565-77-5	2-Pentene, 2,3,4-trimethyl-	7.35	690	T J N

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50181.D
Dilution:	25			Initial Weight/Volume:	10.63 g
Date Analyzed:	11/24/2010 1639	Run Type:	DL	Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4,4-Trimethyl-1-pentene		290000		2300	6900
2,4,4-Trimethyl-2-pentene		58000		1500	6900

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	92		70 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50171.D
Dilution:	1.0			Initial Weight/Volume:	13.33 g
Date Analyzed:	11/24/2010 1241			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		47	97
1,1,1-Trichloroethane		ND		78	97
1,1,2,2-Tetrachloroethane		ND		39	97
1,1,2-Trichloroethane		ND		39	97
1,1-Dichloroethane		ND		74	97
1,1-Dichloroethene		ND		62	97
1,1-Dichloropropene		ND		58	97
1,2,3-Trichlorobenzene		ND		43	97
1,2,3-Trichloropropane		ND		47	97
1,2,4-Trichlorobenzene		ND		39	97
1,2,4-Trimethylbenzene		ND	UJ	54	97
1,2-Dibromo-3-Chloropropane		ND		110	970
1,2-Dichlorobenzene		ND		39	97
1,2-Dichloroethane		ND		39	97
1,2-Dichloropropane		ND		62	97
1,3,5-Trimethylbenzene		ND		58	97
1,3-Dichlorobenzene		ND		39	97
1,3-Dichloropropane		ND		44	97
1,4-Dichlorobenzene		ND		39	97
1,4-Dioxane		ND	UJ	3900	9700
2,2-Dichloropropane		ND		82	97
2-Butanone (MEK)		ND		420	970
2-Chlorotoluene		ND		51	97
2-Hexanone		ND		540	970
4-Chlorotoluene		ND		47	97
4-Isopropyltoluene		ND		58	97
4-Methyl-2-pentanone (MIBK)		ND		400	970
Acetone		ND	UJ	670	9700
Benzene		ND		62	97
Bromobenzene		ND		39	97
Bromoform		ND		62	97
Bromomethane		ND	UJ	89	190
Carbon disulfide		ND		74	97
Carbon tetrachloride		ND		66	97
Chlorobenzene		ND		47	97
Chlorobromomethane		ND		54	97
Chlorodibromomethane		ND		47	97
Chloroethane		ND	UJ	78	190
Chloroform		ND		58	97
Chloromethane		ND		62	190
cis-1,2-Dichloroethene		ND		46	97
cis-1,3-Dichloropropene		ND		39	97
Dibromomethane		ND		49	97
Dichlorobromomethane		ND		50	97
Dichlorodifluoromethane		ND		82	190
Ethyl ether		ND		41	97

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50171.D
Dilution:	1.0			Initial Weight/Volume:	13.33 g
Date Analyzed:	11/24/2010 1241			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		70	97
Ethylene Dibromide		ND		44	97
Hexachlorobutadiene		ND		58	97
Isopropyl ether		ND		44	97
Isopropylbenzene		ND		58	97
m-Xylene & p-Xylene		ND		140	190
Methyl tert-butyl ether		ND		58	97
Methylene Chloride		ND		380	390
n-Butylbenzene		ND		47	97
N-Propylbenzene		ND		66	97
Naphthalene		ND		89	970
o-Xylene		ND		51	97
sec-Butylbenzene		ND		54	97
Styrene		ND		39	97
Tert-amyl methyl ether		ND		58	97
Tert-butyl ethyl ether		ND		56	97
tert-Butylbenzene		ND		54	97
Tetrachloroethene		ND		70	97
Tetrahydrofuran		ND	UJ	480	970
Toluene		ND		70	97
trans-1,2-Dichloroethene		ND		62	97
trans-1,3-Dichloropropene		ND		40	97
Trichloroethene		ND		82	97
Trichlorofluoromethane		ND	UJ	55	190
Vinyl chloride		ND		66	97
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		56	490
2,4,4-Trimethyl-1-pentene		ND		64	190
2,4,4-Trimethyl-2-pentene		ND		42	190
Cyclohexane		ND		39	970
Methyl acetate		ND		540	1900
Methylcyclohexane		ND		62	97

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50171.D
Dilution:	1.0			Initial Weight/Volume:	13.33 g
Date Analyzed:	11/24/2010 1241			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Tentatively Identified Compounds **Number TIC's Found:** 3

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	14.39	3100	T J
	Unknown	14.72	2200	T J
	Unknown	14.86	1200	T J

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50172.D
Dilution:	1.0			Initial Weight/Volume:	10.07 g
Date Analyzed:	11/24/2010 1305			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		64	130
1,1,1-Trichloroethane		ND		110	130
1,1,2,2-Tetrachloroethane		ND		53	130
1,1,2-Trichloroethane		ND		53	130
1,1-Dichloroethane		ND		100	130
1,1-Dichloroethene		ND		86	130
1,1-Dichloropropene		ND		80	130
1,2,3-Trichlorobenzene		ND		59	130
1,2,3-Trichloropropane		ND		64	130
1,2,4-Trichlorobenzene		ND		53	130
1,2,4-Trimethylbenzene		ND	UJ	75	130
1,2-Dibromo-3-Chloropropane		ND		150	1300
1,2-Dichlorobenzene		ND		53	130
1,2-Dichloroethane		ND		53	130
1,2-Dichloropropane		ND		86	130
1,3,5-Trimethylbenzene		ND		80	130
1,3-Dichlorobenzene		ND		53	130
1,3-Dichloropropane		ND		61	130
1,4-Dichlorobenzene		ND		53	130
1,4-Dioxane		ND	UJ	5300	13000
2,2-Dichloropropane		ND		110	130
2-Butanone (MEK)		ND		580	1300
2-Chlorotoluene		ND		69	130
2-Hexanone		ND		750	1300
4-Chlorotoluene		ND		64	130
4-Isopropyltoluene		ND		80	130
4-Methyl-2-pentanone (MIBK)		ND		550	1300
Acetone		ND	UJ	920	13000
Benzene		ND		86	130
Bromobenzene		ND		53	130
Bromoform		ND		86	130
Bromomethane		ND	UJ	120	270
Carbon disulfide		ND		100	130
Carbon tetrachloride		ND		91	130
Chlorobenzene		ND		64	130
Chlorobromomethane		ND		74	130
Chlorodibromomethane		ND		64	130
Chloroethane		ND	UJ	110	270
Chloroform		ND		80	130
Chloromethane		ND		86	270
cis-1,2-Dichloroethene		ND		63	130
cis-1,3-Dichloropropene		ND		53	130
Dibromomethane		ND		67	130
Dichlorobromomethane		ND		68	130
Dichlorodifluoromethane		ND		110	270
Ethyl ether		ND		57	130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50172.D
Dilution:	1.0			Initial Weight/Volume:	10.07 g
Date Analyzed:	11/24/2010 1305			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		96	130
Ethylene Dibromide	ND		60	130
Hexachlorobutadiene	ND		80	130
Isopropyl ether	ND		60	130
Isopropylbenzene	ND		80	130
m-Xylene & p-Xylene	ND		190	270
Methyl tert-butyl ether	ND		80	130
Methylene Chloride	ND		520	530
n-Butylbenzene	ND		64	130
N-Propylbenzene	ND		91	130
Naphthalene	ND		120	1300
o-Xylene	ND		69	130
sec-Butylbenzene	ND		75	130
Styrene	ND		53	130
Tert-amyl methyl ether	ND		80	130
Tert-butyl ethyl ether	ND		77	130
tert-Butylbenzene	ND		75	130
Tetrachloroethene	ND		96	130
Tetrahydrofuran	ND VJ		660	1300
Toluene	ND		96	130
trans-1,2-Dichloroethene	ND		86	130
trans-1,3-Dichloropropene	ND		56	130
Trichloroethene	ND		110	130
Trichlorofluoromethane	ND VJ		76	270
Vinyl chloride	ND		91	130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		77	670
2,4,4-Trimethyl-1-pentene	ND		88	270
2,4,4-Trimethyl-2-pentene	ND		58	270
Cyclohexane	ND		53	1300
Methyl acetate	ND		750	2700
Methylcyclohexane	ND		86	130

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66287		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66310		Lab File ID:	V50172.D
Dilution:	1.0			Initial Weight/Volume:	10.07 g
Date Analyzed:	11/24/2010 1305			Final Weight/Volume:	10 g
Date Prepared:	11/24/2010 0800				

Tentatively Identified Compounds **Number TIC's Found:** 2

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	14.39	1100	T J
	Unknown	14.71	690	T J

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50191.D
Dilution:	1.0			Initial Weight/Volume:	6.68 g
Date Analyzed:	11/24/2010 2038			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		0.99	2.1
1,1,1-Trichloroethane		ND		1.6	2.1
1,1,2,2-Tetrachloroethane		ND		0.82	2.1
1,1,2-Trichloroethane		ND		0.82	2.1
1,1-Dichloroethane		ND		1.6	2.1
1,1-Dichloroethene		ND		1.3	2.1
1,1-Dichloropropene		ND		1.2	2.1
1,2,3-Trichlorobenzene		ND		0.90	2.1
1,2,3-Trichloropropane		ND		0.99	2.1
1,2,4-Trichlorobenzene		ND		0.82	2.1
1,2,4-Trimethylbenzene		ND	UJ	1.2	2.1
1,2-Dibromo-3-Chloropropane		ND		2.3	21
1,2-Dichlorobenzene		ND		0.82	2.1
1,2-Dichloroethane		ND		0.82	2.1
1,2-Dichloropropane		ND		1.3	2.1
1,3,5-Trimethylbenzene		ND		1.2	2.1
1,3-Dichlorobenzene		ND		0.82	2.1
1,3-Dichloropropane		ND		0.94	2.1
1,4-Dichlorobenzene		ND		0.82	2.1
1,4-Dioxane		ND	UJ	82	210
2,2-Dichloropropane		ND		1.7	2.1
2-Butanone (MEK)		ND		8.9	21
2-Chlorotoluene		ND		1.1	2.1
2-Hexanone		ND		12	21
4-Chlorotoluene		ND		0.99	2.1
4-Isopropyltoluene		ND		1.2	2.1
4-Methyl-2-pentanone (MIBK)		ND		8.4	21
Acetone		ND	UJ	14	210
Benzene		ND		1.3	2.1
Bromobenzene		ND		0.82	2.1
Bromoform		ND		1.3	2.1
Bromomethane		ND		1.9	4.1
Carbon disulfide		ND		1.6	2.1
Carbon tetrachloride		ND		1.4	2.1
Chlorobenzene		ND		0.99	2.1
Chlorobromomethane		ND		1.1	2.1
Chlorodibromomethane		ND		0.99	2.1
Chloroethane		ND		1.6	4.1
Chloroform		ND		1.2	2.1
Chloromethane		ND		1.3	4.1
cis-1,2-Dichloroethene		ND		0.97	2.1
cis-1,3-Dichloropropene		ND		0.82	2.1
Dibromomethane		ND		1.0	2.1
Dichlorobromomethane		ND		1.1	2.1
Dichlorodifluoromethane		ND		1.7	4.1
Ethyl ether		ND		0.87	2.1

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50191.D
Dilution:	1.0			Initial Weight/Volume:	6.68 g
Date Analyzed:	11/24/2010 2038			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		1.5	2.1
Ethylene Dibromide	ND		0.92	2.1
Hexachlorobutadiene	ND		1.2	2.1
Isopropyl ether	ND		0.92	2.1
Isopropylbenzene	ND		1.2	2.1
m-Xylene & p-Xylene	ND		2.9	4.1
Methyl tert-butyl ether	ND		1.2	2.1
Methylene Chloride	ND		8.1	8.2
n-Butylbenzene	ND		0.99	2.1
N-Propylbenzene	ND		1.4	2.1
Naphthalene	ND		1.9	21
o-Xylene	ND		1.1	2.1
sec-Butylbenzene	ND		1.2	2.1
Styrene	ND		0.82	2.1
Tert-amyl methyl ether	ND		1.2	2.1
Tert-butyl ethyl ether	ND		1.2	2.1
tert-Butylbenzene	ND		1.2	2.1
Tetrachloroethene	ND		1.5	2.1
Tetrahydrofuran	ND UJ		10	21
Toluene	ND		1.5	2.1
trans-1,2-Dichloroethene	ND		1.3	2.1
trans-1,3-Dichloropropene	ND		0.85	2.1
Trichloroethene	ND		1.7	2.1
Trichlorofluoromethane	ND		1.2	4.1
Vinyl chloride	ND		1.4	2.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.2	10
2,4,4-Trimethyl-1-pentene	ND		1.3	4.1
2,4,4-Trimethyl-2-pentene	ND		0.89	4.1
Cyclohexane	ND		0.82	21
Methyl acetate	ND		12	41
Methylcyclohexane	ND		1.3	2.1

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	98		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50191.D
Dilution:	1.0			Initial Weight/Volume:	6.68 g
Date Analyzed:	11/24/2010 2038			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC
12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50192.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Date Analyzed:	11/24/2010 2102			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.4
1,1,1-Trichloroethane		ND		2.0	2.4
1,1,2,2-Tetrachloroethane		ND		0.98	2.4
1,1,2-Trichloroethane		ND		0.98	2.4
1,1-Dichloroethane		ND		1.9	2.4
1,1-Dichloroethene		ND		1.6	2.4
1,1-Dichloropropene		ND		1.5	2.4
1,2,3-Trichlorobenzene		ND		1.1	2.4
1,2,3-Trichloropropane		ND		1.2	2.4
1,2,4-Trichlorobenzene		ND		0.98	2.4
1,2,4-Trimethylbenzene		ND VJ		1.4	2.4
1,2-Dibromo-3-Chloropropane		ND		2.7	24
1,2-Dichlorobenzene		ND		0.98	2.4
1,2-Dichloroethane		ND		0.98	2.4
1,2-Dichloropropane		ND		1.6	2.4
1,3,5-Trimethylbenzene		ND		1.5	2.4
1,3-Dichlorobenzene		ND		0.98	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.98	2.4
1,4-Dioxane		ND VJ		98	240
2,2-Dichloropropane		ND		2.1	2.4
2-Butanone (MEK)		ND		11	24
2-Chlorotoluene		ND		1.3	2.4
2-Hexanone		ND		14	24
4-Chlorotoluene		ND		1.2	2.4
4-Isopropyltoluene		ND		1.5	2.4
4-Methyl-2-pentanone (MIBK)		ND		10	24
Acetone		ND VJ		17	240
Benzene		ND		1.6	2.4
Bromobenzene		ND		0.98	2.4
Bromoform		ND		1.6	2.4
Bromomethane		ND		2.3	4.9
Carbon disulfide		ND		1.9	2.4
Carbon tetrachloride		ND		1.7	2.4
Chlorobenzene		ND		1.2	2.4
Chlorobromomethane		ND		1.4	2.4
Chlorodibromomethane		ND		1.2	2.4
Chloroethane		ND		2.0	4.9
Chloroform		ND		1.5	2.4
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.2	2.4
cis-1,3-Dichloropropene		ND		0.98	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.3	2.4
Dichlorodifluoromethane		ND		2.1	4.9
Ethyl ether		ND		1.0	2.4

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50192.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Date Analyzed:	11/24/2010 2102			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		1.8	2.4
Ethylene Dibromide	ND		1.1	2.4
Hexachlorobutadiene	ND		1.5	2.4
Isopropyl ether	ND		1.1	2.4
Isopropylbenzene	ND		1.5	2.4
m-Xylene & p-Xylene	ND		3.4	4.9
Methyl tert-butyl ether	ND		1.5	2.4
Methylene Chloride	ND		9.6	9.8
n-Butylbenzene	ND		1.2	2.4
N-Propylbenzene	ND		1.7	2.4
Naphthalene	ND		2.3	24
o-Xylene	ND		1.3	2.4
sec-Butylbenzene	ND		1.4	2.4
Styrene	ND		0.98	2.4
Tert-amyl methyl ether	ND		1.5	2.4
Tert-butyl ethyl ether	ND		1.4	2.4
tert-Butylbenzene	ND		1.4	2.4
Tetrachloroethene	ND		1.8	2.4
Tetrahydrofuran	ND UJ		12	24
Toluene	ND		1.8	2.4
trans-1,2-Dichloroethene	ND		1.6	2.4
trans-1,3-Dichloropropene	ND		1.0	2.4
Trichloroethene	ND		2.1	2.4
Trichlorofluoromethane	ND		1.4	4.9
Vinyl chloride	ND		1.7	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.4	12
2,4,4-Trimethyl-1-pentene	ND		1.6	4.9
2,4,4-Trimethyl-2-pentene	ND		1.1	4.9
Cyclohexane	ND		0.98	24
Methyl acetate	ND		14	49
Methylcyclohexane	ND		1.6	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	90		70 - 130

TC
12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50192.D
Dilution:	1.0			Initial Weight/Volume:	5.91 g
Date Analyzed:	11/24/2010 2102			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	14.39	15	T J

TC
12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-TBK-058**

Lab Sample ID: 360-31167-20
Client Matrix: Solid

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50193.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/24/2010 2126			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND		1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND		100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		ND		17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.0
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.0
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.0
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.0
Ethyl ether		ND		1.1	2.5

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-TBK-058**

Lab Sample ID: 360-31167-20
Client Matrix: Solid

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50193.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/24/2010 2126			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	5.0
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.8	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.0
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	5.0
2,4,4-Trimethyl-2-pentene		ND		1.1	5.0
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	50
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12/20/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-TBK-058**

Lab Sample ID: 360-31167-20
Client Matrix: Solid

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66366		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66365		Lab File ID:	V50193.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/24/2010 2126			Final Weight/Volume:	5 g
Date Prepared:	11/24/2010 1040				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/20/10

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50068.D BFB Injection Date: 11/19/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 16:30

Analysis Batch No.: 66169

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.2	
75	30.0 - 60.0 % of mass 95	42.8	
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 - 120.00 % of mass 95	57.9	
175	5.0 - 9.0 % of mass 174	4.6	(7.9)1
176	95.0 - 101.0 % of mass 174	56.9	(98.4)1
177	5.0 - 9.0 % of mass 176	3.8	(6.7)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66169/3	V50069.D	11/19/2010	16:54
	LCS 360-66168/1-A	V50070.D	11/19/2010	17:18
	LCSD 360-66168/2-A	V50071.D	11/19/2010	17:41
	MB 360-66168/3-A	V50074.D	11/19/2010	18:53
OC-SB-475-8.0/10-DUP	360-31167-6	V50090.D	11/20/2010	01:18
OC-SB-475-8.0/10-XXX	360-31167-7	V50091.D	11/20/2010	01:42

	LCS	LCSD	
Acetone	62	62	
Bromomethane	64	64	UJ associated
Chloroethane	42	46	

	RRF	%D	
Acetone	.028	-29.3	UJ
tetrahydrofuran	0.037	OK	UJ
1,4-Dioxane	0.019	OK	UJ

12/19/10
TC

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50096.D BFB Injection Date: 11/22/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 16:55

Analysis Batch No.: 66227

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	43.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	52.2	
175	5.0 - 9.0 % of mass 174	4.1	(7.8)1
176	95.0 - 101.0 % of mass 174	52.1	(99.9)1
177	5.0 - 9.0 % of mass 176	3.8	(7.3)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66227/2	V50097.D	11/22/2010	17:19
	LCS 360-66225/1-A	V50098.D	11/22/2010	17:43
	LCSD 360-66225/2-A	V50099.D	11/22/2010	18:07
	MB 360-66225/3-A	V50102.D	11/22/2010	19:18
OC-SB-474-0.0/1.0-XXX	360-31167-1	V50111.D	11/22/2010	22:56
OC-SB-474-10.5/12.5-XXX	360-31167-2	V50112.D	11/22/2010	23:19
OC-SB-474-8.0/10-XXX	360-31167-3	V50113.D	11/22/2010	23:43
OC-SB-475-0.0/1.0-XXX	360-31167-4	V50114.D	11/23/2010	00:07
OC-SB-476-0.0/1.0-XXX	360-31167-8	V50115.D	11/23/2010	00:31

W/in Limits 70-130% ✓

	RRF	%D
Acetone	0.030	ok
tetrahydrofuran	0.034	
2-butanone	0.049	
1,4-dioxane	0.016	
124 trimethylbenzene	ok	27

tetrahydrofuran @ 15.3 J no detections
no action

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50116.D BFB Injection Date: 11/23/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 00:56

Analysis Batch No.: 66242

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	42.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	60.5	
175	5.0 - 9.0 % of mass 174	4.9	(8.1)1
176	95.0 - 101.0 % of mass 174	61.1	(101.0)1
177	5.0 - 9.0 % of mass 176	3.9	(6.5)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66242/3	V50117.D	11/23/2010	01:20
	LCS 360-66237/1-A	V50118.D	11/23/2010	01:44
	LCSD 360-66237/2-A	V50119.D	11/23/2010	02:08
	MB 360-66237/3-A	V50122.D	11/23/2010	03:20
OC-SB-475-8.0/10-DUP DL	360-31167-6 DL	V50130.D	11/23/2010	06:33
OC-SB-475-8.0/10-XXX DL	360-31167-7 DL	V50131.D	11/23/2010	06:57
OC-SB-476-13/15-XXX	360-31167-9	V50132.D	11/23/2010	07:22
OC-SB-476-8.0/10-XXX	360-31167-10	V50133.D	11/23/2010	07:46
OC-SB-477-10/12-XXX	360-31167-12	V50135.D	11/23/2010	08:34
OC-SB-477-8.0/10-XXX	360-31167-13	V50136.D	11/23/2010	08:58

	RRF
Acetone	0.03
tetrahydro furan	0.03
1,4 Dioxane	0.01

	LCS	LCSD
Bromomethane	67	68
chloroethane	41	42
trichlorofluoromethane	57	59
Dichlorodifluoromethane	62	66

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50144.D BFB Injection Date: 11/23/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 15:02

Analysis Batch No.: 66263

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.0	
75	30.0 - 60.0 % of mass 95	42.0	
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 - 120.00 % of mass 95	62.0	
175	5.0 - 9.0 % of mass 174	4.7	(7.6)1
176	95.0 - 101.0 % of mass 174	62.1	(100.2)1
177	5.0 - 9.0 % of mass 176	4.2	(6.7)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66263/3	V50145.D	11/23/2010	15:26
	LCS 360-66285/1-A	V50146.D	11/23/2010	15:50
	LCSD 360-66285/2-A	V50147.D	11/23/2010	16:14
	MB 360-66285/3-A	V50150.D	11/23/2010	17:26
OC-SB-475-16/18-XXX	360-31167-5	V50151.D	11/23/2010	17:50
OC-SB-477-0.0/1.0-XXX	360-31167-11	V50152.D	11/23/2010	18:13
OC-SB-475-16/18-XXX MS	360-31167-5 MS	V50159.D	11/23/2010	21:01
OC-SB-475-16/18-XXX MSD	360-31167-5 MSD	V50160.D	11/23/2010	21:26

	RRF	%D
Acetone	.02	26
tetrahydrofuran	.03	
1,4Dioxane	.01	
124TMB	OK	29

UJ all

Acetone @ 20.7J
tetrahydrofuran @ 15.1J

no detections
no actions

Acetone @ 68% UJ associated

	MS	MSD
trichlorofluoromethane	65%	67%
dichlorodifluoromethane	64%	66%

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50162.D BFB Injection Date: 11/24/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 09:07

Analysis Batch No.: 66287

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.2	
75	30.0 - 60.0 % of mass 95	42.7	
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 - 120.00 % of mass 95	58.0	
175	5.0 - 9.0 % of mass 174	4.5	(7.7)1
176	95.0 - 101.0 % of mass 174	58.4	(100.7)1
177	5.0 - 9.0 % of mass 176	3.8	(6.4)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66287/3	V50163.D	11/24/2010	09:30
	LCS 360-66310/1-A	V50164.D	11/24/2010	09:54
	LCSD 360-66310/2-A	V50165.D	11/24/2010	10:18
	MB 360-66310/3-A	V50167.D	11/24/2010	11:06
OC-SB-478-10/12-XXX	360-31167-15	V50170.D	11/24/2010	12:18
OC-SB-478-8.0/10-XXX	360-31167-16	V50171.D	11/24/2010	12:41
OC-SB-497-0.0/1.0-XXX	360-31167-17	V50172.D	11/24/2010	13:05
OC-SB-476-13/15-XXX DL	360-31167-9 DL	V50176.D	11/24/2010	14:40
OC-SB-476-8.0/10-XXX DL	360-31167-10 DL	V50177.D	11/24/2010	15:04
OC-SB-477-10/12-XXX DL	360-31167-12 DL	V50178.D	11/24/2010	15:28
OC-SB-478-10/12-XXX DL	360-31167-15 DL	V50181.D	11/24/2010	16:39
OC-SB-477-8.0/10-XXX DL	360-31167-13 DL	V50182.D	11/24/2010	17:03

	RRF	%D
Acetone	0.03	OK
Tetrahydrofuran	0.03	OK
1,4 Dioxane	0.018	OK
124TMB	OK	25.7

UJ

	LCS	LCSD
Acetone	64	OK 80%
Bromomethane	65	61
Chloroethane	40	40
Trichlorofluoromethane	65	66

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: V50183.D BFB Injection Date: 11/24/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 17:26

Analysis Batch No.: 66366

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.3	
75	30.0 - 60.0 % of mass 95	43.4	
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 - 120.00 % of mass 95	50.6	
175	5.0 - 9.0 % of mass 174	4.1	(8.0)1
176	95.0 - 101.0 % of mass 174	51.1	(100.9)1
177	5.0 - 9.0 % of mass 176	3.5	(6.8)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66366/3	V50184.D	11/24/2010	17:50
	LCS 360-66365/1-A	V50185.D	11/24/2010	18:14
	LCSD 360-66365/2-A	V50186.D	11/24/2010	18:38
	MB 360-66365/3-A	V50189.D	11/24/2010	19:50
OC-SB-478-0.0/1.0-XXX	360-31167-14	V50190.D	11/24/2010	20:14
OC-SB-497-11/13-XXX	360-31167-18	V50191.D	11/24/2010	20:38
OC-SB-497-6.0/8.0-XXX	360-31167-19	V50192.D	11/24/2010	21:02
OC-TBK-058	360-31167-20	V50193.D	11/24/2010	21:26

	RRF	%D
Acetone	0.03	OK
Tetrahydrofuran	0.03	OK
14Dioxane	0.019	OK
124TMB	OK	29.7

VJ

W/in Limits 70-130%

12/19/10
TC

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50070.D

Lab ID: LCS 360-66168/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4280	86	70-130	
1,1,1-Trichloroethane	5000	4170	83	70-130	
1,1,2,2-Tetrachloroethane	5000	4350	87	70-130	
1,1,2-Trichloroethane	5000	4150	83	70-130	
1,1-Dichloroethane	5000	4280	86	70-130	
1,1-Dichloroethene	5000	4370	87	70-130	
1,1-Dichloropropene	5000	4480	90	70-130	
1,2,3-Trichlorobenzene	5000	4850	97	70-130	
1,2,3-Trichloropropane	5000	4290	86	70-130	
1,2,4-Trichlorobenzene	5000	4890	98	70-130	
1,2,4-Trimethylbenzene	5000	5890	118	70-130	
1,2-Dibromo-3-Chloropropane	5000	4090	82	70-130	
1,2-Dichlorobenzene	5000	4770	95	70-130	
1,2-Dichloroethane	5000	3930	79	70-130	
1,2-Dichloropropane	5000	4480	90	70-130	
1,3,5-Trimethylbenzene	5000	4290	86	70-130	
1,3-Dichlorobenzene	5000	4350	87	70-130	
1,3-Dichloropropane	5000	4430	89	70-130	
1,4-Dichlorobenzene	5000	4790	96	70-130	
1,4-Dioxane	50000	45100	90	70-130	
2,2-Dichloropropane	5000	3840	77	70-130	
2-Butanone (MEK)	50000	40400	81	70-130	
2-Chlorotoluene	5000	4420	88	70-130	
2-Hexanone	50000	44500	89	70-130	
4-Chlorotoluene	5000	4530	91	70-130	
4-Isopropyltoluene	5000	4590	92	70-130	
4-Methyl-2-pentanone (MIBK)	50000	42200	84	70-130	
Acetone	50000	31200	62	70-130	*
Benzene	5000	4570	91	70-130	
Bromobenzene	5000	4320	86	70-130	
Bromoform	5000	4270	85	70-130	
Bromomethane	5000	3190	64	70-130	*
Carbon disulfide	5000	4590	92	70-130	
Carbon tetrachloride	5000	4110	82	70-130	
Chlorobenzene	5000	4840	97	70-130	
Chlorobromomethane	5000	4480	90	70-130	
Chlorodibromomethane	5000	4030	81	70-130	
Chloroethane	5000	2110	42	70-130	*
Chloroform	5000	4150	83	70-130	
Chloromethane	5000	5020	100	70-130	
cis-1,2-Dichloroethene	5000	4130	83	70-130	
cis-1,3-Dichloropropene	5000	4460	89	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50070.D

Lab ID: LCS 360-66168/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	5000	4450	89	70-130	
Dichlorobromomethane	5000	3970	79	70-130	
Dichlorodifluoromethane	5000	4370	87	70-130	
Ethyl ether	5000	3800	76	70-130	
Ethylbenzene	5000	4840	97	70-130	
Ethylene Dibromide	5000	4170	83	70-130	
Hexachlorobutadiene	5000	4650	93	70-130	
Isopropyl ether	5000	4290	86	70-130	
Isopropylbenzene	5000	4470	89	70-130	
m-Xylene & p-Xylene	10000	9590	96	70-130	
Methyl tert-butyl ether	5000	4070	81	70-130	
Methylene Chloride	5000	4690	94	70-130	
n-Butylbenzene	5000	5190	104	70-130	
N-Propylbenzene	5000	4730	95	70-130	
Naphthalene	5000	4580	92	70-130	
o-Xylene	5000	4660	93	70-130	
sec-Butylbenzene	5000	4390	88	70-130	
Styrene	5000	4540	91	70-130	
Tert-amyl methyl ether	5000	4140	83	70-130	
Tert-butyl ethyl ether	5000	4060	81	70-130	
tert-Butylbenzene	5000	4580	92	70-130	
Tetrachloroethene	5000	4410	88	70-130	
Tetrahydrofuran	50000	43800	88	70-130	
Toluene	5000	4760	95	70-130	
trans-1,2-Dichloroethene	5000	4310	86	70-130	
trans-1,3-Dichloropropene	5000	4240	85	70-130	
Trichloroethene	5000	4360	87	70-130	
Trichlorofluoromethane	5000	3570	71	70-130	
Vinyl chloride	5000	4490	90	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	5000	4340	87	70-130	
2,4,4-Trimethyl-1-pentene	5000	4210	84	70-130	
2,4,4-Trimethyl-2-pentene	5000	4700	94	70-130	
Cyclohexane	5000	4330	87	70-130	
Methyl acetate	50000	38800	78	70-130	
Methylcyclohexane	5000	4360	87	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/1/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50071.D

Lab ID: LCSD 360-66168/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4290	86	0	20	70-130	
1,1,1-Trichloroethane	5000	4360	87	4	20	70-130	
1,1,2,2-Tetrachloroethane	5000	4310	86	1	20	70-130	
1,1,2-Trichloroethane	5000	4210	84	1	20	70-130	
1,1-Dichloroethane	5000	4430	89	3	20	70-130	
1,1-Dichloroethene	5000	4510	90	3	20	70-130	
1,1-Dichloropropene	5000	4600	92	3	20	70-130	
1,2,3-Trichlorobenzene	5000	5040	101	4	20	70-130	
1,2,3-Trichloropropane	5000	4200	84	2	20	70-130	
1,2,4-Trichlorobenzene	5000	5070	101	4	20	70-130	
1,2,4-Trimethylbenzene	5000	5970	119	1	20	70-130	
1,2-Dibromo-3-Chloropropane	5000	4050	81	1	20	70-130	
1,2-Dichlorobenzene	5000	4780	96	0	20	70-130	
1,2-Dichloroethane	5000	4080	82	4	20	70-130	
1,2-Dichloropropane	5000	4510	90	1	20	70-130	
1,3,5-Trimethylbenzene	5000	4330	87	1	20	70-130	
1,3-Dichlorobenzene	5000	4420	88	2	20	70-130	
1,3-Dichloropropane	5000	4450	89	0	20	70-130	
1,4-Dichlorobenzene	5000	4750	95	1	20	70-130	
1,4-Dioxane	50000	40200	80	12	20	70-130	
2,2-Dichloropropane	5000	4050	81	5	20	70-130	
2-Butanone (MEK)	50000	40300	81	0	20	70-130	
2-Chlorotoluene	5000	4530	91	2	20	70-130	
2-Hexanone	50000	45400	91	2	20	70-130	
4-Chlorotoluene	5000	4580	92	1	20	70-130	
4-Isopropyltoluene	5000	4640	93	1	20	70-130	
4-Methyl-2-pentanone (MIBK)	50000	42200	84	0	20	70-130	
Acetone	50000	31100	62	0	20	70-130	*
Benzene	5000	4660	93	2	20	70-130	
Bromobenzene	5000	4340	87	0	20	70-130	
Bromoform	5000	4140	83	3	20	70-130	
Bromomethane	5000	3200	64	1	20	70-130	*
Carbon disulfide	5000	4730	95	3	20	70-130	
Carbon tetrachloride	5000	4210	84	2	20	70-130	
Chlorobenzene	5000	4860	97	0	20	70-130	
Chlorobromomethane	5000	4530	91	1	20	70-130	
Chlorodibromomethane	5000	4090	82	1	20	70-130	
Chloroethane	5000	2300	46	8	20	70-130	*
Chloroform	5000	4250	85	2	20	70-130	
Chloromethane	5000	5150	103	2	20	70-130	
cis-1,2-Dichloroethene	5000	4220	84	2	20	70-130	
cis-1,3-Dichloropropene	5000	4630	93	4	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC
12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50071.D

Lab ID: LCSD 360-66168/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	5000	4600	92	3	20	70-130	
Dichlorobromomethane	5000	4050	81	2	20	70-130	
Dichlorodifluoromethane	5000	4500	90	3	20	70-130	
Ethyl ether	5000	3810	76	0	20	70-130	
Ethylbenzene	5000	4890	98	1	20	70-130	
Ethylene Dibromide	5000	4270	85	2	20	70-130	
Hexachlorobutadiene	5000	4800	96	3	20	70-130	
Isopropyl ether	5000	4350	87	1	20	70-130	
Isopropylbenzene	5000	4530	91	2	20	70-130	
m-Xylene & p-Xylene	10000	9640	96	1	20	70-130	
Methyl tert-butyl ether	5000	4150	83	2	20	70-130	
Methylene Chloride	5000	4780	96	2	20	70-130	
n-Butylbenzene	5000	5220	104	1	20	70-130	
N-Propylbenzene	5000	4780	96	1	20	70-130	
Naphthalene	5000	4750	95	4	20	70-130	
o-Xylene	5000	4700	94	1	20	70-130	
sec-Butylbenzene	5000	4450	89	1	20	70-130	
Styrene	5000	4530	91	0	20	70-130	
Tert-amyl methyl ether	5000	4280	86	3	20	70-130	
Tert-butyl ethyl ether	5000	4190	84	3	20	70-130	
tert-Butylbenzene	5000	4560	91	0	20	70-130	
Tetrachloroethene	5000	4660	93	5	20	70-130	
Tetrahydrofuran	50000	44900	90	2	20	70-130	
Toluene	5000	4800	96	1	20	70-130	
trans-1,2-Dichloroethene	5000	4470	89	4	20	70-130	
trans-1,3-Dichloropropene	5000	4260	85	1	20	70-130	
Trichloroethene	5000	4470	89	2	20	70-130	
Trichlorofluoromethane	5000	3760	75	5	20	70-130	
Vinyl chloride	5000	4590	92	2	20	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	5000	4440	89	2	20	70-130	
2,4,4-Trimethyl-1-pentene	5000	4400	88	4	20	70-130	
2,4,4-Trimethyl-2-pentene	5000	4990	100	6	20	70-130	
Cyclohexane	5000	4490	90	4	20	70-130	
Methyl acetate	50000	38800	78	0	20	70-130	
Methylcyclohexane	5000	4490	90	3	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/7/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50118.D

Lab ID: LCS 360-66237/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4380	88	70-130	
1,1,1-Trichloroethane	5000	4070	81	70-130	
1,1,2,2-Tetrachloroethane	5000	4230	85	70-130	
1,1,2-Trichloroethane	5000	4460	89	70-130	
1,1-Dichloroethane	5000	4410	88	70-130	
1,1-Dichloroethene	5000	3980	80	70-130	
1,1-Dichloropropene	5000	4320	86	70-130	
1,2,3-Trichlorobenzene	5000	5190	104	70-130	
1,2,3-Trichloropropane	5000	4280	86	70-130	
1,2,4-Trichlorobenzene	5000	5180	104	70-130	
1,2,4-Trimethylbenzene	5000	5780	116	70-130	
1,2-Dibromo-3-Chloropropane	5000	4310	86	70-130	
1,2-Dichlorobenzene	5000	5040	101	70-130	
1,2-Dichloroethane	5000	4070	81	70-130	
1,2-Dichloropropane	5000	4660	93	70-130	
1,3,5-Trimethylbenzene	5000	4360	87	70-130	
1,3-Dichlorobenzene	5000	4500	90	70-130	
1,3-Dichloropropane	5000	4620	92	70-130	
1,4-Dichlorobenzene	5000	4920	98	70-130	
1,4-Dioxane	50000	48300	97	70-130	
2,2-Dichloropropane	5000	3660	73	70-130	
2-Butanone (MEK)	50000	43300	87	70-130	
2-Chlorotoluene	5000	4570	91	70-130	
2-Hexanone	50000	48200	96	70-130	
4-Chlorotoluene	5000	4660	93	70-130	
4-Isopropyltoluene	5000	4510	90	70-130	
4-Methyl-2-pentanone (MIBK)	50000	44900	90	70-130	
Acetone	50000	36400	73	70-130	
Benzene	5000	4760	95	70-130	
Bromobenzene	5000	4420	88	70-130	
Bromoform	5000	4270	85	70-130	
Bromomethane	5000	3370	67	70-130	*
Carbon disulfide	5000	4470	89	70-130	
Carbon tetrachloride	5000	3810	76	70-130	
Chlorobenzene	5000	5000	100	70-130	
Chlorobromomethane	5000	4520	90	70-130	
Chlorodibromomethane	5000	4270	85	70-130	
Chloroethane	5000	2060	41	70-130	*
Chloroform	5000	4270	85	70-130	
Chloromethane	5000	4400	88	70-130	
cis-1,2-Dichloroethene	5000	4280	86	70-130	
cis-1,3-Dichloropropene	5000	4580	92	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TK 12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50118.D

Lab ID: LCS 360-66237/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	5000	4720	94	70-130	
Dichlorobromomethane	5000	4110	82	70-130	
Dichlorodifluoromethane	5000	3080	62	70-130	*
Ethyl ether	5000	3890	78	70-130	
Ethylbenzene	5000	4910	98	70-130	
Ethylene Dibromide	5000	4380	88	70-130	
Hexachlorobutadiene	5000	4620	92	70-130	
Isopropyl ether	5000	4430	89	70-130	
Isopropylbenzene	5000	4450	89	70-130	
m-Xylene & p-Xylene	10000	9820	98	70-130	
Methyl tert-butyl ether	5000	4170	83	70-130	
Methylene Chloride	5000	4780	96	70-130	
n-Butylbenzene	5000	5010	100	70-130	
N-Propylbenzene	5000	4690	94	70-130	
Naphthalene	5000	4850	97	70-130	
o-Xylene	5000	4800	96	70-130	
sec-Butylbenzene	5000	4310	86	70-130	
Styrene	5000	4680	94	70-130	
Tert-amyl methyl ether	5000	4290	86	70-130	
Tert-butyl ethyl ether	5000	4240	85	70-130	
tert-Butylbenzene	5000	4550	91	70-130	
Tetrachloroethene	5000	4510	90	70-130	
Tetrahydrofuran	50000	44100	88	70-130	
Toluene	5000	4930	99	70-130	
trans-1,2-Dichloroethene	5000	4310	86	70-130	
trans-1,3-Dichloropropene	5000	4440	89	70-130	
Trichloroethene	5000	4610	92	70-130	
Trichlorofluoromethane	5000	2860	57	70-130	*
Vinyl chloride	5000	4090	82	70-130	
1,1,2-Trichloro-1,2,2-trifluor oethane	5000	4170	83	70-130	
2,4,4-Trimethyl-1-pentene	5000	3870	77	70-130	
2,4,4-Trimethyl-2-pentene	5000	4420	88	70-130	
Cyclohexane	5000	4080	82	70-130	
Methyl acetate	50000	50400	101	70-130	
Methylcyclohexane	5000	4010	80	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50119.D

Lab ID: LCSD 360-66237/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4460	89	2	20	70-130	
1,1,1-Trichloroethane	5000	4220	84	4	20	70-130	
1,1,2,2-Tetrachloroethane	5000	4530	91	7	20	70-130	
1,1,2-Trichloroethane	5000	4560	91	2	20	70-130	
1,1-Dichloroethane	5000	4610	92	5	20	70-130	
1,1-Dichloroethene	5000	4110	82	3	20	70-130	
1,1-Dichloropropene	5000	4440	89	3	20	70-130	
1,2,3-Trichlorobenzene	5000	5270	105	2	20	70-130	
1,2,3-Trichloropropane	5000	4430	89	3	20	70-130	
1,2,4-Trichlorobenzene	5000	5290	106	2	20	70-130	
1,2,4-Trimethylbenzene	5000	5700	114	1	20	70-130	
1,2-Dibromo-3-Chloropropane	5000	4670	93	8	20	70-130	
1,2-Dichlorobenzene	5000	5150	103	2	20	70-130	
1,2-Dichloroethane	5000	4340	87	6	20	70-130	
1,2-Dichloropropane	5000	4800	96	3	20	70-130	
1,3,5-Trimethylbenzene	5000	4290	86	1	20	70-130	
1,3-Dichlorobenzene	5000	4490	90	0	20	70-130	
1,3-Dichloropropane	5000	4910	98	6	20	70-130	
1,4-Dichlorobenzene	5000	4980	100	1	20	70-130	
1,4-Dioxane	50000	48500	97	0	20	70-130	
2,2-Dichloropropane	5000	3580	72	2	20	70-130	
2-Butanone (MEK)	50000	45500	91	5	20	70-130	
2-Chlorotoluene	5000	4500	90	2	20	70-130	
2-Hexanone	50000	52500	105	9	20	70-130	
4-Chlorotoluene	5000	4630	93	1	20	70-130	
4-Isopropyltoluene	5000	4450	89	1	20	70-130	
4-Methyl-2-pentanone (MIBK)	50000	48400	97	7	20	70-130	
Acetone	50000	38300	77	5	20	70-130	
Benzene	5000	4870	97	2	20	70-130	
Bromobenzene	5000	4420	88	0	20	70-130	
Bromoform	5000	4580	92	7	20	70-130	
Bromomethane	5000	3390	68	0	20	70-130	*
Carbon disulfide	5000	4520	90	1	20	70-130	
Carbon tetrachloride	5000	4010	80	5	20	70-130	
Chlorobenzene	5000	5040	101	1	20	70-130	
Chlorobromomethane	5000	4830	97	7	20	70-130	
Chlorodibromomethane	5000	4390	88	3	20	70-130	
Chloroethane	5000	2080	42	1	20	70-130	*
Chloroform	5000	4450	89	4	20	70-130	
Chloromethane	5000	4600	92	4	20	70-130	
cis-1,2-Dichloroethene	5000	4430	89	3	20	70-130	
cis-1,3-Dichloropropene	5000	4870	97	6	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50119.D

Lab ID: LCSD 360-66237/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	5000	4970	99	5	20	70-130	
Dichlorobromomethane	5000	4360	87	6	20	70-130	
Dichlorodifluoromethane	5000	3280	66	6	20	70-130	*
Ethyl ether	5000	4070	81	5	20	70-130	
Ethylbenzene	5000	4890	98	0	20	70-130	
Ethylene Dibromide	5000	4710	94	7	20	70-130	
Hexachlorobutadiene	5000	4690	94	1	20	70-130	
Isopropyl ether	5000	4600	92	4	20	70-130	
Isopropylbenzene	5000	4430	89	0	20	70-130	
m-Xylene & p-Xylene	10000	9750	98	1	20	70-130	
Methyl tert-butyl ether	5000	4360	87	4	20	70-130	
Methylene Chloride	5000	4990	100	4	20	70-130	
n-Butylbenzene	5000	5120	102	2	20	70-130	
N-Propylbenzene	5000	4640	93	1	20	70-130	
Naphthalene	5000	5040	101	4	20	70-130	
o-Xylene	5000	4790	96	0	20	70-130	
sec-Butylbenzene	5000	4250	85	1	20	70-130	
Styrene	5000	4680	94	0	20	70-130	
Tert-amyl methyl ether	5000	4540	91	6	20	70-130	
Tert-butyl ethyl ether	5000	4470	89	5	20	70-130	
tert-Butylbenzene	5000	4490	90	1	20	70-130	
Tetrachloroethene	5000	4750	95	5	20	70-130	
Tetrahydrofuran	50000	48800	98	10	20	70-130	
Toluene	5000	5100	102	3	20	70-130	
trans-1,2-Dichloroethene	5000	4440	89	3	20	70-130	
trans-1,3-Dichloropropene	5000	4630	93	4	20	70-130	
Trichloroethene	5000	4780	96	4	20	70-130	
Trichlorofluoromethane	5000	2970	59	4	20	70-130	*
Vinyl chloride	5000	4270	85	4	20	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	5000	4310	86	4	20	70-130	
2,4,4-Trimethyl-1-pentene	5000	3950	79	2	20	70-130	
2,4,4-Trimethyl-2-pentene	5000	4540	91	3	20	70-130	
Cyclohexane	5000	4240	85	4	20	70-130	
Methyl acetate	50000	52600	105	4	20	70-130	
Methylcyclohexane	5000	4180	84	4	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/17/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50147.D

Lab ID: LCSD 360-66285/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	100	89.4	89	3	20	70-130	
1,1,1-Trichloroethane	100	87.8	88	1	20	70-130	
1,1,2,2-Tetrachloroethane	100	88.6	89	11	20	70-130	
1,1,2-Trichloroethane	100	87.9	88	9	20	70-130	
1,1-Dichloroethane	100	90.3	90	1	20	70-130	
1,1-Dichloroethene	100	91.0	91	2	20	70-130	
1,1-Dichloropropene	100	92.2	92	1	20	70-130	
1,2,3-Trichlorobenzene	100	99.0	99	9	20	70-130	
1,2,3-Trichloropropane	100	87.1	87	13	20	70-130	
1,2,4-Trichlorobenzene	100	102	102	6	20	70-130	
1,2,4-Trimethylbenzene	100	122	122	1	20	70-130	
1,2-Dibromo-3-Chloropropane	100	88.9	89	11	20	70-130	
1,2-Dichlorobenzene	100	102	102	1	20	70-130	
1,2-Dichloroethane	100	83.8	84	5	20	70-130	
1,2-Dichloropropane	100	92.9	93	4	20	70-130	
1,3,5-Trimethylbenzene	100	88.9	89	1	20	70-130	
1,3-Dichlorobenzene	100	91.2	91	1	20	70-130	
1,3-Dichloropropane	100	92.3	92	8	20	70-130	
1,4-Dichlorobenzene	100	99.0	99	1	20	70-130	
1,4-Dioxane	1000	986	99	0	20	70-130	
2,2-Dichloropropane	100	85.4	85	6	20	70-130	
2-Butanone (MEK)	1000	823	82	14	20	70-130	
2-Chlorotoluene	100	92.5	93	1	20	70-130	
2-Hexanone	1000	928	93	16	20	70-130	
4-Chlorotoluene	100	94.7	95	1	20	70-130	
4-Isopropyltoluene	100	94.8	95	1	20	70-130	
4-Methyl-2-pentanone (MIBK)	1000	865	86	18	20	70-130	
Acetone	1000	683	68	10	20	70-130	*
Benzene	100	94.9	95	1	20	70-130	
Bromobenzene	100	88.5	88	1	20	70-130	
Bromoform	100	89.6	90	8	20	70-130	
Bromomethane	100	89.2	89	3	20	70-130	
Carbon disulfide	100	99.2	99	1	20	70-130	
Carbon tetrachloride	100	85.6	86	2	20	70-130	
Chlorobenzene	100	102	102	0	20	70-130	
Chlorobromomethane	100	94.1	94	4	20	70-130	
Chlorodibromomethane	100	85.3	85	8	20	70-130	
Chloroethane	100	77.1	77	1	20	70-130	
Chloroform	100	87.7	88	1	20	70-130	
Chloromethane	100	89.5	90	3	20	70-130	
cis-1,2-Dichloroethene	100	87.3	87	2	20	70-130	
cis-1,3-Dichloropropene	100	93.6	94	6	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC
12-19-10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50164.D

Lab ID: LCS 360-66310/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4420	88	70-130	
1,1,1-Trichloroethane	5000	4320	86	70-130	
1,1,2,2-Tetrachloroethane	5000	4440	89	70-130	
1,1,2-Trichloroethane	5000	4200	84	70-130	
1,1-Dichloroethane	5000	4350	87	70-130	
1,1-Dichloroethene	5000	4310	86	70-130	
1,1-Dichloropropene	5000	4590	92	70-130	
1,2,3-Trichlorobenzene	5000	5170	103	70-130	
1,2,3-Trichloropropane	5000	4340	87	70-130	
1,2,4-Trichlorobenzene	5000	5390	108	70-130	
1,2,4-Trimethylbenzene	5000	6180	124	70-130	
1,2-Dibromo-3-Chloropropane	5000	4540	91	70-130	
1,2-Dichlorobenzene	5000	5020	100	70-130	
1,2-Dichloroethane	5000	4010	80	70-130	
1,2-Dichloropropane	5000	4490	90	70-130	
1,3,5-Trimethylbenzene	5000	4460	89	70-130	
1,3-Dichlorobenzene	5000	4630	93	70-130	
1,3-Dichloropropane	5000	4530	91	70-130	
1,4-Dichlorobenzene	5000	4960	99	70-130	
1,4-Dioxane	50000	42100	84	70-130	
2,2-Dichloropropane	5000	4070	81	70-130	
2-Butanone (MEK)	50000	40500	81	70-130	
2-Chlorotoluene	5000	4610	92	70-130	
2-Hexanone	50000	45400	91	70-130	
4-Chlorotoluene	5000	4720	94	70-130	
4-Isopropyltoluene	5000	4830	97	70-130	
4-Methyl-2-pentanone (MIBK)	50000	41400	83	70-130	
Acetone	50000	32100	64	70-130	*
Benzene	5000	4640	93	70-130	
Bromobenzene	5000	4390	88	70-130	
Bromoform	5000	4240	85	70-130	
Bromomethane	5000	3250	65	70-130	*
Carbon disulfide	5000	4670	93	70-130	
Carbon tetrachloride	5000	4200	84	70-130	
Chlorobenzene	5000	4940	99	70-130	
Chlorobromomethane	5000	4470	89	70-130	
Chlorodibromomethane	5000	4190	84	70-130	
Chloroethane	5000	2010	40	70-130	*
Chloroform	5000	4190	84	70-130	
Chloromethane	5000	4360	87	70-130	
cis-1,2-Dichloroethene	5000	4160	83	70-130	
cis-1,3-Dichloropropene	5000	4640	93	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

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FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50164.D

Lab ID: LCS 360-66310/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	5000	4630	93	70-130	
Dichlorobromomethane	5000	4090	82	70-130	
Dichlorodifluoromethane	5000	3720	74	70-130	
Ethyl ether	5000	3790	76	70-130	
Ethylbenzene	5000	4960	99	70-130	
Ethylene Dibromide	5000	4330	87	70-130	
Hexachlorobutadiene	5000	5070	101	70-130	
Isopropyl ether	5000	4220	84	70-130	
Isopropylbenzene	5000	4670	93	70-130	
m-Xylene & p-Xylene	10000	9860	99	70-130	
Methyl tert-butyl ether	5000	4010	80	70-130	
Methylene Chloride	5000	4390	88	70-130	
n-Butylbenzene	5000	5420	108	70-130	
N-Propylbenzene	5000	4890	98	70-130	
Naphthalene	5000	4840	97	70-130	
o-Xylene	5000	4800	96	70-130	
sec-Butylbenzene	5000	4610	92	70-130	
Styrene	5000	4700	94	70-130	
Tert-amyl methyl ether	5000	4090	82	70-130	
Tert-butyl ethyl ether	5000	3950	79	70-130	
tert-Butylbenzene	5000	4810	96	70-130	
Tetrachloroethene	5000	4790	96	70-130	
Tetrahydrofuran	50000	42800	86	70-130	
Toluene	5000	4860	97	70-130	
trans-1,2-Dichloroethene	5000	4350	87	70-130	
trans-1,3-Dichloropropene	5000	4510	90	70-130	
Trichloroethene	5000	4490	90	70-130	
Trichlorofluoromethane	5000	3240	65	70-130	*
Vinyl chloride	5000	4350	87	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	5000	4670	93	70-130	
2,4,4-Trimethyl-1-pentene	5000	4300	86	70-130	
2,4,4-Trimethyl-2-pentene	5000	4810	96	70-130	
Cyclohexane	5000	4530	91	70-130	
Methyl acetate	50000	39300	79	70-130	
Methylcyclohexane	5000	4450	89	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

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FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50165.D

Lab ID: LCSD 360-66310/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5000	4400	88	0	20	70-130	
1,1,1-Trichloroethane	5000	4320	86	0	20	70-130	
1,1,2,2-Tetrachloroethane	5000	4820	96	8	20	70-130	
1,1,2-Trichloroethane	5000	4540	91	8	20	70-130	
1,1-Dichloroethane	5000	4450	89	2	20	70-130	
1,1-Dichloroethene	5000	4570	91	6	20	70-130	
1,1-Dichloropropene	5000	4620	92	1	20	70-130	
1,2,3-Trichlorobenzene	5000	5230	105	1	20	70-130	
1,2,3-Trichloropropane	5000	4700	94	8	20	70-130	
1,2,4-Trichlorobenzene	5000	5320	106	1	20	70-130	
1,2,4-Trimethylbenzene	5000	6100	122	1	20	70-130	
1,2-Dibromo-3-Chloropropane	5000	4720	94	4	20	70-130	
1,2-Dichlorobenzene	5000	5070	101	1	20	70-130	
1,2-Dichloroethane	5000	4300	86	7	20	70-130	
1,2-Dichloropropane	5000	4620	92	3	20	70-130	
1,3,5-Trimethylbenzene	5000	4430	89	1	20	70-130	
1,3-Dichlorobenzene	5000	4580	92	1	20	70-130	
1,3-Dichloropropane	5000	4880	98	7	20	70-130	
1,4-Dichlorobenzene	5000	4910	98	1	20	70-130	
1,4-Dioxane	50000	38900	78	8	20	70-130	
2,2-Dichloropropane	5000	3820	76	6	20	70-130	
2-Butanone (MEK)	50000	44800	90	10	20	70-130	
2-Chlorotoluene	5000	4550	91	1	20	70-130	
2-Hexanone	50000	52000	104	13	20	70-130	
4-Chlorotoluene	5000	4680	94	1	20	70-130	
4-Isopropyltoluene	5000	4740	95	2	20	70-130	
4-Methyl-2-pentanone (MIBK)	50000	46700	93	12	20	70-130	
Acetone	50000	39900	80	22	20	70-130	*
Benzene	5000	4680	94	1	20	70-130	
Bromobenzene	5000	4480	90	2	20	70-130	
Bromoform	5000	4500	90	6	20	70-130	
Bromomethane	5000	3040	61	7	20	70-130	*
Carbon disulfide	5000	4820	96	3	20	70-130	
Carbon tetrachloride	5000	4260	85	1	20	70-130	
Chlorobenzene	5000	5020	100	1	20	70-130	
Chlorobromomethane	5000	4760	95	6	20	70-130	
Chlorodibromomethane	5000	4480	90	7	20	70-130	
Chloroethane	5000	2000	40	1	20	70-130	*
Chloroform	5000	4290	86	2	20	70-130	
Chloromethane	5000	4380	88	0	20	70-130	
cis-1,2-Dichloroethene	5000	4350	87	4	20	70-130	
cis-1,3-Dichloropropene	5000	4770	95	3	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

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FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50165.D

Lab ID: LCSD 360-66310/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	5000	4920	98	6	20	70-130	
Dichlorobromomethane	5000	4220	84	3	20	70-130	
Dichlorodifluoromethane	5000	3710	74	0	20	70-130	
Ethyl ether	5000	4040	81	6	20	70-130	
Ethylbenzene	5000	4940	99	1	20	70-130	
Ethylene Dibromide	5000	4710	94	8	20	70-130	
Hexachlorobutadiene	5000	4920	98	3	20	70-130	
Isopropyl ether	5000	4420	88	5	20	70-130	
Isopropylbenzene	5000	4600	92	1	20	70-130	
m-Xylene & p-Xylene	10000	9760	98	1	20	70-130	
Methyl tert-butyl ether	5000	4300	86	7	20	70-130	
Methylene Chloride	5000	4570	91	4	20	70-130	
n-Butylbenzene	5000	5280	106	3	20	70-130	
N-Propylbenzene	5000	4830	97	1	20	70-130	
Naphthalene	5000	5040	101	4	20	70-130	
o-Xylene	5000	4760	95	1	20	70-130	
sec-Butylbenzene	5000	4550	91	1	20	70-130	
Styrene	5000	4640	93	1	20	70-130	
Tert-amyl methyl ether	5000	4410	88	7	20	70-130	
Tert-butyl ethyl ether	5000	4300	86	9	20	70-130	
tert-Butylbenzene	5000	4670	93	3	20	70-130	
Tetrachloroethene	5000	4700	94	2	20	70-130	
Tetrahydrofuran	50000	47200	94	10	20	70-130	
Toluene	5000	4950	99	2	20	70-130	
trans-1,2-Dichloroethene	5000	4400	88	1	20	70-130	
trans-1,3-Dichloropropene	5000	4690	94	4	20	70-130	
Trichloroethene	5000	4510	90	0	20	70-130	
Trichlorofluoromethane	5000	3280	66	1	20	70-130	*
Vinyl chloride	5000	4440	89	2	20	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	5000	4700	94	1	20	70-130	
2,4,4-Trimethyl-1-pentene	5000	4290	86	0	20	70-130	
2,4,4-Trimethyl-2-pentene	5000	4930	99	2	20	70-130	
Cyclohexane	5000	4550	91	0	20	70-130	
Methyl acetate	50000	45800	92	15	20	70-130	
Methylcyclohexane	5000	4480	90	1	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

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FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50159.D

Lab ID: 360-31167-5 MS Client ID: OC-SB-475-16/18-XXX MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	237	ND	211	89	70-130	
1,1,1-Trichloroethane	237	ND	196	83	70-130	
1,1,2,2-Tetrachloroethane	237	ND	215	91	70-130	
1,1,2-Trichloroethane	237	ND	208	88	70-130	
1,1-Dichloroethane	237	ND	211	89	70-130	
1,1-Dichloroethene	237	ND	212	90	70-130	
1,1-Dichloropropene	237	ND	208	88	70-130	
1,2,3-Trichlorobenzene	237	ND	223	94	70-130	
1,2,3-Trichloropropane	237	ND	204	86	70-130	
1,2,4-Trichlorobenzene	237	ND	225	95	70-130	
1,2,4-Trimethylbenzene	237	ND	268	113	70-130	
1,2-Dibromo-3-Chloropropane	237	ND	199	84	70-130	
1,2-Dichlorobenzene	237	ND	230	97	70-130	
1,2-Dichloroethane	237	ND	192	81	70-130	
1,2-Dichloropropane	237	ND	220	93	70-130	
1,3,5-Trimethylbenzene	237	ND	199	84	70-130	
1,3-Dichlorobenzene	237	ND	204	86	70-130	
1,3-Dichloropropane	237	ND	217	92	70-130	
1,4-Dichlorobenzene	237	ND	220	93	70-130	
1,4-Dioxane	2370	ND	2430	103	70-130	
2,2-Dichloropropane	237	ND	173	73	70-130	
2-Butanone (MEK)	2370	ND	1990	84	70-130	
2-Chlorotoluene	237	ND	209	88	70-130	
2-Hexanone	2370	ND	2210	93	70-130	
4-Chlorotoluene	237	ND	216	91	70-130	
4-Isopropyltoluene	237	ND	209	88	70-130	
4-Methyl-2-pentanone (MIBK)	2370	ND	2150	91	70-130	
Acetone	2370	ND	1820	77	70-130	
Benzene	237	ND	228	96	70-130	
Bromobenzene	237	ND	205	87	70-130	
Bromoform	237	ND	205	87	70-130	
Bromomethane	237	ND	200	85	70-130	
Carbon disulfide	237	ND	226	95	70-130	
Carbon tetrachloride	237	ND	189	80	70-130	
Chlorobenzene	237	ND	233	99	70-130	
Chlorobromomethane	237	ND	218	92	70-130	
Chlorodibromomethane	237	ND	196	83	70-130	
Chloroethane	237	ND	180	76	70-130	
Chloroform	237	ND	203	86	70-130	
Chloromethane	237	ND	203	86	70-130	
cis-1,2-Dichloroethene	237	ND	202	85	70-130	
cis-1,3-Dichloropropene	237	ND	220	93	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

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FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50159.D

Lab ID: 360-31167-5 MS Client ID: OC-SB-475-16/18-XXX MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Dibromomethane	237	ND	223	94	70-130	
Dichlorobromomethane	237	ND	195	82	70-130	
Dichlorodifluoromethane	237	ND	150	64	70-130	F
Ethyl ether	237	ND	218	92	70-130	
Ethylbenzene	237	ND	230	97	70-130	
Ethylene Dibromide	237	ND	204	86	70-130	
Hexachlorobutadiene	237	ND	193	82	70-130	
Isopropyl ether	237	ND	213	90	70-130	
Isopropylbenzene	237	ND	210	89	70-130	
m-Xylene & p-Xylene	473	ND	453	96	70-130	
Methyl tert-butyl ether	237	ND	198	83	70-130	
Methylene Chloride	237	ND	222	94	70-130	
n-Butylbenzene	237	ND	229	97	70-130	
N-Propylbenzene	237	ND	219	93	70-130	
Naphthalene	237	ND	218	92	70-130	
o-Xylene	237	ND	225	95	70-130	
sec-Butylbenzene	237	ND	200	85	70-130	
Styrene	237	ND	218	92	70-130	
Tert-amyl methyl ether	237	ND	206	87	70-130	
Tert-butyl ethyl ether	237	ND	199	84	70-130	
tert-Butylbenzene	237	ND	210	89	70-130	
Tetrachloroethene	237	ND	210	89	70-130	
Tetrahydrofuran	2370	ND	2100	89	70-130	
Toluene	237	ND	231	98	70-130	
trans-1,2-Dichloroethene	237	ND	202	85	70-130	
trans-1,3-Dichloropropene	237	ND	205	87	70-130	
Trichloroethene	237	ND	204	86	70-130	
Trichlorofluoromethane	237	ND	154	65	70-130	F
Vinyl chloride	237	ND	201	85	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	237	ND	208	88	70-130	
2,4,4-Trimethyl-1-pentene	237	ND	190	80	70-130	
2,4,4-Trimethyl-2-pentene	237	ND	208	88	70-130	
Cyclohexane	237	ND	209	88	70-130	
Methyl acetate	2370	ND	2040	86	70-130	
Methylcyclohexane	237	ND	203	86	70-130	

Column to be used to flag recovery and RPD values

TC 12/19/10

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50160.D

Lab ID: 360-31167-5 MSD Client ID: OC-SB-475-16/18-XXX MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	119	103	86	69	30	70-130	F
1,1,1-Trichloroethane	119	98.2	82	66	30	70-130	F
1,1,2,2-Tetrachloroethane	119	109	92	65	30	70-130	F
1,1,2-Trichloroethane	119	106	89	65	30	70-130	F
1,1-Dichloroethane	119	103	87	68	30	70-130	F
1,1-Dichloroethene	119	103	87	69	30	70-130	F
1,1-Dichloropropene	119	104	87	67	30	70-130	F
1,2,3-Trichlorobenzene	119	117	98	62	30	70-130	F
1,2,3-Trichloropropane	119	101	85	68	30	70-130	F
1,2,4-Trichlorobenzene	119	120	100	61	30	70-130	F
1,2,4-Trimethylbenzene	119	132	111	68	30	70-130	F
1,2-Dibromo-3-Chloropropane	119	105	88	62	30	70-130	F
1,2-Dichlorobenzene	119	117	98	65	30	70-130	F
1,2-Dichloroethane	119	97.9	82	65	30	70-130	F
1,2-Dichloropropane	119	108	90	68	30	70-130	F
1,3,5-Trimethylbenzene	119	97.2	82	69	30	70-130	F
1,3-Dichlorobenzene	119	101	85	68	30	70-130	F
1,3-Dichloropropane	119	111	93	64	30	70-130	F
1,4-Dichlorobenzene	119	113	95	65	30	70-130	F
1,4-Dioxane	1190	1050	88	80	30	70-130	F
2,2-Dichloropropane	119	88.1	74	65	30	70-130	F
2-Butanone (MEK)	1190	1010	85	65	30	70-130	F
2-Chlorotoluene	119	102	86	68	30	70-130	F
2-Hexanone	1190	1150	96	63	30	70-130	F
4-Chlorotoluene	119	105	88	69	30	70-130	F
4-Isopropyltoluene	119	103	87	68	30	70-130	F
4-Methyl-2-pentanone (MIBK)	1190	1060	89	68	30	70-130	F
Acetone	1190	872	73	71	30	70-130	F
Benzene	119	111	93	69	30	70-130	F
Bromobenzene	119	101	85	68	30	70-130	F
Bromoform	119	103	87	66	30	70-130	F
Bromomethane	119	98.6	83	68	30	70-130	F
Carbon disulfide	119	110	92	69	30	70-130	F
Carbon tetrachloride	119	96.3	81	65	30	70-130	F
Chlorobenzene	119	115	97	68	30	70-130	F
Chlorobromomethane	119	109	91	67	30	70-130	F
Chlorodibromomethane	119	100	84	65	30	70-130	F
Chloroethane	119	83.2	70	74	30	70-130	F
Chloroform	119	100	84	68	30	70-130	F
Chloromethane	119	99.9	84	68	30	70-130	F
cis-1,2-Dichloroethene	119	99.0	83	68	30	70-130	F
cis-1,3-Dichloropropene	119	111	93	66	30	70-130	F

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/19/10

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Matrix: Solid Level: Low Lab File ID: V50160.D

Lab ID: 360-31167-5 MSD Client ID: OC-SB-475-16/18-XXX MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	119	112	94	66	30	70-130	F
Dichlorobromomethane	119	97.4	82	67	30	70-130	F
Dichlorodifluoromethane	119	78.1	66	63	30	70-130	F
Ethyl ether	119	107	90	68	30	70-130	F
Ethylbenzene	119	113	95	68	30	70-130	F
Ethylene Dibromide	119	106	89	63	30	70-130	F
Hexachlorobutadiene	119	101	85	62	30	70-130	F
Isopropyl ether	119	105	88	68	30	70-130	F
Isopropylbenzene	119	103	86	69	30	70-130	F
m-Xylene & p-Xylene	238	223	94	68	30	70-130	F
Methyl tert-butyl ether	119	101	85	65	30	70-130	F
Methylene Chloride	119	108	91	69	30	70-130	F
n-Butylbenzene	119	116	97	66	30	70-130	F
N-Propylbenzene	119	108	91	68	30	70-130	F
Naphthalene	119	116	97	61	30	70-130	F
o-Xylene	119	110	92	69	30	70-130	F
sec-Butylbenzene	119	98.3	83	68	30	70-130	F
Styrene	119	108	90	68	30	70-130	F
Tert-amyl methyl ether	119	103	86	67	30	70-130	F
Tert-butyl ethyl ether	119	99.3	83	67	30	70-130	F
tert-Butylbenzene	119	105	88	67	30	70-130	F
Tetrachloroethene	119	106	89	66	30	70-130	F
Tetrahydrofuran	1190	1080	90	64	30	70-130	F
Toluene	119	116	98	66	30	70-130	F
trans-1,2-Dichloroethene	119	100	84	67	30	70-130	F
trans-1,3-Dichloropropene	119	107	89	63	30	70-130	F
Trichloroethene	119	102	86	67	30	70-130	F
Trichlorofluoromethane	119	79.4	67	64	30	70-130	F
Vinyl chloride	119	96.6	81	70	30	70-130	F
1,1,2-Trichloro-1,2,2-trifluor oethane	119	106	89	65	30	70-130	F
2,4,4-Trimethyl-1-pentene	119	93.7	79	68	30	70-130	F
2,4,4-Trimethyl-2-pentene	119	108	91	63	30	70-130	F
Cyclohexane	119	105	88	66	30	70-130	F
Methyl acetate	1190	1060	89	63	30	70-130	F
Methylcyclohexane	119	104	87	65	30	70-130	F

Column to be used to flag recovery and RPD values

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FORM III 8260C

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31167-1 Analy Batch No.: 64639

SDG No.: 360-31167

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD05 360-64639/5	V49628.D
Level 2	STD1 360-64639/6	V49629.D
Level 3	STD5 360-64639/7	V49630.D
Level 4	STD10 360-64639/8	V49631.D
Level 5	STD20 360-64639/9	V49632.D
Level 6	STD40 360-64639/10	V49633.D
Level 7	STD80 360-64639/11	V49634.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3935 0.3859	0.4338 0.3940	0.4132	0.4170	0.4116	Ave		0.4070			0.1000	4.1		15.0			
Chloromethane	0.5853 0.5760	0.5341 0.5920	0.6001	0.6055	0.6007	Ave		0.5848			0.1000	4.2		15.0			
Vinyl chloride	0.3856 0.4232	0.3999 0.4374	0.4715	0.4711	0.4575	Ave		0.4352			0.1000	7.8		15.0			
Bromomethane	0.2549 0.2347	0.2234 0.2245	0.2662	0.2708	0.2620	Ave		0.2481			0.1000	8.1		15.0			
Chloroethane	0.2792 0.2173	0.2489 0.1992	0.2664	0.2639	0.2545	Ave		0.2471			0.1000	12.0		15.0			
Trichlorofluoromethane	0.3978 0.4099	0.3985 0.4097	0.4458	0.4645	0.4533	Ave		0.4256			0.1000	6.6		15.0			
Ethyl ether	0.2101 0.2034	0.1920 0.2013	0.2154	0.1932	0.1907	Ave		0.2009				4.7		15.0			
1,1-Dichloroethene	0.3339 0.2745	0.2816 0.2778	0.3253	0.3008	0.2974	Ave		0.2988			0.1000	7.8		15.0			
Carbon disulfide	1.0424 1.0619	0.9916 1.0808	1.2539	1.1788	1.1668	Ave		1.1109			0.1000	8.3		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1714 0.1814	0.1646 0.1862	0.2089	0.1940	0.1945	Ave		0.1859				8.1		15.0			
Methylene Chloride	0.5333 0.3138	0.4296 0.3198	0.3823	0.3371	0.3292	Lin1F		0.3239							0.9960		0.9900
Acetone	0.0752 0.0403	0.0602 0.0390	0.0528	0.0394	0.0391	Lin1F		0.0401							0.9910		0.9900
trans-1,2-Dichloroethene	0.5063 0.5122	0.4859 0.5219	0.5836	0.5476	0.5441	Ave		0.5288			0.1000	6.1		15.0			
Methyl acetate	0.1288 0.1150	0.1137 0.1114	0.1268	0.1120	0.1081	Ave		0.1165				6.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

: Acetone UJ Prd Judgment

Also 14Dioxane : tetrahydrofuran are qualified UJ due to RRF < 0.05.

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66169/3 Calibration Date: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50069.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.3671	0.1000	18.0	20.0	-9.8	20.0
Chloromethane	Ave	0.5848	0.5696	0.1000	19.5	20.0	-2.6	20.0
Vinyl chloride	Ave	0.4352	0.4079	0.1000	18.7	20.0	-6.3	20.0
Bromomethane	Ave	0.2481	0.2221	0.1000	17.9	20.0	-10.5	20.0
Chloroethane	Ave	0.2471	0.1999	0.1000	16.2	20.0	-19.1	20.0
Trichlorofluoromethane	Ave	0.4256	0.3566	0.1000	16.8	20.0	-16.2	20.0
Ethyl ether	Ave	0.2009	0.1807		18.0	20.0	-10.1	20.0
1,1-Dichloroethene	Ave	0.2988	0.2777	0.1000	18.6	20.0	-7.1	20.0
Carbon disulfide	Ave	1.111	0.8814	0.1000	15.9	20.0	-20.7*	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.1859	0.1752		18.9	20.0	-5.7	20.0
Methylene Chloride	Lin1F		0.3105	0.1000	19.2	20.0	-4.2	20.0
Acetone	Lin1F		0.0283*	0.1000	141	200	-29.3*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4603	0.1000	17.4	20.0	-12.9	20.0
Methyl acetate	Ave	0.1165	0.0884		152	200	-24.1*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.4975	0.1000	17.1	20.0	-14.7	20.0
Isopropyl ether	Ave	1.225	1.093		17.8	20.0	-10.8	20.0
1,1-Dichloroethane	Ave	0.6309	0.5457	0.2000	17.3	20.0	-13.5	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7444		16.5	20.0	-17.6	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4115	0.1000	16.8	20.0	-15.9	20.0
2,2-Dichloropropane	Ave	0.3975	0.3374		17.0	20.0	-15.1	20.0
Chlorobromomethane	Ave	0.1468	0.1325		18.1	20.0	-9.7	20.0
Cyclohexane	Ave	0.6747	0.5771		17.1	20.0	-14.5	20.0
Chloroform	Lin		0.4679	0.2000	16.5	20.0	-17.4	20.0
Carbon tetrachloride	Ave	0.3579	0.2942	0.1000	16.4	20.0	-17.8	20.0
Tetrahydrofuran	Lin1F		0.0370		181	200	-9.4	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3665	0.1000	16.8	20.0	-16.1	20.0
2-Butanone (MEK)	Lin2F		0.0540*	0.1000	172	200	-13.8	20.0
1,1-Dichloropropene	Ave	0.4348	0.3929		18.1	20.0	-9.6	20.0
Benzene	Ave	1.218	1.196	0.5000	19.6	20.0	-1.9	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5888		17.6	20.0	-12.1	20.0
1,2-Dichloroethane	Ave	0.2565	0.2069	0.1000	16.1	20.0	-19.3	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2233		16.0	20.0	-20.2*	20.0
Methylcyclohexane	Ave	0.5609	0.4874		17.4	20.0	-13.1	20.0
Trichloroethene	Ave	0.3061	0.2662	0.2000	17.4	20.0	-13.0	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1650		19.2	20.0	-4.1	20.0
Dibromomethane	Ave	0.1094	0.1016		18.6	20.0	-7.2	20.0
1,2-Dichloropropane	Ave	0.2611	0.2332	0.1000	17.9	20.0	-10.7	20.0
Dichlorobromomethane	Ave	0.3171	0.2576	0.2000	16.2	20.0	-18.8	20.0
1,4-Dioxane	Ave	0.0203	0.0190		188	200	-6.2	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3333	0.2000	18.6	20.0	-7.1	20.0

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66169/3 Calibration Date: 11/19/2010 16:54

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50069.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6695	0.4000	20.2	20.0	1.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1075	0.1000	177	200	-11.5	20.0
Tetrachloroethene	Lin2F		0.1661*	0.2000	18.3	20.0	-8.7	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2197	0.1000	17.7	20.0	-11.5	20.0
1,1,2-Trichloroethane	Lin1F		0.1056	0.1000	17.3	20.0	-13.7	20.0
Chlorodibromomethane	Ave	0.1690	0.1432	0.1000	16.9	20.0	-15.3	20.0
1,3-Dichloropropane	Ave	0.2536	0.2360		18.6	20.0	-7.0	20.0
Ethylene Dibromide	Ave	0.1272	0.1138		17.9	20.0	-10.5	20.0
2-Hexanone	Lin2F		0.0674*	0.1000	189	200	-5.3	20.0
Chlorobenzene	Ave	0.9897	0.9609	0.5000	19.4	20.0	-2.9	20.0
Ethylbenzene	Ave	1.973	2.022	0.1000	20.5	20.0	2.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3383		17.6	20.0	-11.9	20.0
m-Xylene & p-Xylene	Ave	1.506	1.535	0.1000	40.8	40.0	1.9	20.0
o-Xylene	Ave	1.683	1.653	0.3000	19.6	20.0	-1.8	20.0
Styrene	Ave	1.175	1.104	0.3000	18.8	20.0	-6.1	20.0
Bromoform	Ave	0.4674	0.4150	0.1000	17.8	20.0	-11.2	20.0
Isopropylbenzene	Ave	2.074	1.901	0.1000	18.3	20.0	-8.4	20.0
Bromobenzene	Ave	0.8055	0.7086		17.6	20.0	-12.0	20.0
N-Propylbenzene	Ave	2.457	2.363		19.2	20.0	-3.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8785	0.3000	18.6	20.0	-6.8	20.0
2-Chlorotoluene	Ave	1.633	1.474		18.1	20.0	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.466		17.5	20.0	-12.3	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0596		18.1	20.0	-9.4	20.0
4-Chlorotoluene	Ave	1.467	1.342		18.3	20.0	-8.5	20.0
tert-Butylbenzene	Ave	1.418	1.324		18.7	20.0	-6.6	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.078		24.3	20.0	21.5*	20.0
sec-Butylbenzene	Ave	2.295	2.078		18.1	20.0	-9.4	20.0
4-Isopropyltoluene	Ave	1.765	1.615		18.3	20.0	-8.5	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7323	0.6000	17.8	20.0	-11.0	20.0
1,4-Dichlorobenzene	Ave	2.723	2.613	0.5000	19.2	20.0	-4.0	20.0
n-Butylbenzene	Ave	6.254	6.561		21.0	20.0	4.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.357	0.4000	19.7	20.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1224	0.0500	18.3	20.0	-8.3	20.0
Hexachlorobutadiene	Ave	0.9293	0.8751		18.8	20.0	-5.8	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.500	0.2000	20.5	20.0	2.3	20.0
Naphthalene	Ave	2.231	2.308		20.7	20.0	3.5	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.146		20.7	20.0	3.6	20.0
Dibromofluoromethane	Ave	0.2449	0.2313		18.9	20.0	-5.5	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9056		20.4	20.0	2.2	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5096		20.1	20.0	0.4	20.0

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66227/2 Calibration Date: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50097.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.4013	0.1000	19.7	20.0	-1.4	20.0
Chloromethane	Ave	0.5848	0.5949	0.1000	20.3	20.0	1.7	20.0
Vinyl chloride	Ave	0.4352	0.4258	0.1000	19.6	20.0	-2.2	20.0
Bromomethane	Ave	0.2481	0.2123	0.1000	17.1	20.0	-14.4	20.0
Chloroethane	Ave	0.2471	0.2124	0.1000	17.2	20.0	-14.0	20.0
Trichlorofluoromethane	Ave	0.4256	0.3946	0.1000	18.5	20.0	-7.3	20.0
Ethyl ether	Ave	0.2009	0.1824		18.2	20.0	-9.2	20.0
1,1-Dichloroethene	Ave	0.2988	0.3050	0.1000	20.4	20.0	2.1	20.0
Carbon disulfide	Ave	1.111	0.9692	0.1000	17.4	20.0	-12.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1830		19.7	20.0	-1.5	20.0
Methylene Chloride	Lin1F		0.3111	0.1000	19.2	20.0	-4.0	20.0
Acetone	Lin1F		0.0307*	0.1000	153	200	-23.5*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4830	0.1000	18.3	20.0	-8.7	20.0
Methyl acetate	Ave	0.1165	0.0885		152	200	-24.0*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.4780	0.1000	16.4	20.0	-18.0	20.0
Isopropyl ether	Ave	1.225	1.063		17.3	20.0	-13.3	20.0
1,1-Dichloroethane	Ave	0.6309	0.5663	0.2000	18.0	20.0	-10.2	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7326		16.2	20.0	-18.9	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4231	0.1000	17.3	20.0	-13.5	20.0
2,2-Dichloropropane	Ave	0.3975	0.3216		16.2	20.0	-19.1	20.0
Chlorobromomethane	Ave	0.1468	0.1356		18.5	20.0	-7.6	20.0
Cyclohexane	Ave	0.6747	0.6000		17.8	20.0	-11.1	20.0
Chloroform	Lin		0.4832	0.2000	17.1	20.0	-14.7	20.0
Carbon tetrachloride	Ave	0.3579	0.3217	0.1000	18.0	20.0	-10.1	20.0
Tetrahydrofuran	Lin1F		0.0342		167	200	-16.3	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3925	0.1000	18.0	20.0	-10.2	20.0
2-Butanone (MEK)	Lin2F		0.0494*	0.1000	158	200	-21.1*	20.0
1,1-Dichloropropene	Ave	0.4348	0.4159		19.1	20.0	-4.3	20.0
Benzene	Ave	1.218	1.191	0.5000	19.6	20.0	-2.2	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5604		16.7	20.0	-16.3	20.0
1,2-Dichloroethane	Ave	0.2565	0.2118	0.1000	16.5	20.0	-17.4	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2393		17.1	20.0	-14.4	20.0
Trichloroethene	Ave	0.3061	0.2794	0.2000	18.3	20.0	-8.7	20.0
Methylcyclohexane	Ave	0.5609	0.4986		17.8	20.0	-11.1	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1683		19.6	20.0	-2.2	20.0
Dibromomethane	Ave	0.1094	0.1016		18.6	20.0	-7.1	20.0
1,2-Dichloropropane	Ave	0.2611	0.2377	0.1000	18.2	20.0	-9.0	20.0
Dichlorobromomethane	Ave	0.3171	0.2647	0.2000	16.7	20.0	-16.5	20.0
1,4-Dioxane	Ave	0.0203	0.0167		165	200	-17.5	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3435	0.2000	19.1	20.0	-4.3	20.0

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66227/2 Calibration Date: 11/22/2010 17:19

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50097.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6841	0.4000	20.7	20.0	3.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1015	0.1000	167	200	-16.4	20.0
Tetrachloroethene	Lin2F		0.1759*	0.2000	19.3	20.0	-3.3	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2273	0.1000	18.3	20.0	-8.4	20.0
1,1,2-Trichloroethane	Lin1F		0.1045	0.1000	17.1	20.0	-14.5	20.0
Chlorodibromomethane	Ave	0.1690	0.1472	0.1000	17.4	20.0	-12.9	20.0
1,3-Dichloropropane	Ave	0.2536	0.2324		18.3	20.0	-8.4	20.0
Ethylene Dibromide	Ave	0.1272	0.1125		17.7	20.0	-11.5	20.0
2-Hexanone	Lin2F		0.0629*	0.1000	176	200	-11.8	20.0
Chlorobenzene	Ave	0.9897	0.9892	0.5000	20.0	20.0	-0.0	20.0
Ethylbenzene	Ave	1.973	2.060	0.1000	20.9	20.0	4.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3421		17.8	20.0	-10.9	20.0
m-Xylene & p-Xylene	Ave	1.506	1.560	0.1000	41.4	40.0	3.6	20.0
o-Xylene	Ave	1.683	1.680	0.3000	20.0	20.0	-0.2	20.0
Styrene	Ave	1.175	1.130	0.3000	19.2	20.0	-3.9	20.0
Bromoform	Ave	0.4674	0.4422	0.1000	18.9	20.0	-5.4	20.0
Isopropylbenzene	Ave	2.074	1.989	0.1000	19.2	20.0	-4.1	20.0
Bromobenzene	Ave	0.8055	0.7083		17.6	20.0	-12.1	20.0
N-Propylbenzene	Ave	2.457	2.430		19.8	20.0	-1.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8844	0.3000	18.8	20.0	-6.2	20.0
2-Chlorotoluene	Ave	1.633	1.505		18.4	20.0	-7.8	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.526		18.3	20.0	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0580		17.7	20.0	-11.7	20.0
4-Chlorotoluene	Ave	1.467	1.368		18.6	20.0	-6.8	20.0
tert-Butylbenzene	Ave	1.418	1.369		19.3	20.0	-3.4	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.173		25.4	20.0	27.0*	20.0
sec-Butylbenzene	Ave	2.295	2.173		18.9	20.0	-5.3	20.0
4-Isopropyltoluene	Ave	1.765	1.692		19.2	20.0	-4.1	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7429	0.6000	18.1	20.0	-9.7	20.0
1,4-Dichlorobenzene	Ave	2.723	2.742	0.5000	20.1	20.0	0.7	20.0
n-Butylbenzene	Ave	6.254	7.122		22.8	20.0	13.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.466	0.4000	20.6	20.0	3.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1230	0.0500	18.4	20.0	-7.9	20.0
Hexachlorobutadiene	Ave	0.9293	0.9641		20.7	20.0	3.7	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.551	0.2000	21.2	20.0	5.8	20.0
Naphthalene	Ave	2.231	2.322		20.8	20.0	4.1	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.170		21.1	20.0	5.7	20.0
Dibromofluoromethane	Ave	0.2449	0.2333		19.1	20.0	-4.7	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9109		20.6	20.0	2.8	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5119		20.2	20.0	0.8	20.0

TC 12/20/10

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66242/3 Calibration Date: 11/23/2010 01:20

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50117.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.3488	0.1000	17.1	20.0	-14.3	20.0
Chloromethane	Ave	0.5848	0.6083	0.1000	20.8	20.0	4.0	20.0
Vinyl chloride	Ave	0.4352	0.4120	0.1000	18.9	20.0	-5.3	20.0
Bromomethane	Ave	0.2481	0.2371	0.1000	19.1	20.0	-4.4	20.0
Chloroethane	Ave	0.2471	0.2155	0.1000	17.4	20.0	-12.8	20.0
Trichlorofluoromethane	Ave	0.4256	0.3447	0.1000	16.2	20.0	-19.0	20.0
Ethyl ether	Ave	0.2009	0.1885		18.8	20.0	-6.2	20.0
1,1-Dichloroethene	Ave	0.2988	0.2813	0.1000	18.8	20.0	-5.9	20.0
Carbon disulfide	Ave	1.111	0.9483	0.1000	17.1	20.0	-14.6	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.1859	0.1646		17.7	20.0	-11.4	20.0
Methylene Chloride	Lin1F		0.3339	0.1000	20.6	20.0	3.1	20.0
Acetone	Lin1F		0.0308*	0.1000	154	200	-23.1*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4900	0.1000	18.5	20.0	-7.3	20.0
Methyl acetate	Ave	0.1165	0.0971		167	200	-16.7	20.0
Methyl tert-butyl ether	Ave	0.5831	0.5039	0.1000	17.3	20.0	-13.6	20.0
Isopropyl ether	Ave	1.225	1.137		18.6	20.0	-7.2	20.0
1,1-Dichloroethane	Ave	0.6309	0.5849	0.2000	18.5	20.0	-7.3	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7896		17.5	20.0	-12.6	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4377	0.1000	17.9	20.0	-10.5	20.0
2,2-Dichloropropane	Ave	0.3975	0.3084		15.5	20.0	-22.4*	20.0
Chlorobromomethane	Ave	0.1468	0.1408		19.2	20.0	-4.0	20.0
Cyclohexane	Ave	0.6747	0.5367		15.9	20.0	-20.4*	20.0
Chloroform	Lin		0.4984	0.2000	17.6	20.0	-12.1	20.0
Carbon tetrachloride	Ave	0.3579	0.2940	0.1000	16.4	20.0	-17.9	20.0
Tetrahydrofuran	Lin1F		0.0362		177	200	-11.5	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3746	0.1000	17.1	20.0	-14.3	20.0
2-Butanone (MEK)	Lin2F		0.0528*	0.1000	169	200	-15.7	20.0
1,1-Dichloropropene	Ave	0.4348	0.3980		18.3	20.0	-8.4	20.0
Benzene	Ave	1.218	1.233	0.5000	20.2	20.0	1.2	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5920		17.7	20.0	-11.6	20.0
1,2-Dichloroethane	Ave	0.2565	0.2119	0.1000	16.5	20.0	-17.4	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2158		15.4	20.0	-22.9*	20.0
Trichloroethene	Ave	0.3061	0.2934	0.2000	19.2	20.0	-4.2	20.0
Methylcyclohexane	Ave	0.5609	0.4526		16.1	20.0	-19.3	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1525		17.7	20.0	-11.4	20.0
Dibromomethane	Ave	0.1094	0.1029		18.8	20.0	-5.9	20.0
1,2-Dichloropropane	Ave	0.2611	0.2493	0.1000	19.1	20.0	-4.5	20.0
Dichlorobromomethane	Ave	0.3171	0.2706	0.2000	17.1	20.0	-14.7	20.0
1,4-Dioxane	Ave	0.0203	0.0182		180	200	-10.2	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3415	0.2000	19.0	20.0	-4.9	20.0

TC
12-20-10

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66242/3 Calibration Date: 11/23/2010 01:20

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50117.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6893	0.4000	20.8	20.0	4.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1022	0.1000	168	200	-15.9	20.0
Tetrachloroethene	Lin2F		0.1685*	0.2000	18.5	20.0	-7.3	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2210	0.1000	17.8	20.0	-11.0	20.0
1,1,2-Trichloroethane	Lin1F		0.1097	0.1000	17.9	20.0	-10.3	20.0
Chlorodibromomethane	Ave	0.1690	0.1455	0.1000	17.2	20.0	-13.9	20.0
1,3-Dichloropropane	Ave	0.2536	0.2412		19.0	20.0	-4.9	20.0
Ethylene Dibromide	Ave	0.1272	0.1166		18.3	20.0	-8.3	20.0
2-Hexanone	Lin2F		0.0645*	0.1000	181	200	-9.4	20.0
Chlorobenzene	Ave	0.9897	1.022	0.5000	20.7	20.0	3.3	20.0
Ethylbenzene	Ave	1.973	2.048	0.1000	20.8	20.0	3.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3519		18.3	20.0	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.506	1.550	0.1000	41.2	40.0	2.9	20.0
o-Xylene	Ave	1.683	1.689	0.3000	20.1	20.0	0.3	20.0
Styrene	Ave	1.175	1.151	0.3000	19.6	20.0	-2.0	20.0
Bromoform	Ave	0.4674	0.4310	0.1000	18.4	20.0	-7.8	20.0
Isopropylbenzene	Ave	2.074	1.949	0.1000	18.8	20.0	-6.0	20.0
Bromobenzene	Ave	0.8055	0.7396		18.4	20.0	-8.2	20.0
N-Propylbenzene	Ave	2.457	2.408		19.6	20.0	-2.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8456	0.3000	17.9	20.0	-10.3	20.0
2-Chlorotoluene	Ave	1.633	1.536		18.8	20.0	-6.0	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.518		18.2	20.0	-9.2	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0588		17.9	20.0	-10.5	20.0
4-Chlorotoluene	Ave	1.467	1.422		19.4	20.0	-3.1	20.0
tert-Butylbenzene	Ave	1.418	1.348		19.0	20.0	-4.9	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.083		24.3	20.0	21.7*	20.0
sec-Butylbenzene	Ave	2.295	2.083		18.2	20.0	-9.2	20.0
4-Isopropyltoluene	Ave	1.765	1.633		18.5	20.0	-7.5	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7543	0.6000	18.3	20.0	-8.3	20.0
1,4-Dichlorobenzene	Ave	2.723	2.812	0.5000	20.7	20.0	3.3	20.0
n-Butylbenzene	Ave	6.254	6.696		21.4	20.0	7.1	20.0
1,2-Dichlorobenzene	Ave	2.389	2.477	0.4000	20.7	20.0	3.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1192	0.0500	17.9	20.0	-10.7	20.0
Hexachlorobutadiene	Ave	0.9293	0.9098		19.6	20.0	-2.1	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.542	0.2000	21.0	20.0	5.2	20.0
Naphthalene	Ave	2.231	2.312		20.7	20.0	3.6	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.173		21.2	20.0	6.0	20.0
Dibromofluoromethane	Ave	0.2449	0.2247		18.4	20.0	-8.2	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9075		20.5	20.0	2.4	20.0
4-Bromofluorobenzene	Ave	0.5078	0.4987		19.6	20.0	-1.8	20.0

TC
12-20-10

FORM VII 8260C

12/06/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66263/3 Calibration Date: 11/23/2010 15:26

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50145.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.4098	0.1000	20.1	20.0	0.7	20.0
Chloromethane	Ave	0.5848	0.6203	0.1000	21.2	20.0	6.1	20.0
Vinyl chloride	Ave	0.4352	0.4498	0.1000	20.7	20.0	3.4	20.0
Bromomethane	Ave	0.2481	0.2398	0.1000	19.3	20.0	-3.3	20.0
Chloroethane	Ave	0.2471	0.2213	0.1000	17.9	20.0	-10.4	20.0
Trichlorofluoromethane	Ave	0.4256	0.4076	0.1000	19.2	20.0	-4.2	20.0
Ethyl ether	Ave	0.2009	0.1860		18.5	20.0	-7.4	20.0
1,1-Dichloroethene	Ave	0.2988	0.3095	0.1000	20.7	20.0	3.6	20.0
Carbon disulfide	Ave	1.111	0.9862	0.1000	17.8	20.0	-11.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1897		20.4	20.0	2.0	20.0
Methylene Chloride	Lin1F		0.3136	0.1000	19.4	20.0	-3.2	20.0
Acetone	Lin1F		0.0294*	0.1000	147	200	-26.6*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4990	0.1000	18.9	20.0	-5.6	20.0
Methyl acetate	Ave	0.1165	0.0907		156	200	-22.2*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.5093	0.1000	17.5	20.0	-12.7	20.0
Isopropyl ether	Ave	1.225	1.112		18.1	20.0	-9.3	20.0
1,1-Dichloroethane	Ave	0.6309	0.5831	0.2000	18.5	20.0	-7.6	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7742		17.1	20.0	-14.3	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4345	0.1000	17.8	20.0	-11.2	20.0
2,2-Dichloropropane	Ave	0.3975	0.3506		17.6	20.0	-11.8	20.0
Chlorobromomethane	Ave	0.1468	0.1408		19.2	20.0	-4.1	20.0
Cyclohexane	Ave	0.6747	0.6145		18.2	20.0	-8.9	20.0
Chloroform	Lin		0.4927	0.2000	17.4	20.0	-13.1	20.0
Carbon tetrachloride	Ave	0.3579	0.3227	0.1000	18.0	20.0	-9.9	20.0
Tetrahydrofuran	Lin1F		0.0359		176	200	-12.2	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.4040	0.1000	18.5	20.0	-7.5	20.0
2-Butanone (MEK)	Lin2F		0.0518*	0.1000	166	200	-17.2	20.0
1,1-Dichloropropene	Ave	0.4348	0.4220		19.4	20.0	-2.9	20.0
Benzene	Ave	1.218	1.249	0.5000	20.5	20.0	2.5	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5887		17.6	20.0	-12.1	20.0
1,2-Dichloroethane	Ave	0.2565	0.2122	0.1000	16.5	20.0	-17.3	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2439		17.4	20.0	-12.8	20.0
Trichloroethene	Ave	0.3061	0.2831	0.2000	18.5	20.0	-7.5	20.0
Methylcyclohexane	Ave	0.5609	0.5209		18.6	20.0	-7.1	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1751		20.3	20.0	1.7	20.0
Dibromomethane	Ave	0.1094	0.1032		18.9	20.0	-5.7	20.0
1,2-Dichloropropane	Ave	0.2611	0.2429	0.1000	18.6	20.0	-7.0	20.0
Dichlorobromomethane	Ave	0.3171	0.2683	0.2000	16.9	20.0	-15.4	20.0
1,4-Dioxane	Ave	0.0203	0.0192		189	200	-5.4	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3414	0.2000	19.0	20.0	-4.9	20.0

TC
12-20-10

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66263/3 Calibration Date: 11/23/2010 15:26

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50145.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.7045	0.4000	21.3	20.0	6.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1040	0.1000	171	200	-14.4	20.0
Tetrachloroethene	Lin2F		0.1799*	0.2000	19.8	20.0	-1.1	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2204	0.1000	17.8	20.0	-11.2	20.0
1,1,2-Trichloroethane	Lin1F		0.1051	0.1000	17.2	20.0	-14.1	20.0
Chlorodibromomethane	Ave	0.1690	0.1438	0.1000	17.0	20.0	-14.9	20.0
1,3-Dichloropropane	Ave	0.2536	0.2318		18.3	20.0	-8.6	20.0
Ethylene Dibromide	Ave	0.1272	0.1149		18.1	20.0	-9.6	20.0
2-Hexanone	Lin2F		0.0642*	0.1000	180	200	-9.9	20.0
Chlorobenzene	Ave	0.9897	1.012	0.5000	20.4	20.0	2.2	20.0
Ethylbenzene	Ave	1.973	2.140	0.1000	21.7	20.0	8.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3486		18.2	20.0	-9.2	20.0
m-Xylene & p-Xylene	Ave	1.506	1.613	0.1000	42.8	40.0	7.1	20.0
o-Xylene	Ave	1.683	1.737	0.3000	20.6	20.0	3.2	20.0
Styrene	Ave	1.175	1.161	0.3000	19.8	20.0	-1.2	20.0
Bromoform	Ave	0.4674	0.4184	0.1000	17.9	20.0	-10.5	20.0
Isopropylbenzene	Ave	2.074	2.048	0.1000	19.7	20.0	-1.3	20.0
Bromobenzene	Ave	0.8055	0.7264		18.0	20.0	-9.8	20.0
N-Propylbenzene	Ave	2.457	2.499		20.3	20.0	1.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8566	0.3000	18.2	20.0	-9.1	20.0
2-Chlorotoluene	Ave	1.633	1.552		19.0	20.0	-5.0	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.554		18.6	20.0	-7.0	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0570		17.4	20.0	-13.2	20.0
4-Chlorotoluene	Ave	1.467	1.434		19.6	20.0	-2.2	20.0
tert-Butylbenzene	Ave	1.418	1.429		20.2	20.0	0.8	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.220		26.0	20.0	29.8*	20.0
sec-Butylbenzene	Ave	2.295	2.220		19.4	20.0	-3.2	20.0
4-Isopropyltoluene	Ave	1.765	1.734		19.6	20.0	-1.8	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7618	0.6000	18.5	20.0	-7.4	20.0
1,4-Dichlorobenzene	Ave	2.723	2.727	0.5000	20.0	20.0	0.2	20.0
n-Butylbenzene	Ave	6.254	7.077		22.6	20.0	13.2	20.0
1,2-Dichlorobenzene	Ave	2.389	2.477	0.4000	20.7	20.0	3.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1185	0.0500	17.8	20.0	-11.2	20.0
Hexachlorobutadiene	Ave	0.9293	0.9438		20.3	20.0	1.6	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.549	0.2000	21.1	20.0	5.6	20.0
Naphthalene	Ave	2.231	2.280		20.4	20.0	2.2	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.167		21.1	20.0	5.4	20.0
Dibromofluoromethane	Ave	0.2449	0.2297		18.8	20.0	-6.2	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9133		20.6	20.0	3.1	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5163		20.3	20.0	1.7	20.0

TC 12/20/10

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66287/3 Calibration Date: 11/24/2010 09:30

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50163.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.3995	0.1000	19.6	20.0	-1.8	20.0
Chloromethane	Ave	0.5848	0.6089	0.1000	20.8	20.0	4.1	20.0
Vinyl chloride	Ave	0.4352	0.4313	0.1000	19.8	20.0	-0.9	20.0
Bromomethane	Ave	0.2481	0.2344	0.1000	18.9	20.0	-5.5	20.0
Chloroethane	Ave	0.2471	0.2086	0.1000	16.9	20.0	-15.6	20.0
Trichlorofluoromethane	Ave	0.4256	0.3940	0.1000	18.5	20.0	-7.4	20.0
Ethyl ether	Ave	0.2009	0.1856		18.5	20.0	-7.6	20.0
1,1-Dichloroethene	Ave	0.2988	0.2972	0.1000	19.9	20.0	-0.5	20.0
Carbon disulfide	Ave	1.111	0.9643	0.1000	17.4	20.0	-13.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1877		20.2	20.0	1.0	20.0
Methylene Chloride	Lin1F		0.3063	0.1000	18.9	20.0	-5.4	20.0
Acetone	Lin1F		0.0305*	0.1000	152	200	-23.8*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4887	0.1000	18.5	20.0	-7.6	20.0
Methyl acetate	Ave	0.1165	0.0904		155	200	-22.4*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.5069	0.1000	17.4	20.0	-13.1	20.0
Isopropyl ether	Ave	1.225	1.110		18.1	20.0	-9.4	20.0
1,1-Dichloroethane	Ave	0.6309	0.5683	0.2000	18.0	20.0	-9.9	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7723		17.1	20.0	-14.5	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4189	0.1000	17.1	20.0	-14.4	20.0
2,2-Dichloropropane	Ave	0.3975	0.3623		18.2	20.0	-8.9	20.0
Chlorobromomethane	Ave	0.1468	0.1370		18.7	20.0	-6.6	20.0
Cyclohexane	Ave	0.6747	0.5982		17.7	20.0	-11.3	20.0
Chloroform	Lin		0.4821	0.2000	17.0	20.0	-14.9	20.0
Carbon tetrachloride	Ave	0.3579	0.3217	0.1000	18.0	20.0	-10.1	20.0
Tetrahydrofuran	Lin1F		0.0362		177	200	-11.4	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3931	0.1000	18.0	20.0	-10.0	20.0
2-Butanone (MEK)	Lin2F		0.0534*	0.1000	171	200	-14.7	20.0
1,1-Dichloropropene	Ave	0.4348	0.4061		18.7	20.0	-6.6	20.0
Benzene	Ave	1.218	1.180	0.5000	19.4	20.0	-3.1	20.0
Tert-amyl methyl ether	Ave	0.6694	0.6007		17.9	20.0	-10.3	20.0
1,2-Dichloroethane	Ave	0.2565	0.2107	0.1000	16.4	20.0	-17.9	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2360		16.9	20.0	-15.6	20.0
Methylcyclohexane	Ave	0.5609	0.5095		18.2	20.0	-9.2	20.0
Trichloroethene	Ave	0.3061	0.2777	0.2000	18.1	20.0	-9.3	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1747		20.3	20.0	1.5	20.0
Dibromomethane	Ave	0.1094	0.1030		18.8	20.0	-5.8	20.0
1,2-Dichloropropane	Ave	0.2611	0.2350	0.1000	18.0	20.0	-10.0	20.0
Dichlorobromomethane	Ave	0.3171	0.2653	0.2000	16.7	20.0	-16.3	20.0
1,4-Dioxane	Ave	0.0203	0.0182		180	200	-10.1	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3380	0.2000	18.8	20.0	-5.8	20.0

12/20/10 TC

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66287/3 Calibration Date: 11/24/2010 09:30

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50163.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6737	0.4000	20.4	20.0	1.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1084	0.1000	178	200	-10.8	20.0
Tetrachloroethene	Lin2F		0.1747*	0.2000	19.2	20.0	-4.0	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2220	0.1000	17.9	20.0	-10.5	20.0
1,1,2-Trichloroethane	Lin1F		0.1076	0.1000	17.6	20.0	-12.1	20.0
Chlorodibromomethane	Ave	0.1690	0.1488	0.1000	17.6	20.0	-12.0	20.0
1,3-Dichloropropane	Ave	0.2536	0.2389		18.8	20.0	-5.8	20.0
Ethylene Dibromide	Ave	0.1272	0.1167		18.4	20.0	-8.2	20.0
2-Hexanone	Lin2F		0.0679*	0.1000	191	200	-4.7	20.0
Chlorobenzene	Ave	0.9897	0.999	0.5000	20.2	20.0	0.9	20.0
Ethylbenzene	Ave	1.973	2.037	0.1000	20.6	20.0	3.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3491		18.2	20.0	-9.1	20.0
m-Xylene & p-Xylene	Ave	1.506	1.544	0.1000	41.0	40.0	2.5	20.0
o-Xylene	Ave	1.683	1.668	0.3000	19.8	20.0	-0.9	20.0
Styrene	Ave	1.175	1.141	0.3000	19.4	20.0	-2.9	20.0
Bromoform	Ave	0.4674	0.4357	0.1000	18.6	20.0	-6.8	20.0
Isopropylbenzene	Ave	2.074	2.004	0.1000	19.3	20.0	-3.4	20.0
Bromobenzene	Ave	0.8055	0.7193		17.9	20.0	-10.7	20.0
N-Propylbenzene	Ave	2.457	2.461		20.0	20.0	0.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.9187	0.3000	19.5	20.0	-2.5	20.0
2-Chlorotoluene	Ave	1.633	1.528		18.7	20.0	-6.4	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.529		18.3	20.0	-8.5	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0615		18.7	20.0	-6.5	20.0
4-Chlorotoluene	Ave	1.467	1.387		18.9	20.0	-5.5	20.0
tert-Butylbenzene	Ave	1.418	1.392		19.6	20.0	-1.9	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.150		25.1	20.0	25.7*	20.0
sec-Butylbenzene	Ave	2.295	2.150		18.7	20.0	-6.3	20.0
4-Isopropyltoluene	Ave	1.765	1.677		19.0	20.0	-5.0	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7651	0.6000	18.6	20.0	-7.0	20.0
1,4-Dichlorobenzene	Ave	2.723	2.720	0.5000	20.0	20.0	-0.1	20.0
n-Butylbenzene	Ave	6.254	6.870		22.0	20.0	9.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.456	0.4000	20.6	20.0	2.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1252	0.0500	18.8	20.0	-6.2	20.0
Hexachlorobutadiene	Ave	0.9293	0.9148		19.7	20.0	-1.6	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.485	0.2000	20.3	20.0	1.3	20.0
Naphthalene	Ave	2.231	2.247		20.1	20.0	0.7	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.125		20.3	20.0	1.7	20.0
Dibromofluoromethane	Ave	0.2449	0.2318		18.9	20.0	-5.3	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.8990		20.3	20.0	1.4	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5086		20.0	20.0	0.2	20.0

12/20/10
TC

FORM VII 8260C

12/06/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66366/3 Calibration Date: 11/24/2010 17:50

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50184.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.4010	0.1000	19.7	20.0	-1.5	20.0
Chloromethane	Ave	0.5848	0.6187	0.1000	21.2	20.0	5.8	20.0
Vinyl chloride	Ave	0.4352	0.4331	0.1000	19.9	20.0	-0.5	20.0
Bromomethane	Ave	0.2481	0.2333	0.1000	18.8	20.0	-5.9	20.0
Chloroethane	Ave	0.2471	0.2140	0.1000	17.3	20.0	-13.4	20.0
Trichlorofluoromethane	Ave	0.4256	0.3932	0.1000	18.5	20.0	-7.6	20.0
Ethyl ether	Ave	0.2009	0.1902		18.9	20.0	-5.3	20.0
1,1-Dichloroethene	Ave	0.2988	0.3067	0.1000	20.5	20.0	2.7	20.0
Carbon disulfide	Ave	1.111	0.9878	0.1000	17.8	20.0	-11.1	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.1859	0.1899		20.4	20.0	2.2	20.0
Methylene Chloride	Lin1F		0.3216	0.1000	19.9	20.0	-0.7	20.0
Acetone	Lin1F		0.0336*	0.1000	168	200	-16.1	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.5065	0.1000	19.2	20.0	-4.2	20.0
Methyl acetate	Ave	0.1165	0.0928		159	200	-20.4*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.5121	0.1000	17.6	20.0	-12.2	20.0
Isopropyl ether	Ave	1.225	1.132		18.5	20.0	-7.6	20.0
1,1-Dichloroethane	Ave	0.6309	0.5891	0.2000	18.7	20.0	-6.6	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7840		17.4	20.0	-13.2	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4380	0.1000	17.9	20.0	-10.5	20.0
2,2-Dichloropropane	Ave	0.3975	0.3530		17.8	20.0	-11.2	20.0
Chlorobromomethane	Ave	0.1468	0.1414		19.3	20.0	-3.7	20.0
Cyclohexane	Ave	0.6747	0.5999		17.8	20.0	-11.1	20.0
Chloroform	Lin		0.5075	0.2000	17.9	20.0	-10.4	20.0
Carbon tetrachloride	Ave	0.3579	0.3313	0.1000	18.5	20.0	-7.4	20.0
Tetrahydrofuran	Lin1F		0.0356		174	200	-12.9	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.4078	0.1000	18.7	20.0	-6.7	20.0
2-Butanone (MEK)	Lin2F		0.0543*	0.1000	173	200	-13.3	20.0
1,1-Dichloropropene	Ave	0.4348	0.4278		19.7	20.0	-1.6	20.0
Benzene	Ave	1.218	1.254	0.5000	20.6	20.0	3.0	20.0
Tert-amyl methyl ether	Ave	0.6694	0.6035		18.0	20.0	-9.9	20.0
1,2-Dichloroethane	Ave	0.2565	0.2192	0.1000	17.1	20.0	-14.6	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2528		18.1	20.0	-9.6	20.0
Methylcyclohexane	Ave	0.5609	0.5104		18.2	20.0	-9.0	20.0
Trichloroethene	Ave	0.3061	0.2858	0.2000	18.7	20.0	-6.6	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1744		20.3	20.0	1.3	20.0
Dibromomethane	Ave	0.1094	0.1048		19.2	20.0	-4.1	20.0
1,2-Dichloropropane	Ave	0.2611	0.2479	0.1000	19.0	20.0	-5.1	20.0
Dichlorobromomethane	Ave	0.3171	0.2762	0.2000	17.4	20.0	-12.9	20.0
1,4-Dioxane	Ave	0.0203	0.0192		189	200	-5.4	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3532	0.2000	19.7	20.0	-1.6	20.0

12/20/10
TC

FORM VII 8260C

12/06/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66366/3 Calibration Date: 11/24/2010 17:50

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50184.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.7125	0.4000	21.5	20.0	7.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.1078	0.1000	177	200	-11.3	20.0
Tetrachloroethene	Lin2F		0.1811*	0.2000	19.9	20.0	-0.4	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2271	0.1000	18.3	20.0	-8.5	20.0
1,1,2-Trichloroethane	Lin1F		0.1112	0.1000	18.2	20.0	-9.1	20.0
Chlorodibromomethane	Ave	0.1690	0.1489	0.1000	17.6	20.0	-11.9	20.0
1,3-Dichloropropane	Ave	0.2536	0.2443		19.3	20.0	-3.7	20.0
Ethylene Dibromide	Ave	0.1272	0.1188		18.7	20.0	-6.6	20.0
2-Hexanone	Lin2F		0.0660*	0.1000	185	200	-7.4	20.0
Chlorobenzene	Ave	0.9897	1.024	0.5000	20.7	20.0	3.5	20.0
Ethylbenzene	Ave	1.973	2.153	0.1000	21.8	20.0	9.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3562		18.6	20.0	-7.2	20.0
m-Xylene & p-Xylene	Ave	1.506	1.618	0.1000	43.0	40.0	7.4	20.0
o-Xylene	Ave	1.683	1.747	0.3000	20.8	20.0	3.8	20.0
Styrene	Ave	1.175	1.174	0.3000	20.0	20.0	-0.0	20.0
Bromoform	Ave	0.4674	0.4173	0.1000	17.9	20.0	-10.7	20.0
Isopropylbenzene	Ave	2.074	2.052	0.1000	19.8	20.0	-1.1	20.0
Bromobenzene	Ave	0.8055	0.7414		18.4	20.0	-8.0	20.0
N-Propylbenzene	Ave	2.457	2.515		20.5	20.0	2.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8939	0.3000	19.0	20.0	-5.2	20.0
2-Chlorotoluene	Ave	1.633	1.549		19.0	20.0	-5.1	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.579		18.9	20.0	-5.5	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0601		18.3	20.0	-8.5	20.0
4-Chlorotoluene	Ave	1.467	1.427		19.5	20.0	-2.7	20.0
tert-Butylbenzene	Ave	1.418	1.433		20.2	20.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.220		25.9	20.0	29.7*	20.0
sec-Butylbenzene	Ave	2.295	2.220		19.3	20.0	-3.3	20.0
4-Isopropyltoluene	Ave	1.765	1.706		19.3	20.0	-3.4	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7794	0.6000	18.9	20.0	-5.3	20.0
1,4-Dichlorobenzene	Ave	2.723	2.742	0.5000	20.1	20.0	0.7	20.0
n-Butylbenzene	Ave	6.254	6.995		22.4	20.0	11.9	20.0
1,2-Dichlorobenzene	Ave	2.389	2.501	0.4000	20.9	20.0	4.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1232	0.0500	18.5	20.0	-7.7	20.0
Hexachlorobutadiene	Ave	0.9293	0.9301		20.0	20.0	0.0	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.476	0.2000	20.1	20.0	0.7	20.0
Naphthalene	Ave	2.231	2.222		19.9	20.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.132		20.5	20.0	2.3	20.0
Dibromofluoromethane	Ave	0.2449	0.2298		18.8	20.0	-6.2	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.9204		20.8	20.0	3.9	20.0
4-Bromofluorobenzene	Ave	0.5078	0.5091		20.1	20.0	0.3	20.0

TC 12/20/10

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield
Job No.: 360-31167-1
SDG No.: 360-31167
Client Sample ID:
Lab Sample ID: MB 360-66225/3-A
Matrix: Solid
Lab File ID: V50102.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 5(g)
Date Analyzed: 11/22/2010 19:18
Soil Aliquot Vol: 5 (mL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66227
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Chlorodibromomethane	ND		2.5	1.2
75-00-3	Chloroethane	ND		5.0	2.0
67-66-3	Chloroform	ND		2.5	1.5
74-87-3	Chloromethane	ND		5.0	1.6
156-59-2	cis-1,2-Dichloroethene	ND		2.5	1.2
10061-01-5	cis-1,3-Dichloropropene	ND		2.5	1.0
74-95-3	Dibromomethane	ND		2.5	1.3
75-27-4	Dichlorobromomethane	ND		2.5	1.3
75-71-8	Dichlorodifluoromethane	ND		5.0	2.1
60-29-7	Ethyl ether	ND		2.5	1.1
100-41-4	Ethylbenzene	ND		2.5	1.8
106-93-4	Ethylene Dibromide	ND		2.5	1.1
87-68-3	Hexachlorobutadiene	ND		2.5	1.5
108-20-3	Isopropyl ether	ND		2.5	1.1
98-82-8	Isopropylbenzene	ND		2.5	1.5
179601-23-1	m-Xylene & p-Xylene	ND		5.0	3.5
1634-04-4	Methyl tert-butyl ether	ND		2.5	1.5
75-09-2	Methylene Chloride	ND		10	9.8
104-51-8	n-Butylbenzene	ND		2.5	1.2
103-65-1	N-Propylbenzene	ND		2.5	1.7
91-20-3	Naphthalene	ND		25	2.3
95-47-6	o-Xylene	ND		2.5	1.3
135-98-8	sec-Butylbenzene	ND		2.5	1.4
100-42-5	Styrene	ND		2.5	1.0
994-05-8	Tert-amyl methyl ether	ND		2.5	1.5
637-92-3	Tert-butyl ethyl ether	ND		2.5	1.4
98-06-6	tert-Butylbenzene	ND		2.5	1.4
127-18-4	Tetrachloroethene	ND		2.5	1.8
109-99-9	Tetrahydrofuran	15.3	J	25	12
108-88-3	Toluene	ND		2.5	1.8
156-60-5	trans-1,2-Dichloroethene	ND		2.5	1.6
10061-02-6	trans-1,3-Dichloropropene	ND		2.5	1.0
79-01-6	Trichloroethene	ND		2.5	2.1
75-69-4	Trichlorofluoromethane	ND		5.0	1.4
75-01-4	Vinyl chloride	ND		2.5	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		12	1.4

TC 12/10/10

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31167-1

SDG No.: 360-31167

Client Sample ID: | Lab Sample ID: MB 360-66285/3-A

Matrix: Solid | Lab File ID: V50150.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/23/2010 17:26

Soil Aliquot Vol: 5 (mL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66263 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.5	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.5	2.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.5	1.0
79-00-5	1,1,2-Trichloroethane	ND		2.5	1.0
75-34-3	1,1-Dichloroethane	ND		2.5	1.9
75-35-4	1,1-Dichloroethene	ND		2.5	1.6
563-58-6	1,1-Dichloropropene	ND		2.5	1.5
87-61-6	1,2,3-Trichlorobenzene	ND		2.5	1.1
96-18-4	1,2,3-Trichloropropane	ND		2.5	1.2
120-82-1	1,2,4-Trichlorobenzene	ND		2.5	1.0
95-63-6	1,2,4-Trimethylbenzene	ND		2.5	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	ND		25	2.8
95-50-1	1,2-Dichlorobenzene	ND		2.5	1.0
107-06-2	1,2-Dichloroethane	ND		2.5	1.0
78-87-5	1,2-Dichloropropane	ND		2.5	1.6
108-67-8	1,3,5-Trimethylbenzene	ND		2.5	1.5
541-73-1	1,3-Dichlorobenzene	ND		2.5	1.0
142-28-9	1,3-Dichloropropane	ND		2.5	1.1
106-46-7	1,4-Dichlorobenzene	ND		2.5	1.0
123-91-1	1,4-Dioxane	ND		250	100
594-20-7	2,2-Dichloropropane	ND		2.5	2.1
78-93-3	2-Butanone (MEK)	ND		25	11
95-49-8	2-Chlorotoluene	ND		2.5	1.3
591-78-6	2-Hexanone	ND		25	14
106-43-4	4-Chlorotoluene	ND		2.5	1.2
99-87-6	4-Isopropyltoluene	ND		2.5	1.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		25	10
67-64-1	Acetone	20.7	J	250	17
71-43-2	Benzene	ND		2.5	1.6
108-86-1	Bromobenzene	ND		2.5	1.0
75-25-2	Bromoform	ND		2.5	1.6
74-83-9	Bromomethane	ND		5.0	2.3
75-15-0	Carbon disulfide	ND		2.5	1.9
56-23-5	Carbon tetrachloride	ND		2.5	1.7
108-90-7	Chlorobenzene	ND		2.5	1.2
74-97-5	Chlorobromomethane	ND		2.5	1.4

TC 12/19/10

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield | Job No.: 360-31167-1

SDG No.: 360-31167

Client Sample ID: | Lab Sample ID: MB 360-66285/3-A

Matrix: Solid | Lab File ID: V50150.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/23/2010 17:26

Soil Aliquot Vol: 5 (mL) | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VMS ID: 0.25(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 66263 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Chlorodibromomethane	ND		2.5	1.2
75-00-3	Chloroethane	ND		5.0	2.0
67-66-3	Chloroform	ND		2.5	1.5
74-87-3	Chloromethane	ND		5.0	1.6
156-59-2	cis-1,2-Dichloroethene	ND		2.5	1.2
10061-01-5	cis-1,3-Dichloropropene	ND		2.5	1.0
74-95-3	Dibromomethane	ND		2.5	1.3
75-27-4	Dichlorobromomethane	ND		2.5	1.3
75-71-8	Dichlorodifluoromethane	ND		5.0	2.1
60-29-7	Ethyl ether	ND		2.5	1.1
100-41-4	Ethylbenzene	ND		2.5	1.8
106-93-4	Ethylene Dibromide	ND		2.5	1.1
87-68-3	Hexachlorobutadiene	ND		2.5	1.5
108-20-3	Isopropyl ether	ND		2.5	1.1
98-82-8	Isopropylbenzene	ND		2.5	1.5
179601-23-1	m-Xylene & p-Xylene	ND		5.0	3.5
1634-04-4	Methyl tert-butyl ether	ND		2.5	1.5
75-09-2	Methylene Chloride	ND		10	9.8
104-51-8	n-Butylbenzene	ND		2.5	1.2
103-65-1	N-Propylbenzene	ND		2.5	1.7
91-20-3	Naphthalene	ND		25	2.3
95-47-6	o-Xylene	ND		2.5	1.3
135-98-8	sec-Butylbenzene	ND		2.5	1.4
100-42-5	Styrene	ND		2.5	1.0
994-05-8	Tert-amyl methyl ether	ND		2.5	1.5
637-92-3	Tert-butyl ethyl ether	ND		2.5	1.4
98-06-6	tert-Butylbenzene	ND		2.5	1.4
127-18-4	Tetrachloroethene	ND		2.5	1.8
109-99-9	Tetrahydrofuran	15.1	J	25	12
108-88-3	Toluene	ND		2.5	1.8
156-60-5	trans-1,2-Dichloroethene	ND		2.5	1.6
10061-02-6	trans-1,3-Dichloropropene	ND		2.5	1.0
79-01-6	Trichloroethene	ND		2.5	2.1
75-69-4	Trichlorofluoromethane	ND		5.0	1.4
75-01-4	Vinyl chloride	ND		2.5	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		12	1.4

TC 12/14/10

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / II / III (circle one)

SITE: Olin Chemical Superfund Site Project #: 6107100016.12 SDG #: 360-31147-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
Data completeness				
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☐	☐	☐	Data summaries match EDD	
Holding Times and Preservation				
☑	☐	☐	Hold times met (Waters – Extract within 7 days, analyze within 40 days. Soils – extract within 14 days, analyze within 40 days)	
Instrument Performance Check (Tune)				
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
Initial Calibration				
☑	☐	☐	%RSD less than or equal to 30%	
☑	☐	☐	RRF greater than or equal to 0.05	
Continuing Calibration				
☑	☐	☐	%D less than or equal to 25%	
☑	☐	☐	RRF greater than or equal to 0.05.	
Blank Contamination				Evaluate all blanks for contamination. Highest contaminant level used for action level.
☐	☑	☐	Method blank contamination	
☐	☐	☑	Equipment/Rinseate blank contamination	
Surrogate Recoveries				

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / II / III (circle one)

☑	☐	☐	Surrogates percent recovery criteria met: Soil = (base/neutral 30%-130%, acid 30%-130%) Water = (base/neutral 30%-130%, acid 15%-110%)	
Matrix Spikes and Laboratory Control Samples				
☐	☒	☐	MS/MSD percent recovery criteria met Soil and Water = (base/neutral 40%-140%, acid 30%-130%)	See below.
☑	☐	☐	MS/MSD RPD criteria met (soils <50%, water <30%)	
☑	☐	☐	LCS/LCSD percent recovery criteria met soil/water (base 40%-140%, acid 30%-130%)	
☑	☐	☐	LCS/LCSD RPD criteria met (soils <50%, water <30%)	
Field Duplicates				
☑	☐	☐	RPD criteria met (soils <50%, water <30%)	
Internal Standard				
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
Target Compounds				
☑	☐	☐	Reviewed narrative for anomalies	
Tentatively Identified Compounds (TICs)				
☐	☑	☐	TCL compounds reported as TICs	

Validator's Signature: _____

Date: 12/14/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

Continuing Calibration:

The continuing calibration RRF for 2,4-dinitrophenol (0.0490) and the percent differences for 2,4-dintirophenol (42.5), 4,6-dintiro-2-methylphenol (26.5), and dibenz(a,h)anthracene (28.1) were outside of the QC limits. Sample results for 2,4-dintirophenol, 4,6-dintiro-2-methylphenol, and dibenz(a,h)anthracene were non-detect and the reporting limits were qualified estimated (UJ).

MS/MSD:

Sample OC-SB-481-7.0/9.0-XXX was selected for MS/MSD analysis. The MS and MSD percent recoveries of hexachlorocyclopentadiene (0 and 0) were less than the lower QC limit of 40. The RPD for 2,4-dinitrophenol (68) exceeded the QC limit of 50. The result for 2,4-dinitrophenol in the unspiked sample was non-detect and the reporting limit was qualified estimated (UJ). The result for hexachlorocyclopentadiene in the unspiked sample was non-detect and was rejected (R).

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

FILE COPY

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/14/10

Job Number: 360-31147-1

SDG Number: 360-31147-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/2/2010 4:48 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/02/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL
Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/19/2010 and analyzed on 11/29/2010 and 11/30/2010.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66417. 2,4-Dinitrophenol exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria.

For samples 360-31147-(1-10), in batch 66417, the following compounds were outside control limits in the continuing calibration verification (CCV): 2,4-Dintrophenol (high), Dibenz(ah)anthracene (high), 4,6-Dinitro-2-methylphenol (high), Di-n-octylphthalate (low) and 2,4-Dimethylphenol (low).

General method information
Samples OC-SB-480-0.0/1.0-XXX (360-31147-3)[5X], OC-SB-480-6.0/8.0-DUP (360-31147-4)[5X], OC-SB-480-6.0/8.0-XXX (360-31147-5)[5X] and OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

The 11/29/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 2,4-Dinitrophenol; 4,6-Dinitro-2-Methylphenol, 4-Nitrophenol; 2,3,4,6-Tetrachlorophenol; Pentachlorophenol; Dibenz(a,h)anthracene; and Benzo[g,h,i]perylene.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS
Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9), OC-SB-502-3.0/5.0-XXX (360-31147-10) and OC-TBK-057 (360-31147-11) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010 and 11/24/2010.

For the MSD of sample OC-SB-481-7.0/9.0-XXXMSD (360-31147-7) in batch 360-66308C5-C8, Aliphatics (unadjusted), C9-C10 Aromatics and C9-C12 Aliphatics (unadjusted) failed the recovery criteria low. C5-C8 Aliphatics (unadjusted) exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:
At the request of the client, only the carbon ranges are reported for this job.

The calibration curve dated 9/20/2010 uses quadratic regressions for m,p-Xylene, o-Xylene, and Naphthalene.

Sample OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VPH analyses.

All other quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS
Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010.

C11-C22 Aromatics (unadjusted) and C9-C18 Aliphatics failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66128. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:
At the request of the client, only the carbon ranges are reported for this job.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31147-1	OC-SB-479-0.0/1.0-XXX	Solid	11/16/2010 1525	11/17/2010 1750
360-31147-2	OC-SB-479-8.0/10-XXX	Solid	11/16/2010 1540	11/17/2010 1750
360-31147-3	OC-SB-480-0.0/1.0-XXX	Solid	11/16/2010 1600	11/17/2010 1750
360-31147-4	OC-SB-480-6.0/8.0-DUP	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-5	OC-SB-480-6.0/8.0-XXX	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-6	OC-SB-481-0.0/1.0-XXX	Solid	11/17/2010 1330	11/17/2010 1750
360-31147-7	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MS	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MSD	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-8	OC-SB-500-0.5/3.0-XXX	Solid	11/17/2010 1025	11/17/2010 1750
360-31147-9	OC-SB-501-0.5/3.0-XXX	Solid	11/17/2010 1100	11/17/2010 1750
360-31147-10	OC-SB-502-3.0/5.0-XXX	Solid	11/17/2010 1135	11/17/2010 1750
360-31147-11	OC-TBK-057	Solid	11/16/2010 1525	11/17/2010 1750

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13532.D
Dilution:	1.0			Initial Weight/Volume:	30.04 g
Date Analyzed:	11/29/2010 2126			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	37
1,2,4,5-Tetrachlorobenzene		ND		20	37
1,2,4-Trichlorobenzene		ND		20	37
1,2-Dichlorobenzene		ND		20	37
1,3-Dichlorobenzene		ND		20	37
1,4-Dichlorobenzene		ND		20	37
1-Methylnaphthalene		ND		20	37
2,2'-oxybis[1-chloropropane]		ND		20	37
2,3,4,6-Tetrachlorophenol		ND		20	37
2,4,5-Trichlorophenol		ND		20	37
2,4,6-Trichlorophenol		ND		20	37
2,4-Dichlorophenol		ND		20	37
2,4-Dimethylphenol		ND		20	37
2,4-Dinitrophenol		ND	J	20	37
2,4-Dinitrotoluene		ND		20	37
2,6-Dinitrotoluene		ND		20	37
2-Chloronaphthalene		ND		20	37
2-Chlorophenol		ND		20	37
2-Methylnaphthalene		ND		20	37
2-Methylphenol		ND		22	37
2-Nitroaniline		ND		20	180
2-Nitrophenol		ND		20	37
3 & 4 Methylphenol		ND		20	37
3,3'-Dichlorobenzidine		ND		20	74
3-Nitroaniline		ND		20	180
4,6-Dinitro-2-methylphenol		ND	J	20	180
4-Bromophenyl phenyl ether		ND		20	37
4-Chloro-3-methylphenol		ND		20	74
4-Chloroaniline		ND		20	74
4-Chlorophenyl phenyl ether		ND		20	37
4-Nitroaniline		ND		20	180
4-Nitrophenol		ND		20	180
Acenaphthene		ND		20	37
Acenaphthylene		ND		20	37
Acetophenone		ND		20	37
Aniline		ND		20	37
Anthracene		ND		20	37
Atrazine		ND		20	37
Azobenzene		ND		20	37
Benzaldehyde		ND		20	37
Benzo[a]anthracene		ND		20	37
Benzo[a]pyrene		ND		20	37
Benzo[b]fluoranthene		ND		20	37
Benzo[g,h,i]perylene		ND		20	37
Benzo[k]fluoranthene		ND		20	37
Benzoic acid		58	J	20	180

12/14/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13532.D
Dilution:	1.0			Initial Weight/Volume:	30.04 g
Date Analyzed:	11/29/2010 2126			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20	37
Benzyl alcohol		ND		31	74
Bis(2-chloroethoxy)methane		ND		20	37
Bis(2-chloroethyl)ether		ND		20	37
Bis(2-ethylhexyl) phthalate		ND		20	37
Butyl benzyl phthalate		ND		20	37
Caprolactam		ND		20	37
Carbazole		ND		20	37
Chrysene		ND		20	37
Dibenz(a,h)anthracene		ND 3		20	37
Dibenzofuran		ND		20	37
Diethyl phthalate		ND		20	37
Dimethyl phthalate		ND		20	37
Di-n-butyl phthalate		ND		32	37
Di-n-octyl phthalate		ND		20	37
Fluoranthene		ND		20	37
Fluorene		ND		20	37
Hexachlorobenzene		ND		20	37
Hexachlorobutadiene		ND		20	37
Hexachlorocyclopentadiene		ND		20	74
Hexachloroethane		ND		20	37
Indeno[1,2,3-cd]pyrene		ND		20	37
Isophorone		ND		20	37
Naphthalene		ND		20	89
Nitrobenzene		ND		20	37
N-Nitrosodi-n-propylamine		ND		20	37
N-Nitrosodiphenylamine		ND		20	37
Pentachlorophenol		ND		20	37
Phenanthrene		ND		20	44
Phenol		ND		20	37
Diphenyl oxide		ND		20	37
Pyrene		ND		20	37
N-Nitrosodimethylamine		ND		20	37

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	67		30 - 130
2-Fluorobiphenyl	63		30 - 130
2-Fluorophenol	61		30 - 130
Nitrobenzene-d5	59		30 - 130
Phenol-d5	67		30 - 130
Terphenyl-d14	79		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid % Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13532.D
Dilution:	1.0			Initial Weight/Volume:	30.04 g
Date Analyzed:	11/29/2010 2126			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.79	14000	TJ
	Unknown	8.43	250	TJ
	Unknown	12.26	590	TJ
	Unknown	12.32	250	TJ
18435-45-5	1-Nonadecene	17.19	430	TJN
629-96-9	1-Eicosanol	18.10	650	TJN
18835-33-1	1-Hexacosene	19.29	380	TJN
26603-23-6	p,p''-Dioctyldiphenylamine	20.11	1100	TJN
	Unknown	23.59	150	TJ
	Unknown	23.95	180	TJ

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13533.D
Dilution:	1.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/29/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		ND	J	19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	72
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND	J	19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	72
4-Chloroaniline		ND		19	72
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		22	J	19	180

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13533.D
Dilution:	1.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/29/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		31	72
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		ND		19	36
Butyl benzyl phthalate		ND		19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND *3		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		ND		19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	72
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		ND		19	86
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		ND		19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	70		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	70		30 - 130
Nitrobenzene-d5	63		30 - 130
Phenol-d5	70		30 - 130
Terphenyl-d14	81		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13533.D
Dilution:	1.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/29/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 10

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.76	36	T J N
71-43-2	Benzene	5.27	48	T J N
108-88-3	Toluene	6.76	70	T J N
141-79-7	3-Penten-2-one, 4-methyl-	7.11	30	T J N
	Unknown	7.79	13000	T J
111-76-2	Ethanol, 2-butoxy-	8.43	260	T J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	110	T J N
	Unknown	11.14	30	T J
2136-70-1	Ethanol, 2-(tetradecyloxy)-	17.18	72	T J N
112-95-8	Eicosane	17.59	24	T J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13538.D
Dilution:	5.0			Initial Weight/Volume:	30.25 g
Date Analyzed:	11/30/2010 0103			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		95	180
1,2,4,5-Tetrachlorobenzene		ND		95	180
1,2,4-Trichlorobenzene		ND		95	180
1,2-Dichlorobenzene		ND		95	180
1,3-Dichlorobenzene		ND		95	180
1,4-Dichlorobenzene		ND		95	180
1-Methylnaphthalene		ND		95	180
2,2'-oxybis[1-chloropropane]		ND		95	180
2,3,4,6-Tetrachlorophenol		ND		95	180
2,4,5-Trichlorophenol		ND		95	180
2,4,6-Trichlorophenol		ND		95	180
2,4-Dichlorophenol		ND		95	180
2,4-Dimethylphenol		ND		95	180
2,4-Dinitrophenol		ND	J	95	180
2,4-Dinitrotoluene		ND		95	180
2,6-Dinitrotoluene		ND		95	180
2-Chloronaphthalene		ND		95	180
2-Chlorophenol		ND		95	180
2-Methylnaphthalene		ND		95	180
2-Methylphenol		ND		110	180
2-Nitroaniline		ND		95	880
2-Nitrophenol		ND		95	180
3 & 4 Methylphenol		ND		95	180
3,3'-Dichlorobenzidine		ND		95	350
3-Nitroaniline		ND		95	880
4,6-Dinitro-2-methylphenol		ND	J	95	880
4-Bromophenyl phenyl ether		ND		95	180
4-Chloro-3-methylphenol		ND		95	350
4-Chloroaniline		ND		95	350
4-Chlorophenyl phenyl ether		ND		95	180
4-Nitroaniline		ND		95	880
4-Nitrophenol		ND		95	880
Acenaphthene		ND		95	180
Acenaphthylene		ND		95	180
Acetophenone		ND		95	180
Aniline		ND		95	180
Anthracene		ND		95	180
Atrazine		ND		95	180
Azobenzene		ND		95	180
Benzaldehyde		ND		95	180
Benzo[a]anthracene		ND		95	180
Benzo[a]pyrene		ND		95	180
Benzo[b]fluoranthene		ND		95	180
Benzo[g,h,i]perylene		ND		95	180
Benzo[k]fluoranthene		ND		95	180
Benzoic acid		ND		95	880

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid % Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13538.D
Dilution:	5.0			Initial Weight/Volume:	30.25 g
Date Analyzed:	11/30/2010 0103			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		95	180
Benzyl alcohol		ND		150	350
Bis(2-chloroethoxy)methane		ND		95	180
Bis(2-chloroethyl)ether		ND		95	180
Bis(2-ethylhexyl) phthalate		210		95	180
Butyl benzyl phthalate		ND		95	180
Caprolactam		ND		95	180
Carbazole		ND		95	180
Chrysene		ND		95	180
Dibenz(a,h)anthracene		ND J		95	180
Dibenzofuran		ND		95	180
Diethyl phthalate		ND		95	180
Dimethyl phthalate		ND		95	180
Di-n-butyl phthalate		ND		150	180
Di-n-octyl phthalate		ND		95	180
Fluoranthene		ND		95	180
Fluorene		ND		95	180
Hexachlorobenzene		ND		95	180
Hexachlorobutadiene		ND		95	180
Hexachlorocyclopentadiene		ND		95	350
Hexachloroethane		ND		95	180
Indeno[1,2,3-cd]pyrene		ND		95	180
Isophorone		ND		95	180
Naphthalene		ND		95	420
Nitrobenzene		ND		95	180
N-Nitrosodi-n-propylamine		ND		95	180
N-Nitrosodiphenylamine		ND		95	180
Pentachlorophenol		ND		95	180
Phenanthrene		ND		95	210
Phenol		ND		95	180
Diphenyl oxide		ND		95	180
Pyrene		ND		95	180
N-Nitrosodimethylamine		ND		95	180

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	58		30 - 130
2-Fluorobiphenyl	59		30 - 130
2-Fluorophenol	53		30 - 130
Nitrobenzene-d5	52		30 - 130
Phenol-d5	61		30 - 130
Terphenyl-d14	85		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid % Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13538.D
Dilution:	5.0			Initial Weight/Volume:	30.25 g
Date Analyzed:	11/30/2010 0103			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 10

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.61	920	J N
	Unknown	7.67	15000	J
	Unknown	16.63	550	J
1000131-11-8	Z-5-Nonadecene	17.19	370	J N
	Unknown	18.05	500	J
	Unknown	18.10	850	J
	Unknown	18.65	290	J
630-2-4	Octacosane	19.22	280	J N
26603-23-6	p,p''-Dioctyldiphenylamine	20.14	49000	J N
	Unknown	20.71	380	J

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13539.D
Dilution:	5.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 0140			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		98	180
1,2,4,5-Tetrachlorobenzene		ND		98	180
1,2,4-Trichlorobenzene		ND		98	180
1,2-Dichlorobenzene		ND		98	180
1,3-Dichlorobenzene		ND		98	180
1,4-Dichlorobenzene		ND		98	180
1-Methylnaphthalene		ND		98	180
2,2'-oxybis[1-chloropropane]		ND		98	180
2,3,4,6-Tetrachlorophenol		ND		98	180
2,4,5-Trichlorophenol		ND		98	180
2,4,6-Trichlorophenol		ND		98	180
2,4-Dichlorophenol		ND		98	180
2,4-Dimethylphenol		ND		98	180
2,4-Dinitrophenol		ND J		98	180
2,4-Dinitrotoluene		ND		98	180
2,6-Dinitrotoluene		ND		98	180
2-Chloronaphthalene		ND		98	180
2-Chlorophenol		ND		98	180
2-Methylnaphthalene		ND		98	180
2-Methylphenol		ND		110	180
2-Nitroaniline		ND		98	900
2-Nitrophenol		ND		98	180
3 & 4 Methylphenol		ND		98	180
3,3'-Dichlorobenzidine		ND		98	360
3-Nitroaniline		ND		98	900
4,6-Dinitro-2-methylphenol		ND J		98	900
4-Bromophenyl phenyl ether		ND		98	180
4-Chloro-3-methylphenol		ND		98	360
4-Chloroaniline		ND		98	360
4-Chlorophenyl phenyl ether		ND		98	180
4-Nitroaniline		ND		98	900
4-Nitrophenol		ND		98	900
Acenaphthene		ND		98	180
Acenaphthylene		ND		98	180
Acetophenone		ND		98	180
Aniline		ND		98	180
Anthracene		ND		98	180
Atrazine		ND		98	180
Azobenzene		ND		98	180
Benzaldehyde		ND		98	180
Benzo[a]anthracene		ND		98	180
Benzo[a]pyrene		ND		98	180
Benzo[b]fluoranthene		ND		98	180
Benzo[g,h,i]perylene		ND		98	180
Benzo[k]fluoranthene		ND		98	180
Benzoic acid		ND		98	900

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13539.D
Dilution:	5.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 0140			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		98	180
Benzyl alcohol	ND		150	360
Bis(2-chloroethoxy)methane	ND		98	180
Bis(2-chloroethyl)ether	ND		98	180
Bis(2-ethylhexyl) phthalate	200		98	180
Butyl benzyl phthalate	ND		98	180
Caprolactam	ND		98	180
Carbazole	ND		98	180
Chrysene	ND		98	180
Dibenz(a,h)anthracene	ND J		98	180
Dibenzofuran	ND		98	180
Diethyl phthalate	ND		98	180
Dimethyl phthalate	ND		98	180
Di-n-butyl phthalate	ND		160	180
Di-n-octyl phthalate	ND		98	180
Fluoranthene	ND		98	180
Fluorene	ND		98	180
Hexachlorobenzene	ND		98	180
Hexachlorobutadiene	ND		98	180
Hexachlorocyclopentadiene	ND		98	360
Hexachloroethane	ND		98	180
Indeno[1,2,3-cd]pyrene	ND		98	180
Isophorone	ND		98	180
Naphthalene	ND		98	430
Nitrobenzene	ND		98	180
N-Nitrosodi-n-propylamine	ND		98	180
N-Nitrosodiphenylamine	ND		98	180
Pentachlorophenol	ND		98	180
Phenanthrene	ND		98	220
Phenol	ND		98	180
Diphenyl oxide	ND		98	180
Pyrene	ND		98	180
N-Nitrosodimethylamine	ND		98	180

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	63		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	59		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	71		30 - 130
Terphenyl-d14	89		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13539.D
Dilution:	5.0			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 0140			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.62	880	J N
	Unknown	7.68	17000	J
	Unknown	12.17	7000	J
	Unknown	12.26	3700	J
	Unknown	12.29	820	J
	Unknown	12.33	2900	J
	Unknown	16.64	3700	J
	Unknown	18.06	3700	J
26603-23-6	p,p"-Dioctyldiphenylamine	20.19	130000	J N
	Unknown	20.72	2100	J

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13540.D
Dilution:	5.0			Initial Weight/Volume:	30.23 g
Date Analyzed:	11/30/2010 0216			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		98	180
1,2,4,5-Tetrachlorobenzene		ND		98	180
1,2,4-Trichlorobenzene		ND		98	180
1,2-Dichlorobenzene		ND		98	180
1,3-Dichlorobenzene		ND		98	180
1,4-Dichlorobenzene		ND		98	180
1-Methylnaphthalene		ND		98	180
2,2'-oxybis[1-chloropropane]		ND		98	180
2,3,4,6-Tetrachlorophenol		ND		98	180
2,4,5-Trichlorophenol		ND		98	180
2,4,6-Trichlorophenol		ND		98	180
2,4-Dichlorophenol		ND		98	180
2,4-Dimethylphenol		ND		98	180
2,4-Dinitrophenol		ND	J	98	180
2,4-Dinitrotoluene		ND		98	180
2,6-Dinitrotoluene		ND		98	180
2-Chloronaphthalene		ND		98	180
2-Chlorophenol		ND		98	180
2-Methylnaphthalene		ND		98	180
2-Methylphenol		ND		110	180
2-Nitroaniline		ND		98	910
2-Nitrophenol		ND		98	180
3 & 4 Methylphenol		ND		98	180
3,3'-Dichlorobenzidine		ND		98	360
3-Nitroaniline		ND		98	910
4,6-Dinitro-2-methylphenol		ND	J	98	910
4-Bromophenyl phenyl ether		ND		98	180
4-Chloro-3-methylphenol		ND		98	360
4-Chloroaniline		ND		98	360
4-Chlorophenyl phenyl ether		ND		98	180
4-Nitroaniline		ND		98	910
4-Nitrophenol		ND		98	910
Acenaphthene		ND		98	180
Acenaphthylene		ND		98	180
Acetophenone		ND		98	180
Aniline		ND		98	180
Anthracene		ND		98	180
Atrazine		ND		98	180
Azobenzene		ND		98	180
Benzaldehyde		ND		98	180
Benzo[a]anthracene		ND		98	180
Benzo[a]pyrene		ND		98	180
Benzo[b]fluoranthene		ND		98	180
Benzo[g,h,i]perylene		ND		98	180
Benzo[k]fluoranthene		ND		98	180
Benzoic acid		ND		98	910

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13540.D
Dilution:	5.0			Initial Weight/Volume:	30.23 g
Date Analyzed:	11/30/2010 0216			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		98	180
Benzyl alcohol		ND		150	360
Bis(2-chloroethoxy)methane		ND		98	180
Bis(2-chloroethyl)ether		ND		98	180
Bis(2-ethylhexyl) phthalate		180		98	180
Butyl benzyl phthalate		ND		98	180
Caprolactam		ND		98	180
Carbazole		ND		98	180
Chrysene		ND		98	180
Dibenz(a,h)anthracene		ND	J	98	180
Dibenzofuran		ND		98	180
Diethyl phthalate		ND		98	180
Dimethyl phthalate		ND		98	180
Di-n-butyl phthalate		ND		160	180
Di-n-octyl phthalate		ND		98	180
Fluoranthene		ND		98	180
Fluorene		ND		98	180
Hexachlorobenzene		ND		98	180
Hexachlorobutadiene		ND		98	180
Hexachlorocyclopentadiene		ND		98	360
Hexachloroethane		ND		98	180
Indeno[1,2,3-cd]pyrene		ND		98	180
Isophorone		ND		98	180
Naphthalene		ND		98	440
Nitrobenzene		ND		98	180
N-Nitrosodi-n-propylamine		ND		98	180
N-Nitrosodiphenylamine		ND		98	180
Pentachlorophenol		ND		98	180
Phenanthrene		ND		98	220
Phenol		ND		98	180
Diphenyl oxide		ND		98	180
Pyrene		ND		98	180
N-Nitrosodimethylamine		ND		98	180

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	58		30 - 130
2-Fluorobiphenyl	65		30 - 130
2-Fluorophenol	60		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	69		30 - 130
Terphenyl-d14	94		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13540.D
Dilution:	5.0			Initial Weight/Volume:	30.23 g
Date Analyzed:	11/30/2010 0216			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.57	960	J N
	Unknown	7.66	17000	J
	Unknown	12.26	3600	J
	Unknown	12.29	780	J
	Unknown	12.33	2700	J
	Unknown	16.64	3800	J
	Unknown	18.06	3500	J
26603-23-6	p,p"-Dioctyldiphenylamine	20.18	140000	J N
	Unknown	20.72	2200	J
	Unknown	21.98	780	J

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13534.D
Dilution:	1.0			Initial Weight/Volume:	30.21 g
Date Analyzed:	11/29/2010 2239			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	35
1,2,4,5-Tetrachlorobenzene		ND		19	35
1,2,4-Trichlorobenzene		ND		19	35
1,2-Dichlorobenzene		ND		19	35
1,3-Dichlorobenzene		ND		19	35
1,4-Dichlorobenzene		ND		19	35
1-Methylnaphthalene		ND		19	35
2,2'-oxybis[1-chloropropane]		ND		19	35
2,3,4,6-Tetrachlorophenol		ND		19	35
2,4,5-Trichlorophenol		ND		19	35
2,4,6-Trichlorophenol		ND		19	35
2,4-Dichlorophenol		ND		19	35
2,4-Dimethylphenol		ND		19	35
2,4-Dinitrophenol		ND	J	19	35
2,4-Dinitrotoluene		ND		19	35
2,6-Dinitrotoluene		ND		19	35
2-Chloronaphthalene		ND		19	35
2-Chlorophenol		ND		19	35
2-Methylnaphthalene		ND		19	35
2-Methylphenol		ND		21	35
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	35
3 & 4 Methylphenol		ND		19	35
3,3'-Dichlorobenzidine		ND		19	71
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND	J	19	180
4-Bromophenyl phenyl ether		ND		19	35
4-Chloro-3-methylphenol		ND		19	71
4-Chloroaniline		ND		19	71
4-Chlorophenyl phenyl ether		ND		19	35
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	35
Acenaphthylene		ND		19	35
Acetophenone		ND		19	35
Aniline		ND		19	35
Anthracene		ND		19	35
Atrazine		ND		19	35
Azobenzene		ND		19	35
Benzaldehyde		ND		19	35
Benzo[a]anthracene		ND		19	35
Benzo[a]pyrene		ND		19	35
Benzo[b]fluoranthene		ND		19	35
Benzo[g,h,i]perylene		ND		19	35
Benzo[k]fluoranthene		ND		19	35
Benzoic acid		25	J	19	180

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13534.D
Dilution:	1.0			Initial Weight/Volume:	30.21 g
Date Analyzed:	11/29/2010 2239			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	35
Benzyl alcohol		ND		30	71
Bis(2-chloroethoxy)methane		ND		19	35
Bis(2-chloroethyl)ether		ND		19	35
Bis(2-ethylhexyl) phthalate		ND		19	35
Butyl benzyl phthalate		ND		19	35
Caprolactam		ND		19	35
Carbazole		ND		19	35
Chrysene		ND		19	35
Dibenz(a,h)anthracene		ND		19	35
Dibenzofuran		ND		19	35
Diethyl phthalate		ND		19	35
Dimethyl phthalate		ND		19	35
Di-n-butyl phthalate		ND		31	35
Di-n-octyl phthalate		ND		19	35
Fluoranthene		ND		19	35
Fluorene		ND		19	35
Hexachlorobenzene		ND		19	35
Hexachlorobutadiene		ND		19	35
Hexachlorocyclopentadiene		ND		19	71
Hexachloroethane		ND		19	35
Indeno[1,2,3-cd]pyrene		ND		19	35
Isophorone		ND		19	35
Naphthalene		ND		19	85
Nitrobenzene		ND		19	35
N-Nitrosodi-n-propylamine		ND		19	35
N-Nitrosodiphenylamine		ND		19	35
Pentachlorophenol		ND		19	35
Phenanthrene		ND		19	42
Phenol		ND		19	35
Diphenyl oxide		ND		19	35
Pyrene		ND		19	35
N-Nitrosodimethylamine		ND		19	35

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	74		30 - 130
2-Fluorobiphenyl	70		30 - 130
2-Fluorophenol	70		30 - 130
Nitrobenzene-d5	66		30 - 130
Phenol-d5	75		30 - 130
Terphenyl-d14	84		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid % Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13534.D
Dilution:	1.0			Initial Weight/Volume:	30.21 g
Date Analyzed:	11/29/2010 2239			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 10

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.78	41	J N
	Unknown	7.80	15000	J N
111-76-2	Ethanol, 2-butoxy-	8.44	370	J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	180	J N
1000130-90-8	Z-7-Hexadecenoic acid	15.26	49	J N
57-10-3	n-Hexadecanoic acid	15.28	56	J N
3452-7-1	1-Eicosene	17.19	140	J N
	Unknown	18.10	84	J N
297-3-0	Cyclotetracosane	19.28	91	J N
1599-67-3	1-Docosene	20.91	59	J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13541.D
Dilution:	5.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0252			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		97	180
1,2,4,5-Tetrachlorobenzene		ND		97	180
1,2,4-Trichlorobenzene		ND		97	180
1,2-Dichlorobenzene		ND		97	180
1,3-Dichlorobenzene		ND		97	180
1,4-Dichlorobenzene		ND		97	180
1-Methylnaphthalene		ND		97	180
2,2'-oxybis[1-chloropropane]		ND		97	180
2,3,4,6-Tetrachlorophenol		ND		97	180
2,4,5-Trichlorophenol		ND		97	180
2,4,6-Trichlorophenol		ND		97	180
2,4-Dichlorophenol		ND		97	180
2,4-Dimethylphenol		ND		97	180
2,4-Dinitrophenol		ND J		97	180
2,4-Dinitrotoluene		ND		97	180
2,6-Dinitrotoluene		ND		97	180
2-Chloronaphthalene		ND		97	180
2-Chlorophenol		ND		97	180
2-Methylnaphthalene		ND		97	180
2-Methylphenol		ND		110	180
2-Nitroaniline		ND		97	900
2-Nitrophenol		ND		97	180
3 & 4 Methylphenol		ND		97	180
3,3'-Dichlorobenzidine		ND		97	360
3-Nitroaniline		ND		97	900
4,6-Dinitro-2-methylphenol		ND J		97	900
4-Bromophenyl phenyl ether		ND		97	180
4-Chloro-3-methylphenol		ND		97	360
4-Chloroaniline		ND		97	360
4-Chlorophenyl phenyl ether		ND		97	180
4-Nitroaniline		ND		97	900
4-Nitrophenol		ND		97	900
Acenaphthene		ND		97	180
Acenaphthylene		ND		97	180
Acetophenone		ND		97	180
Aniline		ND		97	180
Anthracene		ND		97	180
Atrazine		ND		97	180
Azobenzene		ND		97	180
Benzaldehyde		ND		97	180
Benzo[a]anthracene		ND		97	180
Benzo[a]pyrene		ND		97	180
Benzo[b]fluoranthene		ND		97	180
Benzo[g,h,i]perylene		ND		97	180
Benzo[k]fluoranthene		ND		97	180
Benzoic acid		ND		97	900

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13541.D
Dilution:	5.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0252			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		97	180
Benzyl alcohol		ND		150	360
Bis(2-chloroethoxy)methane		ND		97	180
Bis(2-chloroethyl)ether		ND		97	180
Bis(2-ethylhexyl) phthalate		450		97	180
Butyl benzyl phthalate		ND		97	180
Caprolactam		ND		97	180
Carbazole		ND		97	180
Chrysene		ND		97	180
Dibenz(a,h)anthracene		ND J		97	180
Dibenzofuran		ND		97	180
Diethyl phthalate		ND		97	180
Dimethyl phthalate		ND		97	180
Di-n-butyl phthalate		ND		160	180
Di-n-octyl phthalate		ND		97	180
Fluoranthene		ND		97	180
Fluorene		ND		97	180
Hexachlorobenzene		ND		97	180
Hexachlorobutadiene		ND		97	180
Hexachlorocyclopentadiene		~~ND~~ R		97	360
Hexachloroethane		ND		97	180
Indeno[1,2,3-cd]pyrene		ND		97	180
Isophorone		ND		97	180
Naphthalene		ND		97	430
Nitrobenzene		ND		97	180
N-Nitrosodi-n-propylamine		ND		97	180
N-Nitrosodiphenylamine		ND		97	180
Pentachlorophenol		ND		97	180
Phenanthrene		ND		97	210
Phenol		ND		97	180
Diphenyl oxide		ND		97	180
Pyrene		ND		97	180
N-Nitrosodimethylamine		ND		97	180

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	62		30 - 130
2-Fluorobiphenyl	68		30 - 130
2-Fluorophenol	61		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	68		30 - 130
Terphenyl-d14	97		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13541.D
Dilution:	5.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0252			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.66	18000	J N
	Unknown	12.17	15000	J
	Unknown	12.26	8500	J
	Unknown	12.29	1800	J
	Unknown	12.33	4800	J
	Unknown	16.64	2300	J
	Unknown	18.06	5700	J
26603-23-6	p,p''-Dioctyldiphenylamine	20.19	190000	J N
	Unknown	20.72	2900	J N
	Unknown	21.99	2400	J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.6/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13535.D
Dilution:	1.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/29/2010 2315			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		ND J		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		21	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	71
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND J		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	71
4-Chloroaniline		ND		19	71
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		49	J	19	180

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13535.D
Dilution:	1.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/29/2010 2315			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		19	36
Benzyl alcohol	ND		30	71
Bis(2-chloroethoxy)methane	ND		19	36
Bis(2-chloroethyl)ether	ND		19	36
Bis(2-ethylhexyl) phthalate	74		19	36
Butyl benzyl phthalate	39		19	36
Caprolactam	ND		19	36
Carbazole	ND		19	36
Chrysene	ND		19	36
Dibenz(a,h)anthracene	ND	J	19	36
Dibenzofuran	ND		19	36
Diethyl phthalate	ND		19	36
Dimethyl phthalate	ND		19	36
Di-n-butyl phthalate	ND		31	36
Di-n-octyl phthalate	ND		19	36
Fluoranthene	ND		19	36
Fluorene	ND		19	36
Hexachlorobenzene	ND		19	36
Hexachlorobutadiene	ND		19	36
Hexachlorocyclopentadiene	ND		19	71
Hexachloroethane	ND		19	36
Indeno[1,2,3-cd]pyrene	ND		19	36
Isophorone	ND		19	36
Naphthalene	ND		19	86
Nitrobenzene	ND		19	36
N-Nitrosodi-n-propylamine	ND		19	36
N-Nitrosodiphenylamine	ND		19	36
Pentachlorophenol	ND		19	36
Phenanthrene	ND		19	43
Phenol	ND		19	36
Diphenyl oxide	ND		19	36
Pyrene	ND		19	36
N-Nitrosodimethylamine	ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	71		30 - 130
2-Fluorobiphenyl	68		30 - 130
2-Fluorophenol	65		30 - 130
Nitrobenzene-d5	63		30 - 130
Phenol-d5	74		30 - 130
Terphenyl-d14	84		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13535.D
Dilution:	1.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/29/2010 2315			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.80	14000	J N
111-76-2	Ethanol, 2-butoxy-	8.44	520	J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.73	170	J N
	Unknown	16.63	130	J N
112-92-5	1-Octadecanol	17.19	92	J N
	Unknown	18.05	130	J N
	Unknown	19.82	58	J N
26603-23-6	p,p''-Dioctyldiphenylamine	20.17	15000	J N
	Unknown	20.72	150	J N
	Unknown	21.99	160	J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13536.D
Dilution:	1.0			Initial Weight/Volume:	30.06 g
Date Analyzed:	11/29/2010 2351			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	36
1,2,4,5-Tetrachlorobenzene		ND		20	36
1,2,4-Trichlorobenzene		ND		20	36
1,2-Dichlorobenzene		ND		20	36
1,3-Dichlorobenzene		ND		20	36
1,4-Dichlorobenzene		ND		20	36
1-Methylnaphthalene		ND		20	36
2,2'-oxybis[1-chloropropane]		ND		20	36
2,3,4,6-Tetrachlorophenol		ND		20	36
2,4,5-Trichlorophenol		ND		20	36
2,4,6-Trichlorophenol		ND		20	36
2,4-Dichlorophenol		ND		20	36
2,4-Dimethylphenol		ND		20	36
2,4-Dinitrophenol		ND	J	20	36
2,4-Dinitrotoluene		ND		20	36
2,6-Dinitrotoluene		ND		20	36
2-Chloronaphthalene		ND		20	36
2-Chlorophenol		ND		20	36
2-Methylnaphthalene		ND		20	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		20	180
2-Nitrophenol		ND		20	36
3 & 4 Methylphenol		ND		20	36
3,3'-Dichlorobenzidine		ND		20	73
3-Nitroaniline		ND		20	180
4,6-Dinitro-2-methylphenol		ND	J	20	180
4-Bromophenyl phenyl ether		ND		20	36
4-Chloro-3-methylphenol		ND		20	73
4-Chloroaniline		ND		20	73
4-Chlorophenyl phenyl ether		ND		20	36
4-Nitroaniline		ND		20	180
4-Nitrophenol		ND		20	180
Acenaphthene		ND		20	36
Acenaphthylene		ND		20	36
Acetophenone		ND		20	36
Aniline		ND		20	36
Anthracene		ND		20	36
Atrazine		ND		20	36
Azobenzene		ND		20	36
Benzaldehyde		ND		20	36
Benzo[a]anthracene		ND		20	36
Benzo[a]pyrene		ND		20	36
Benzo[b]fluoranthene		ND		20	36
Benzo[g,h,i]perylene		ND		20	36
Benzo[k]fluoranthene		ND		20	36
Benzoic acid		36	J	20	180

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13536.D
Dilution:	1.0			Initial Weight/Volume:	30.06 g
Date Analyzed:	11/29/2010 2351			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20	36
Benzyl alcohol		ND		31	73
Bis(2-chloroethoxy)methane		ND		20	36
Bis(2-chloroethyl)ether		ND		20	36
Bis(2-ethylhexyl) phthalate		37		20	36
Butyl benzyl phthalate		ND		20	36
Caprolactam		ND		20	36
Carbazole		ND		20	36
Chrysene		ND		20	36
Dibenz(a,h)anthracene		ND	J	20	36
Dibenzofuran		ND		20	36
Diethyl phthalate		ND		20	36
Dimethyl phthalate		ND		20	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		20	36
Fluoranthene		ND		20	36
Fluorene		ND		20	36
Hexachlorobenzene		ND		20	36
Hexachlorobutadiene		ND		20	36
Hexachlorocyclopentadiene		ND		20	73
Hexachloroethane		ND		20	36
Indeno[1,2,3-cd]pyrene		ND		20	36
Isophorone		ND		20	36
Naphthalene		ND		20	87
Nitrobenzene		ND		20	36
N-Nitrosodi-n-propylamine		ND		20	36
N-Nitrosodiphenylamine		ND		20	36
Pentachlorophenol		ND		20	36
Phenanthrene		ND		20	44
Phenol		ND		20	36
Diphenyl oxide		ND		20	36
Pyrene		ND		20	36
N-Nitrosodimethylamine		ND		20	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	69		30 - 130
2-Fluorobiphenyl	65		30 - 130
2-Fluorophenol	61		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	70		30 - 130
Terphenyl-d14	84		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid % Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13536.D
Dilution:	1.0			Initial Weight/Volume:	30.06 g
Date Analyzed:	11/29/2010 2351			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.73	38	J N
78-95-5	2-Propanone, 1-chloro-	5.50	21	J N
141-79-7	3-Penten-2-one, 4-methyl-	7.11	31	J N
	Unknown	7.78	14000	J
111-76-2	Ethanol, 2-butoxy-	8.43	530	J N
	Unknown	8.56	27	J
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	180	J N
629-96-9	1-Eicosanol	17.19	100	J N
	Unknown	18.10	36	J
26603-23-6	p,p''-Dioctyldiphenylamine	20.11	1400	J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13537.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0027			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		ND J		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	72
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND J		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	72
4-Chloroaniline		ND		19	72
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		38	J	19	180

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13537.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0027			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		31	72
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		ND		19	36
Butyl benzyl phthalate		34	J	19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		ND		19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	72
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		ND		19	86
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		ND		19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	67		30 - 130
2-Fluorobiphenyl	64		30 - 130
2-Fluorophenol	60		30 - 130
Nitrobenzene-d5	61		30 - 130
Phenol-d5	73		30 - 130
Terphenyl-d14	100		30 - 130

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66417		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66092		Lab File ID:	B13537.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/30/2010 0027			Final Weight/Volume:	1.0 mL
Date Prepared:	11/19/2010 1209			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	4.15	20	T J N
67-66-3	Chloroform	4.73	44	T J N
141-79-7	3-Penten-2-one, 4-methyl-	7.11	34	T J N
	Unknown	7.41	20	T J N
	Unknown	7.77	15000	T J N
111-76-2	Ethanol, 2-butoxy-	8.43	500	T J N
	Unknown	8.56	28	T J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.72	160	T J N
	Unknown	11.14	32	T J N
57-10-3	n-Hexadecanoic acid	15.28	20	T J N

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Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-66092

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	360-31147-7	Analysis Batch: 360-66417	Instrument ID: Inst. B
Client Matrix:	Solid	Prep Batch: 360-66092	Lab File ID: B13542.D
Dilution:	5.0		Initial Weight/Volume: 30.28 g
Date Analyzed:	11/30/2010 0328		Final Weight/Volume: 1.0 mL
Date Prepared:	11/19/2010 1209		Injection Volume: 2 uL

MSD Lab Sample ID:	360-31147-7	Analysis Batch: 360-66417	Instrument ID: Inst. B
Client Matrix:	Solid	Prep Batch: 360-66092	Lab File ID: B13543.D
Dilution:	5.0		Initial Weight/Volume: 30.79 g
Date Analyzed:	11/30/2010 0404		Final Weight/Volume: 1.0 mL
Date Prepared:	11/19/2010 1209		Injection Volume: 2 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	78	85	40 - 140	7	30		
1,2,4,5-Tetrachlorobenzene	78	81	40 - 140	2	30		
1,2,4-Trichlorobenzene	67	70	40 - 140	3	30		
1,2-Dichlorobenzene	72	75	40 - 140	3	30		
1,3-Dichlorobenzene	70	71	40 - 140	0	30		
1,4-Dichlorobenzene	71	73	40 - 140	1	30		
1-Methylnaphthalene	79	83	40 - 140	3	30		
2,2'-oxybis[1-chloropropane]	78	81	40 - 140	2	30		
2,3,4,6-Tetrachlorophenol	90	100	40 - 140	9	30		
2,4,5-Trichlorophenol	91	105	30 - 130	13	30		
2,4,6-Trichlorophenol	86	96	30 - 130	10	30		
2,4-Dichlorophenol	85	90	30 - 130	4	30		
2,4-Dimethylphenol	103	110	30 - 130	4	30		
2,4-Dinitrophenol	36	75	30 - 130	68	30	J	F
2,4-Dinitrotoluene	74	86	40 - 140	13	30		
2,6-Dinitrotoluene	83	90	40 - 140	6	30		
2-Chloronaphthalene	67	74	40 - 140	7	30		
2-Chlorophenol	78	85	30 - 130	7	30		
2-Methylnaphthalene	83	87	40 - 140	3	30		
2-Methylphenol	81	89	30 - 130	8	30		
2-Nitroaniline	87	105	40 - 140	18	30	J	J
2-Nitrophenol	71	83	30 - 130	14	30		
3 & 4 Methylphenol	93	108	30 - 130	14	30		
3,3'-Dichlorobenzidine	116	128	40 - 140	9	30		
3-Nitroaniline	90	112	40 - 140	20	30	J	J
4,6-Dinitro-2-methylphenol	74	102	30 - 130	30	30	J	J
4-Bromophenyl phenyl ether	86	88	40 - 140	1	30		
4-Chloro-3-methylphenol	92	96	30 - 130	3	30	J	J
4-Chloroaniline	67	82	40 - 140	19	30	J	J
4-Chlorophenyl phenyl ether	88	92	40 - 140	3	30		

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-66092

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	360-31147-7	Analysis Batch: 360-66417	Instrument ID:	Inst. B	
Client Matrix:	Solid	Prep Batch: 360-66092	Lab File ID:	B13542.D	
Dilution:	5.0		Initial Weight/Volume:	30.28 g	
Date Analyzed:	11/30/2010 0328		Final Weight/Volume:	1.0 mL	
Date Prepared:	11/19/2010 1209		Injection Volume:	2 uL	

MSD Lab Sample ID:	360-31147-7	Analysis Batch: 360-66417	Instrument ID:	Inst. B	
Client Matrix:	Solid	Prep Batch: 360-66092	Lab File ID:	B13543.D	
Dilution:	5.0		Initial Weight/Volume:	30.79 g	
Date Analyzed:	11/30/2010 0404		Final Weight/Volume:	1.0 mL	
Date Prepared:	11/19/2010 1209		Injection Volume:	2 uL	

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Di-n-octyl phthalate	123	115	40 - 140	8	30		
Fluoranthene	83	86	40 - 140	1	30		
Fluorene	97	102	40 - 140	3	30		
Hexachlorobenzene	80	82	40 - 140	1	30		
Hexachlorobutadiene	68	71	40 - 140	2	30		
Hexachlorocyclopentadiene	0	0	40 - 140	NC	30	F	F
Hexachloroethane	61	65	40 - 140	4	30		
Indeno[1,2,3-cd]pyrene	95	100	40 - 140	3	30		
Isophorone	60	63	40 - 140	3	30		
Naphthalene	74	79	40 - 140	5	30	J	J
Nitrobenzene	73	79	40 - 140	6	30		
N-Nitrosodi-n-propylamine	82	89	40 - 140	6	30		
N-Nitrosodiphenylamine	82	87	40 - 140	5	30		
Pentachlorophenol	77	95	30 - 130	19	30		
Phenanthrene	88	91	40 - 140	2	30		
Phenol	80	88	30 - 130	8	30		
Diphenyl oxide	82	85	40 - 140	2	30		
Pyrene	108	108	40 - 140	2	30		
N-Nitrosodimethylamine	67	70	40 - 140	2	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	65	71	30 - 130
2-Fluorobiphenyl	68	72	30 - 130
2-Fluorophenol	60	63	30 - 130
Nitrobenzene-d5	69	73	30 - 130
Phenol-d5	68	73	30 - 130
Terphenyl-d14	92	88	30 - 130

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66417/2 Calibration Date: 11/29/2010 19:03

Instrument ID: Inst. B Calib Start Date: 11/29/2010 14:18

GC Column: Rtx-5ms ID: 0.25(um) Calib End Date: 11/29/2010 17:15

Lab File ID: B13528.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.223	1.226	0.0100	2510	2500	0.3	20.0
2,6-Dinitrotoluene	Ave	0.2476	0.2672	0.2000	2700	2500	7.9	20.0
Acenaphthylene	Ave	1.656	1.694	0.9000	2560	2500	2.3	20.0
3-Nitroaniline	Ave	0.1813	0.2062		2840	2500	13.7	20.0
2,4-Dinitrophenol	QuaF		0.0490	0.0100	3560	2500	42.5*	20.0
Acenaphthene	Ave	1.155	1.139	0.9000	2470	2500	-1.4	20.0
4-Nitrophenol	QuaF		0.1573	0.0100	2480	2500	-0.7	20.0
2,4-Dinitrotoluene	Lin1F		0.3029	0.2000	2370	2500	-5.1	20.0
Dibenzofuran	Ave	1.362	1.391	0.8000	2550	2500	2.1	20.0
2,3,4,6-Tetrachlorophenol	QuaF		0.1902		2620	2500	5.0	20.0
Diethyl phthalate	Ave	1.218	1.220	0.0100	2500	2500	0.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.5157	0.5157		2500	2500	0.0	20.0
4-Nitroaniline	Ave	0.1781	0.1975		2770	2500	10.9	20.0
Fluorene	Ave	1.172	1.198	0.9000	2560	2500	2.2	20.0
4,6-Dinitro-2-methylphenol	Qua		0.0632		3160	2500	26.5*	20.0
Diphenylamine	Ave	0.6611	0.6637		2510	2500	0.4	20.0
N-Nitrosodiphenylamine	Ave	0.5650	0.5673		2940	2920	0.4	20.0
1,2-Diphenylhydrazine	Ave	0.9423	0.9427		2500	2500	0.0	20.0
Azobenzene	Ave	0.9423	0.9427		2500	2500	0.0	20.0
Benzophenone	Ave	0.7798	0.7756		2490	2500	-0.5	20.0
4-Bromophenyl phenyl ether	Ave	0.2003	0.1975	0.1000	2470	2500	-1.4	20.0
Atrazine	Ave	0.1899	0.1981		2610	2500	4.4	20.0
Hexachlorobenzene	Ave	0.2239	0.2130	0.1000	2380	2500	-4.9	20.0
Pentachlorophenol	Qua		0.0838	0.0500	2760	2500	10.3	20.0
Pentachloronitrobenzene	Ave	0.0745	0.0770		2580	2500	3.4	20.0
Phenanthrene	Ave	1.067	1.038	0.7000	2430	2500	-2.8	20.0
Anthracene	Ave	1.033	1.031	0.7000	2490	2500	-0.2	20.0
Carbazole	Ave	0.7913	0.7837		2480	2500	-1.0	20.0
Di-n-butyl phthalate	Ave	1.362	1.352	0.0100	2480	2500	-0.8	20.0
Fluoranthene	Ave	0.9592	0.9402	0.6000	2450	2500	-2.0	20.0
Benzidine	Qua		0.1650		3070	2500	23.0*	20.0
Pyrene	Ave	1.484	1.460	0.6000	2460	2500	-1.6	20.0
Butyl benzyl phthalate	Ave	0.6739	0.7293	0.0100	2710	2500	8.2	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8266	0.8546	0.0100	2580	2500	3.4	20.0
3,3'-Dichlorobenzidine	Ave	0.1997	0.2333	0.0100	2920	2500	16.9	20.0
Benzo[a]anthracene	Ave	0.9553	0.9665	0.8000	2530	2500	1.2	20.0
Chrysene	Ave	1.053	1.031	0.7000	2450	2500	-2.1	20.0
Di-n-octyl phthalate	LinF		1.816	0.0100	1960	2500	-21.6*	20.0
Benzo[b]fluoranthene	Lin1F		1.139	0.7000	2270	2500	-9.1	20.0
Benzo[k]fluoranthene	Ave	1.195	1.205	0.7000	2520	2500	0.8	20.0
Benzo[a]pyrene	Lin1		0.9451	0.7000	2430	2500	-2.8	20.0

FORM VII 8270D

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Lab Sample ID: CCVIS 360-66417/2 Calibration Date: 11/29/2010 19:03

Instrument ID: Inst. B Calib Start Date: 11/29/2010 14:18

GC Column: Rtx-5ms ID: 0.25(um) Calib End Date: 11/29/2010 17:15

Lab File ID: B13528.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin		0.8054	0.5000	2860	2500	14.5	20.0
Dibenz(a,h)anthracene	Qua		0.6432	0.4000	3200	2500	28.1*	20.0
Benzo[g,h,i]perylene	Qua		0.7085	0.5000	2810	2500	12.3	20.0
2-Fluorophenol	Ave	0.5593	0.5548		2480	2500	-0.8	20.0
Phenol-d5	Ave	1.217	1.241		2550	2500	1.9	20.0
Nitrobenzene-d5	Ave	0.2553	0.2616		2560	2500	2.5	20.0
2-Fluorobiphenyl	Ave	1.313	1.296		2470	2500	-1.3	20.0
2,4,6-Tribromophenol	Lin1F		0.0774		2180	2500	-12.7	20.0
Terphenyl-d14	Ave	0.9052	0.9459		2610	2500	4.5	20.0

Geoprobe Nov 2010 Soils

No detects in this SDG

VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / (II) / III (circle one)

SITE: Olin Chemical Project #: 61071000 16-12 SDG #: 360-31096-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
			Data completeness	
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☑	☐	☐	Data summaries match EDD	77 compounds X 17 samples = 1232 records OK ✓
			Holding Times and Preservation	
☑	☐	☐	Hold times met (14 days with preservation)	
☐	☐	☑	Preserved (waters HCL, soils methanol)	Soils only in this SDG
			Instrument Performance Check (Tune)	
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
			Initial Calibration	Tetrahydrofuran @ 0.04
☐	☑	☐	%RSD less than or equal to 30%	Acetone @ 0.04
☑	☐	☐	RRF greater than or equal to 0.05 →	1,4-Dioxane @ 0.02 UJ all Samples
			Continuing Calibration	%D > 25%: Acetone, Methyl Acetate, 124 TMB
☐	☑	☐	%D less than or equal to 25%	RRF < 0.05: Acetone, MEK, 14Dioxane
☐	☑	☐	RRF greater than or equal to 0.05.	
			Blank Contamination	Evaluate all blanks for contamination. Highest contaminant level used for action level.
☐	☑	☐	Method blank contamination Clean	
☐	☒	☐	Trip blank contamination →	OC-TBK-055, OC-TBK-056 } Clean
☐	☐	☒	Equipment/Rinseate blank contamination	
			Surrogate Recoveries	

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VOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for OLIN CHEMICAL SUPERFUND SITE

Criteria and Qualifications: REGION I Organics Guideline (1996)

Yes	No	N/A	TIER I / (II) / III (circle one)	
☑	☐	☐	Surrogates percent recovery criteria met (water and soil: 70%-130%)	
			Matrix Spikes and Laboratory Control Samples	
☐	☐	☒	MS/MSD percent recovery criteria met (water and soil: 70%-130%)	MS/MSD not submitted w/ this data set.
☐	☐	☑	MS/MSD RPD criteria met (water and soil <30%)	
☐	☑	☐	LCS percent recovery criteria (water and soil: 70%-130%)	LCS / LCSD: Acetone 69% / 69%
			Field Duplicates	
☐	☐	☒	RPD criteria (water <30%, soils <50%) met	Not collected and reported in this SDG
			Internal Standard	
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
			Target Compounds	
☑	☐	☐	Reviewed narrative for anomalies	
			Tentatively Identified Compounds (TICs)	
☐	☑	☐	TCL compounds reported as TICs	No TIC's detected

Validator's Signature: [signature]

Date: 12/17/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab File ID: V50050.D Lab Sample ID: MB 360-66088/3-A

Matrix: Solid Heated Purge: (Y/N) N

Instrument ID: HP #1 GC/MS Date Analyzed: 11/18/2010 18:00

GC Column: RTX-VMS ID: 0.25(um)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 360-66088/1-A	V50046.D	11/18/2010 16:24
	LCSD 360-66088/2-A	V50047.D	11/18/2010 16:48
OC-SB-485-0.0/1.0-XXX	360-31096-1	V50051.D	11/18/2010 18:24
OC-SB-485-11/13-XXX	360-31096-2	V50052.D	11/18/2010 18:48
OC-SB-485-6.0/8.0-XXX	360-31096-3	V50053.D	11/18/2010 19:12
OC-TBK-055	360-31096-4	V50054.D	11/18/2010 19:36
OC-SB-488-0.0/1.0-XXX	360-31096-5	V50055.D	11/18/2010 20:00
OC-SB-488-7.0/9.0-XXX	360-31096-6	V50056.D	11/18/2010 20:24
OC-SB-490-0.0/1.0-XXX	360-31096-7	V50057.D	11/18/2010 20:48
OC-SB-490-7.0/9.0-XXX	360-31096-8	V50058.D	11/18/2010 21:12
OC-SB-494-0.0/1.0-XXX	360-31096-9	V50059.D	11/18/2010 21:36
OC-SB-494-12/14-XXX	360-31096-10	V50060.D	11/18/2010 22:00
OC-SB-494-6.0/8.0-XXX	360-31096-11	V50061.D	11/18/2010 22:24
OC-SB-495-0.0/1.0-XXX	360-31096-12	V50062.D	11/18/2010 22:48
OC-SB-495-4.0/6.0-XXX	360-31096-13	V50063.D	11/18/2010 23:12
OC-SB-496-0.0/1.0-XXX	360-31096-14	V50064.D	11/18/2010 23:37
OC-SB-496-5.0/6.5-XXX	360-31096-15	V50065.D	11/19/2010 00:01
OC-TBK-056	360-31096-16	V50066.D	11/19/2010 00:25

Acetone @ 68%

Acetone @ 69%

No detection in Associated Samples (UJ Qual)

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: V50046.D

Lab ID: LCS 360-66088/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	100	88.1	88	70-130	
1,1,1-Trichloroethane	100	87.3	87	70-130	
1,1,2,2-Tetrachloroethane	100	93.3	93	70-130	
1,1,2-Trichloroethane	100	86.6	87	70-130	
1,1-Dichloroethane	100	90.6	91	70-130	
1,1-Dichloroethene	100	96.3	96	70-130	
1,1-Dichloropropene	100	96.2	96	70-130	
1,2,3-Trichlorobenzene	100	102	102	70-130	
1,2,3-Trichloropropane	100	84.5	85	70-130	
1,2,4-Trichlorobenzene	100	106	106	70-130	
1,2,4-Trimethylbenzene	100	120	120	70-130	
1,2-Dibromo-3-Chloropropane	100	87.7	88	70-130	
1,2-Dichlorobenzene	100	101	101	70-130	
1,2-Dichloroethane	100	82.4	82	70-130	
1,2-Dichloropropane	100	91.3	91	70-130	
1,3,5-Trimethylbenzene	100	86.9	87	70-130	
1,3-Dichlorobenzene	100	86.9	87	70-130	
1,3-Dichloropropane	100	92.4	92	70-130	
1,4-Dichlorobenzene	100	98.4	98	70-130	
1,4-Dioxane	1000	919	92	70-130	
2,2-Dichloropropane	100	79.4	79	70-130	
2-Butanone (MEK)	1000	790	79	70-130	
2-Chlorotoluene	100	90.3	90	70-130	
2-Hexanone	1000	910	91	70-130	
4-Chlorotoluene	100	92.6	93	70-130	
4-Isopropyltoluene	100	92.7	93	70-130	
4-Methyl-2-pentanone (MIBK)	1000	835	84	70-130	
Acetone	1000	694	69	70-130	*
Benzene	100	96.1	96	70-130	
Bromobenzene	100	86.3	86	70-130	
Bromoform	100	90.1	90	70-130	
Bromomethane	100	83.6	84	70-130	
Carbon disulfide	100	102	102	70-130	
Carbon tetrachloride	100	87.7	88	70-130	
Chlorobenzene	100	99.6	100	70-130	
Chlorobromomethane	100	90.5	91	70-130	
Chlorodibromomethane	100	84.2	84	70-130	
Chloroethane	100	82.6	83	70-130	
Chloroform	100	87.0	87	70-130	
Chloromethane	100	102	102	70-130	
cis-1,2-Dichloroethene	100	86.3	86	70-130	
cis-1,3-Dichloropropene	100	94.6	95	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/16/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: V50046.D

Lab ID: LCS 360-66088/1-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dibromomethane	100	93.3	93	70-130	
Dichlorobromomethane	100	82.2	82	70-130	
Dichlorodifluoromethane	100	91.1	91	70-130	
Ethyl ether	100	90.4	90	70-130	
Ethylbenzene	100	99.5	99	70-130	
Ethylene Dibromide	100	88.1	88	70-130	
Hexachlorobutadiene	100	102	102	70-130	
Isopropyl ether	100	88.6	89	70-130	
Isopropylbenzene	100	91.1	91	70-130	
m-Xylene & p-Xylene	200	198	99	70-130	
Methyl tert-butyl ether	100	83.5	84	70-130	
Methylene Chloride	100	92.0	92	70-130	
n-Butylbenzene	100	110	110	70-130	
N-Propylbenzene	100	96.3	96	70-130	
Naphthalene	100	95.7	96	70-130	
o-Xylene	100	95.6	96	70-130	
sec-Butylbenzene	100	89.7	90	70-130	
Styrene	100	93.0	93	70-130	
Tert-amyl methyl ether	100	85.6	86	70-130	
Tert-butyl ethyl ether	100	82.4	82	70-130	
tert-Butylbenzene	100	92.5	93	70-130	
Tetrachloroethene	100	97.5	97	70-130	
Tetrahydrofuran	1000	880	88	70-130	
Toluene	100	99.8	100	70-130	
trans-1,2-Dichloroethene	100	90.9	91	70-130	
trans-1,3-Dichloropropene	100	90.3	90	70-130	
Trichloroethene	100	92.1	92	70-130	
Trichlorofluoromethane	100	85.8	86	70-130	
Vinyl chloride	100	90.2	90	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	100	92.4	92	70-130	
2,4,4-Trimethyl-1-pentene	100	87.1	87	70-130	
2,4,4-Trimethyl-2-pentene	100	98.1	98	70-130	
Cyclohexane	100	91.4	91	70-130	
Methyl acetate	1000	789	79	70-130	
Methylcyclohexane	100	91.1	91	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/16/10

11/23/2010

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: V50047.D

Lab ID: LCSD 360-66088/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	100	90.7	91	3	20	70-130	
1,1,1-Trichloroethane	100	88.9	89	2	20	70-130	
1,1,2,2-Tetrachloroethane	100	92.9	93	0	20	70-130	
1,1,2-Trichloroethane	100	87.7	88	1	20	70-130	
1,1-Dichloroethane	100	90.9	91	0	20	70-130	
1,1-Dichloroethene	100	94.7	95	2	20	70-130	
1,1-Dichloropropene	100	94.8	95	1	20	70-130	
1,2,3-Trichlorobenzene	100	104	104	2	20	70-130	
1,2,3-Trichloropropane	100	91.0	91	7	20	70-130	
1,2,4-Trichlorobenzene	100	106	106	0	20	70-130	
1,2,4-Trimethylbenzene	100	125	125	4	20	70-130	
1,2-Dibromo-3-Chloropropane	100	93.9	94	7	20	70-130	
1,2-Dichlorobenzene	100	102	102	1	20	70-130	
1,2-Dichloroethane	100	83.3	83	1	20	70-130	
1,2-Dichloropropane	100	93.8	94	3	20	70-130	
1,3,5-Trimethylbenzene	100	90.3	90	4	20	70-130	
1,3-Dichlorobenzene	100	93.6	94	7	20	70-130	
1,3-Dichloropropane	100	93.6	94	1	20	70-130	
1,4-Dichlorobenzene	100	99.4	99	1	20	70-130	
1,4-Dioxane	1000	872	87	5	20	70-130	
2,2-Dichloropropane	100	87.0	87	9	20	70-130	
2-Butanone (MEK)	1000	817	82	3	20	70-130	
2-Chlorotoluene	100	94.0	94	4	20	70-130	
2-Hexanone	1000	935	94	3	20	70-130	
4-Chlorotoluene	100	96.3	96	4	20	70-130	
4-Isopropyltoluene	100	97.1	97	5	20	70-130	
4-Methyl-2-pentanone (MIBK)	1000	869	87	4	20	70-130	
Acetone	1000	682	68	2	20	70-130	*
Benzene	100	96.4	96	0	20	70-130	
Bromobenzene	100	91.8	92	6	20	70-130	
Bromoform	100	91.7	92	2	20	70-130	
Bromomethane	100	89.1	89	6	20	70-130	
Carbon disulfide	100	101	101	1	20	70-130	
Carbon tetrachloride	100	89.8	90	2	20	70-130	
Chlorobenzene	100	103	103	3	20	70-130	
Chlorobromomethane	100	93.4	93	3	20	70-130	
Chlorodibromomethane	100	87.7	88	4	20	70-130	
Chloroethane	100	82.9	83	0	20	70-130	
Chloroform	100	87.1	87	0	20	70-130	
Chloromethane	100	103	103	1	20	70-130	
cis-1,2-Dichloroethene	100	87.6	88	1	20	70-130	
cis-1,3-Dichloropropene	100	95.4	95	1	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/16/10

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: V50047.D

Lab ID: LCSD 360-66088/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCSD CONCENTRATION (ug/Kg)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dibromomethane	100	96.2	96	3	20	70-130	
Dichlorobromomethane	100	84.7	85	3	20	70-130	
Dichlorodifluoromethane	100	95.1	95	4	20	70-130	
Ethyl ether	100	91.7	92	1	20	70-130	
Ethylbenzene	100	102	102	3	20	70-130	
Ethylene Dibromide	100	89.4	89	1	20	70-130	
Hexachlorobutadiene	100	101	101	1	20	70-130	
Isopropyl ether	100	90.3	90	2	20	70-130	
Isopropylbenzene	100	94.6	95	4	20	70-130	
m-Xylene & p-Xylene	200	203	101	2	20	70-130	
Methyl tert-butyl ether	100	86.2	86	3	20	70-130	
Methylene Chloride	100	93.9	94	2	20	70-130	
n-Butylbenzene	100	110	110	0	20	70-130	
N-Propylbenzene	100	100	100	4	20	70-130	
Naphthalene	100	99.0	99	3	20	70-130	
o-Xylene	100	97.9	98	2	20	70-130	
sec-Butylbenzene	100	93.1	93	4	20	70-130	
Styrene	100	96.5	96	4	20	70-130	
Tert-amyl methyl ether	100	86.7	87	1	20	70-130	
Tert-butyl ethyl ether	100	85.8	86	4	20	70-130	
tert-Butylbenzene	100	96.4	96	4	20	70-130	
Tetrachloroethene	100	95.6	96	2	20	70-130	
Tetrahydrofuran	1000	893	89	2	20	70-130	
Toluene	100	100	100	0	20	70-130	
trans-1,2-Dichloroethene	100	91.5	91	1	20	70-130	
trans-1,3-Dichloropropene	100	93.2	93	3	20	70-130	
Trichloroethene	100	91.5	91	1	20	70-130	
Trichlorofluoromethane	100	86.9	87	1	20	70-130	
Vinyl chloride	100	89.9	90	0	20	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	100	92.1	92	0	20	70-130	
2,4,4-Trimethyl-1-pentene	100	87.2	87	0	20	70-130	
2,4,4-Trimethyl-2-pentene	100	99.5	100	1	20	70-130	
Cyclohexane	100	89.8	90	2	20	70-130	
Methyl acetate	1000	808	81	2	20	70-130	
Methylcyclohexane	100	89.5	90	2	20	70-130	

Column to be used to flag recovery and RPD values

FORM III 8260C

TC 12/16/10

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD05 360-64639/5	V49628.D
Level 2	STD1 360-64639/6	V49629.D
Level 3	STD5 360-64639/7	V49630.D
Level 4	STD10 360-64639/8	V49631.D
Level 5	STD20 360-64639/9	V49632.D
Level 6	STD40 360-64639/10	V49633.D
Level 7	STD80 360-64639/11	V49634.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3935 0.3859	0.4338 0.3940	0.4132	0.4170	0.4116	Ave		0.4070			0.1000	4.1		15.0			
Chloromethane	0.5853 0.5760	0.5341 0.5920	0.6001	0.6055	0.6007	Ave		0.5848			0.1000	4.2		15.0			
Vinyl chloride	0.3856 0.4232	0.3999 0.4374	0.4715	0.4711	0.4575	Ave		0.4352			0.1000	7.8		15.0			
Bromomethane	0.2549 0.2347	0.2234 0.2245	0.2662	0.2708	0.2620	Ave		0.2481			0.1000	8.1		15.0			
Chloroethane	0.2792 0.2173	0.2489 0.1992	0.2664	0.2639	0.2545	Ave		0.2471			0.1000	12.0		15.0			
Trichlorofluoromethane	0.3978 0.4099	0.3985 0.4097	0.4458	0.4645	0.4533	Ave		0.4256			0.1000	6.6		15.0			
Ethyl ether	0.2101 0.2034	0.1920 0.2013	0.2154	0.1932	0.1907	Ave		0.2009				4.7		15.0			
1,1-Dichloroethene	0.3339 0.2745	0.2816 0.2778	0.3253	0.3008	0.2974	Ave		0.2988			0.1000	7.8		15.0			
Carbon disulfide	1.0424 1.0619	0.9916 1.0808	1.2539	1.1788	1.1668	Ave		1.1109			0.1000	8.3		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1714 0.1814	0.1646 0.1862	0.2089	0.1940	0.1945	Ave		0.1859				8.1		15.0			
Methylene Chloride	0.5333 0.3138	0.4296 0.3198	0.3823	0.3371	0.3292	Lin1F		0.3239							0.9960		0.9900
Acetone	0.0752 0.0403	0.0602 0.0390	0.0528	0.0394	0.0391	Lin1F		0.0401				28.5			0.9910		0.9900
trans-1,2-Dichloroethene	0.5063 0.5122	0.4859 0.5219	0.5836	0.5476	0.5441	Ave		0.5288			0.1000	6.1		15.0			
Methyl acetate	0.1288 0.1150	0.1137 0.1114	0.1268	0.1120	0.1081	Ave		0.1165				6.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

VJ Professional Judgment

12/10/10
TC

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF LVL 1 / LVL 6	RRF LVL 2 / LVL 7	RRF LVL 3	RRF LVL 4	RRF LVL 5	CURVE TYPE	COEFFICIENT B	COEFFICIENT M1	COEFFICIENT M2	#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
Methyl tert-butyl ether	0.5586 / 0.5687	0.5948 / 0.5709	0.6440	0.5840	0.5604	Ave		0.5831			0.1000	5.1		15.0			
Isopropyl ether	1.1667 / 1.2157	1.1494 / 1.2497	1.3359	1.2388	1.2208	Ave		1.2253				5.0		15.0			
1,1-Dichloroethane	0.6290 / 0.6163	0.5832 / 0.6448	0.6720	0.6375	0.6333	Ave		0.6309			0.2000	4.3		15.0			
Tert-butyl ethyl ether	0.9140 / 0.8638	0.8808 / 0.8560	1.0160	0.9108	0.8846	Ave		0.9037				6.0		15.0			
1,4-Dioxane	+++++ / 0.0197	+++++ / 0.0190	0.0226	0.0201	0.0199	Ave		0.0203				6.8		15.0			
cis-1,2-Dichloroethene	0.4910 / 0.4764	0.4629 / 0.4967	0.5174	0.4907	0.4893	Ave		0.4892			0.1000	3.5		15.0			
2,2-Dichloropropane	0.3693 / 0.3747	0.4074 / 0.3473	0.4536	0.4295	0.4005	Ave		0.3975				9.3		15.0			
Chlorobromomethane	0.1517 / 0.1452	0.1309 / 0.1460	0.1612	0.1485	0.1438	Ave		0.1468				6.2		15.0			
Cyclohexane	0.6760 / 0.6337	0.6181 / 0.6251	0.7838	0.7044	0.6816	Ave		0.6747				8.6		15.0			
Chloroform	0.7019 / 0.5495	0.5778 / 0.5683	0.6262	0.5728	0.5685	Lin	0.0430	0.5642							1.0000		0.9900
Carbon tetrachloride	0.3681 / 0.3396	0.3303 / 0.3588	0.3738	0.3676	0.3674	Ave		0.3579			0.1000	4.6		15.0			
Tetrahydrofuran	0.0677 / 0.0418	0.0495 / 0.0403	0.0470	0.0412	0.0387	Lin1F		0.0409			21.1				0.9970		0.9900
1,1,1-Trichloroethane	0.4037 / 0.4226	0.4196 / 0.4431	0.4692	0.4515	0.4488	Ave		0.4369			0.1000	5.2		15.0			
2-Butanone (MEK)	0.0635 / 0.0645	0.0630 / 0.0647	0.0652	0.0599	0.0573	Lin2F		0.0626							0.9970		0.9900
1,1-Dichloropropene	0.4267 / 0.4393	0.3842 / 0.4560	0.4566	0.4338	0.4467	Ave		0.4348				5.7		15.0			
Benzene	1.1641 / 1.2296	1.1438 / 1.2546	1.2749	1.2250	1.2358	Ave		1.2182			0.5000	3.9		15.0			
Tert-amyl methyl ether	0.6760 / 0.6609	0.6121 / 0.6732	0.7426	0.6721	0.6493	Ave		0.6694				5.8		15.0			
1,2-Dichloroethane	0.2527 / 0.2662	0.2387 / 0.2747	0.2681	0.2445	0.2506	Ave		0.2565			0.1000	5.2		15.0			
2,4,4-Trimethyl-1-pentene	0.3379 / 0.2406	0.2948 / 0.2443	0.2969	0.2738	0.2695	Ave		0.2797				12.0		15.0			
Trichloroethene	0.3541 / 0.3006	0.3037 / 0.2834	0.3073	0.2909	0.3027	Ave		0.3061			0.2000	7.4		15.0			

OK

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

< 0.05 Region I
Limit Professional Judgment
used to VJ all results

TC
12/16/10 ✓

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab Sample ID: CCVIS 360-66094/3 Calibration Date: 11/18/2010 16:00

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50045.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4070	0.3669	0.1000	18.0	20.0	-9.9	20.0
Chloromethane	Ave	0.5848	0.5806	0.1000	19.9	20.0	-0.7	20.0
Vinyl chloride	Ave	0.4352	0.4126	0.1000	19.0	20.0	-5.2	20.0
Bromomethane	Ave	0.2481	0.2241	0.1000	18.1	20.0	-9.7	20.0
Chloroethane	Ave	0.2471	0.2035	0.1000	16.5	20.0	-17.6	20.0
Trichlorofluoromethane	Ave	0.4256	0.3655	0.1000	17.2	20.0	-14.1	20.0
Ethyl ether	Ave	0.2009	0.1745		17.4	20.0	-13.1	20.0
1,1-Dichloroethene	Ave	0.2988	0.2885	0.1000	19.3	20.0	-3.4	20.0
Carbon disulfide	Ave	1.111	0.9230	0.1000	16.6	20.0	-16.9	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1859	0.1778		19.1	20.0	-4.3	20.0
Methylene Chloride	Lin1F		0.3003	0.1000	18.5	20.0	-7.3	20.0
Acetone	Lin1F		0.0284*	0.1000	142	200	-29.2*	20.0
trans-1,2-Dichloroethene	Ave	0.5288	0.4807	0.1000	18.2	20.0	-9.1	20.0
Methyl acetate	Ave	0.1165	0.0838		144	200	-28.1*	20.0
Methyl tert-butyl ether	Ave	0.5831	0.4596	0.1000	15.8	20.0	-21.2*	20.0
Isopropyl ether	Ave	1.225	1.067		17.4	20.0	-12.9	20.0
1,1-Dichloroethane	Ave	0.6309	0.5580	0.2000	17.7	20.0	-11.6	20.0
Tert-butyl ethyl ether	Ave	0.9037	0.7142		15.8	20.0	-21.0*	20.0
cis-1,2-Dichloroethene	Ave	0.4892	0.4172	0.1000	17.1	20.0	-14.7	20.0
2,2-Dichloropropane	Ave	0.3975	0.3438		17.3	20.0	-13.5	20.0
Chlorobromomethane	Ave	0.1468	0.1338		18.2	20.0	-8.8	20.0
Cyclohexane	Ave	0.6747	0.5922		17.6	20.0	-12.2	20.0
Chloroform	Lin		0.4753	0.2000	16.8	20.0	-16.1	20.0
Carbon tetrachloride	Ave	0.3579	0.3069	0.1000	17.1	20.0	-14.3	20.0
Tetrahydrofuran	Lin1F		0.0330		162	200	-19.2	20.0
1,1,1-Trichloroethane	Ave	0.4369	0.3831	0.1000	17.5	20.0	-12.3	20.0
2-Butanone (MEK)	Lin2F		0.0470*	0.1000	150	200	-25.0*	20.0
1,1-Dichloropropene	Ave	0.4348	0.4084		18.8	20.0	-6.1	20.0
Benzene	Ave	1.218	1.173	0.5000	19.3	20.0	-3.7	20.0
Tert-amyl methyl ether	Ave	0.6694	0.5482		16.4	20.0	-18.1	20.0
1,2-Dichloroethane	Ave	0.2565	0.2010	0.1000	15.7	20.0	-21.6*	20.0
2,4,4-Trimethyl-1-pentene	Ave	0.2797	0.2359		16.9	20.0	-15.6	20.0
Trichloroethene	Ave	0.3061	0.2732	0.2000	17.8	20.0	-10.8	20.0
Methylcyclohexane	Ave	0.5609	0.4924		17.6	20.0	-12.2	20.0
2,4,4-Trimethyl-2-pentene	Ave	0.1721	0.1677		19.5	20.0	-2.5	20.0
Dibromomethane	Ave	0.1094	0.0987		18.1	20.0	-9.7	20.0
1,2-Dichloropropane	Ave	0.2611	0.2360	0.1000	18.1	20.0	-9.6	20.0
Dichlorobromomethane	Ave	0.3171	0.2611	0.2000	16.5	20.0	-17.7	20.0
1,4-Dioxane	Ave	0.0203	0.0173		170	200	-14.9	20.0
cis-1,3-Dichloropropene	Ave	0.3589	0.3336	0.2000	18.6	20.0	-7.0	20.0

UJ
UJ
all samples

TC 12/17/10

FORM VII 8260C

11/23/2010

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab Sample ID: CCVIS 360-66094/3 Calibration Date: 11/18/2010 16:00

Instrument ID: HP #1 GC/MS Calib Start Date: 10/19/2010 15:51

GC Column: RTX-VMS ID: 0.25(um) Calib End Date: 10/19/2010 18:32

Lab File ID: V50045.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	0.6621	0.6621	0.4000	20.0	20.0	0.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1215	0.0971*	0.1000	160	200	-20.1*	20.0
Tetrachloroethene	Lin2F		0.1726*	0.2000	19.0	20.0	-5.1	20.0
trans-1,3-Dichloropropene	Ave	0.2482	0.2176	0.1000	17.5	20.0	-12.3	20.0
1,1,2-Trichloroethane	Lin1F		0.1023	0.1000	16.7	20.0	-16.4	20.0
Chlorodibromomethane	Ave	0.1690	0.1384	0.1000	16.4	20.0	-18.1	20.0
1,3-Dichloropropane	Ave	0.2536	0.2269		17.9	20.0	-10.6	20.0
Ethylene Dibromide	Ave	0.1272	0.1089		17.1	20.0	-14.4	20.0
2-Hexanone	Lin2F		0.0594*	0.1000	167	200	-16.6	20.0
Chlorobenzene	Ave	0.9897	0.9896	0.5000	20.0	20.0	0.0	20.0
Ethylbenzene	Ave	1.973	2.036	0.1000	20.6	20.0	3.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3840	0.3359		17.5	20.0	-12.5	20.0
m-Xylene & p-Xylene	Ave	1.506	1.541	0.1000	40.9	40.0	2.3	20.0
o-Xylene	Ave	1.683	1.649	0.3000	19.6	20.0	-2.0	20.0
Styrene	Ave	1.175	1.129	0.3000	19.2	20.0	-3.9	20.0
Bromoform	Ave	0.4674	0.4164	0.1000	17.8	20.0	-10.9	20.0
Isopropylbenzene	Ave	2.074	1.980	0.1000	19.1	20.0	-4.6	20.0
Bromobenzene	Ave	0.8055	0.7054		17.5	20.0	-12.4	20.0
N-Propylbenzene	Ave	2.457	2.448		19.9	20.0	-0.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9428	0.8794	0.3000	18.7	20.0	-6.7	20.0
2-Chlorotoluene	Ave	1.633	1.505		18.4	20.0	-7.8	20.0
1,3,5-Trimethylbenzene	Ave	1.671	1.509		18.1	20.0	-9.7	20.0
1,2,3-Trichloropropane	Ave	0.0657	0.0541		16.5	20.0	-17.7	20.0
4-Chlorotoluene	Ave	1.467	1.372		18.7	20.0	-6.4	20.0
tert-Butylbenzene	Ave	1.418	1.375		19.4	20.0	-3.0	20.0
1,2,4-Trimethylbenzene	Ave	1.711	2.159		25.2	20.0	26.2*	20.0
sec-Butylbenzene	Ave	2.295	2.151		18.8	20.0	-6.2	20.0
4-Isopropyltoluene	Ave	1.765	1.660		18.8	20.0	-5.9	20.0
1,3-Dichlorobenzene	Ave	0.8231	0.7299	0.6000	17.7	20.0	-11.3	20.0
1,4-Dichlorobenzene	Ave	2.723	2.772	0.5000	20.4	20.0	1.8	20.0
n-Butylbenzene	Ave	6.254	7.165		22.9	20.0	14.6	20.0
1,2-Dichlorobenzene	Ave	2.389	2.447	0.4000	20.5	20.0	2.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1335	0.1146	0.0500	17.2	20.0	-14.2	20.0
Hexachlorobutadiene	Ave	0.9293	0.9697		20.9	20.0	4.3	20.0
1,2,4-Trichlorobenzene	Ave	1.466	1.524	0.2000	20.8	20.0	3.9	20.0
Naphthalene	Ave	2.231	2.193		19.7	20.0	-1.7	20.0
1,2,3-Trichlorobenzene	Ave	1.107	1.155		20.9	20.0	4.4	20.0
Dibromofluoromethane	Ave	0.2449	0.2273		18.6	20.0	-7.2	20.0
Toluene-d8 (Surr)	Ave	0.8862	0.8983		20.3	20.0	1.4	20.0
4-Bromofluorobenzene	Ave	0.5078	0.4908		19.3	20.0	-3.3	20.0

UJ all Samples

TC 12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50051.D
Dilution:	1.0			Initial Weight/Volume:	4.63 g
Date Analyzed:	11/18/2010 1824			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.4	3.0
1,1,1-Trichloroethane		ND		2.4	3.0
1,1,2,2-Tetrachloroethane		ND		1.2	3.0
1,1,2-Trichloroethane		ND		1.2	3.0
1,1-Dichloroethane		ND		2.3	3.0
1,1-Dichloroethene		ND		1.9	3.0
1,1-Dichloropropene		ND		1.8	3.0
1,2,3-Trichlorobenzene		ND		1.3	3.0
1,2,3-Trichloropropane		ND		1.4	3.0
1,2,4-Trichlorobenzene		ND		1.2	3.0
1,2,4-Trimethylbenzene		ND VJ		1.7	3.0
1,2-Dibromo-3-Chloropropane		ND		3.3	30
1,2-Dichlorobenzene		ND		1.2	3.0
1,2-Dichloroethane		ND		1.2	3.0
1,2-Dichloropropane		ND		1.9	3.0
1,3,5-Trimethylbenzene		ND		1.8	3.0
1,3-Dichlorobenzene		ND		1.2	3.0
1,3-Dichloropropane		ND		1.4	3.0
1,4-Dichlorobenzene		ND		1.2	3.0
1,4-Dioxane		ND VJ		120	300
2,2-Dichloropropane		ND		2.5	3.0
2-Butanone (MEK)		ND		13	30
2-Chlorotoluene		ND		1.5	3.0
2-Hexanone		ND		17	30
4-Chlorotoluene		ND		1.4	3.0
4-Isopropyltoluene		ND		1.8	3.0
4-Methyl-2-pentanone (MIBK)		ND		12	30
Acetone		ND VJ		20	300
Benzene		ND		1.9	3.0
Bromobenzene		ND		1.2	3.0
Bromoform		ND		1.9	3.0
Bromomethane		ND		2.7	5.9
Carbon disulfide		ND		2.3	3.0
Carbon tetrachloride		ND		2.0	3.0
Chlorobenzene		ND		1.4	3.0
Chlorobromomethane		ND		1.6	3.0
Chlorodibromomethane		ND		1.4	3.0
Chloroethane		ND		2.4	5.9
Chloroform		ND		1.8	3.0
Chloromethane		ND		1.9	5.9
cis-1,2-Dichloroethene		ND		1.4	3.0
cis-1,3-Dichloropropene		ND		1.2	3.0
Dibromomethane		ND		1.5	3.0
Dichlorobromomethane		ND		1.5	3.0
Dichlorodifluoromethane		ND		2.5	5.9
Ethyl ether		ND		1.3	3.0

12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50051.D
Dilution:	1.0			Initial Weight/Volume:	4.63 g
Date Analyzed:	11/18/2010 1824			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.1	3.0
Ethylene Dibromide		ND		1.3	3.0
Hexachlorobutadiene		ND		1.8	3.0
Isopropyl ether		ND		1.3	3.0
Isopropylbenzene		ND		1.8	3.0
m-Xylene & p-Xylene		ND		4.2	5.9
Methyl tert-butyl ether		ND		1.8	3.0
Methylene Chloride		ND		12	12
n-Butylbenzene		ND		1.4	3.0
N-Propylbenzene		ND		2.0	3.0
Naphthalene		ND		2.7	30
o-Xylene		ND		1.5	3.0
sec-Butylbenzene		ND		1.7	3.0
Styrene		ND		1.2	3.0
Tert-amyl methyl ether		ND		1.8	3.0
Tert-butyl ethyl ether		ND		1.7	3.0
tert-Butylbenzene		ND		1.7	3.0
Tetrachloroethene		ND		2.1	3.0
Tetrahydrofuran		ND	UJ	15	30
Toluene		ND		2.1	3.0
trans-1,2-Dichloroethene		ND		1.9	3.0
trans-1,3-Dichloropropene		ND		1.2	3.0
Trichloroethene		ND		2.5	3.0
Trichlorofluoromethane		ND		1.7	5.9
Vinyl chloride		ND		2.0	3.0
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.7	15
2,4,4-Trimethyl-1-pentene		ND		2.0	5.9
2,4,4-Trimethyl-2-pentene		ND		1.3	5.9
Cyclohexane		ND		1.2	30
Methyl acetate		ND	UJ	17	59
Methylcyclohexane		ND		1.9	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	92		70 - 130

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50051.D
Dilution:	1.0			Initial Weight/Volume:	4.63 g
Date Analyzed:	11/18/2010 1824			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC
12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50052.D
Dilution:	1.0			Initial Weight/Volume:	6.96 g
Date Analyzed:	11/18/2010 1848			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		0.95	2.0
1,1,1-Trichloroethane		ND		1.6	2.0
1,1,2,2-Tetrachloroethane		ND		0.79	2.0
1,1,2-Trichloroethane		ND		0.79	2.0
1,1-Dichloroethane		ND		1.5	2.0
1,1-Dichloroethene		ND		1.3	2.0
1,1-Dichloropropene		ND		1.2	2.0
1,2,3-Trichlorobenzene		ND		0.87	2.0
1,2,3-Trichloropropane		ND		0.95	2.0
1,2,4-Trichlorobenzene		ND		0.79	2.0
1,2,4-Trimethylbenzene		ND	UJ	1.1	2.0
1,2-Dibromo-3-Chloropropane		ND		2.2	20
1,2-Dichlorobenzene		ND		0.79	2.0
1,2-Dichloroethane		ND		0.79	2.0
1,2-Dichloropropane		ND		1.3	2.0
1,3,5-Trimethylbenzene		ND		1.2	2.0
1,3-Dichlorobenzene		ND		0.79	2.0
1,3-Dichloropropane		ND		0.90	2.0
1,4-Dichlorobenzene		ND		0.79	2.0
1,4-Dioxane		ND	UJ	79	200
2,2-Dichloropropane		ND		1.7	2.0
2-Butanone (MEK)		ND		8.5	20
2-Chlorotoluene		ND		1.0	2.0
2-Hexanone		ND		11	20
4-Chlorotoluene		ND		0.95	2.0
4-Isopropyltoluene		ND		1.2	2.0
4-Methyl-2-pentanone (MIBK)		ND		8.0	20
Acetone		ND	UJ	14	200
Benzene		ND		1.3	2.0
Bromobenzene		ND		0.79	2.0
Bromoform		ND		1.3	2.0
Bromomethane		ND		1.8	3.9
Carbon disulfide		ND		1.5	2.0
Carbon tetrachloride		ND		1.3	2.0
Chlorobenzene		ND		0.95	2.0
Chlorobromomethane		ND		1.1	2.0
Chlorodibromomethane		ND		0.95	2.0
Chloroethane		ND		1.6	3.9
Chloroform		ND		1.2	2.0
Chloromethane		ND		1.3	3.9
cis-1,2-Dichloroethene		ND		0.93	2.0
cis-1,3-Dichloropropene		ND		0.79	2.0
Dibromomethane		ND		0.99	2.0
Dichlorobromomethane		ND		1.0	2.0
Dichlorodifluoromethane		ND		1.7	3.9
Ethyl ether		ND		0.84	2.0

TC
12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50052.D
Dilution:	1.0			Initial Weight/Volume:	6.96 g
Date Analyzed:	11/18/2010 1848			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.4	2.0
Ethylene Dibromide		ND		0.88	2.0
Hexachlorobutadiene		ND		1.2	2.0
Isopropyl ether		ND		0.88	2.0
Isopropylbenzene		ND		1.2	2.0
m-Xylene & p-Xylene		ND		2.8	3.9
Methyl tert-butyl ether		ND		1.2	2.0
Methylene Chloride		ND		7.7	7.9
n-Butylbenzene		ND		0.95	2.0
N-Propylbenzene		ND		1.3	2.0
Naphthalene		ND		1.8	20
o-Xylene		ND		1.0	2.0
sec-Butylbenzene		ND		1.1	2.0
Styrene		ND		0.79	2.0
Tert-amyl methyl ether		ND		1.2	2.0
Tert-butyl ethyl ether		ND		1.1	2.0
tert-Butylbenzene		ND		1.1	2.0
Tetrachloroethene		ND		1.4	2.0
Tetrahydrofuran		ND UJ		9.8	20
Toluene		ND		1.4	2.0
trans-1,2-Dichloroethene		ND		1.3	2.0
trans-1,3-Dichloropropene		ND		0.82	2.0
Trichloroethene		ND		1.7	2.0
Trichlorofluoromethane		ND		1.1	3.9
Vinyl chloride		ND		1.3	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.1	9.9
2,4,4-Trimethyl-1-pentene		12		1.3	3.9
2,4,4-Trimethyl-2-pentene		4.0		0.85	3.9
Cyclohexane		ND		0.79	20
Methyl acetate		ND UJ		11	39
Methylcyclohexane		ND		1.3	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	90		70 - 130

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50052.D
Dilution:	1.0			Initial Weight/Volume:	6.96 g
Date Analyzed:	11/18/2010 1848			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC
12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50053.D
Dilution:	1.0			Initial Weight/Volume:	6.35 g
Date Analyzed:	11/18/2010 1912			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.0	2.1
1,1,1-Trichloroethane		ND		1.7	2.1
1,1,2,2-Tetrachloroethane		ND		0.85	2.1
1,1,2-Trichloroethane		ND		0.85	2.1
1,1-Dichloroethane		ND		1.6	2.1
1,1-Dichloroethene		ND		1.4	2.1
1,1-Dichloropropene		ND		1.3	2.1
1,2,3-Trichlorobenzene		ND		0.93	2.1
1,2,3-Trichloropropane		ND		1.0	2.1
1,2,4-Trichlorobenzene		ND		0.85	2.1
1,2,4-Trimethylbenzene		ND UJ		1.2	2.1
1,2-Dibromo-3-Chloropropane		ND		2.4	21
1,2-Dichlorobenzene		ND		0.85	2.1
1,2-Dichloroethane		ND		0.85	2.1
1,2-Dichloropropane		ND		1.4	2.1
1,3,5-Trimethylbenzene		ND		1.3	2.1
1,3-Dichlorobenzene		ND		0.85	2.1
1,3-Dichloropropane		ND		0.97	2.1
1,4-Dichlorobenzene		ND		0.85	2.1
1,4-Dioxane		ND UJ		85	210
2,2-Dichloropropane		ND		1.8	2.1
2-Butanone (MEK)		ND		9.2	21
2-Chlorotoluene		ND		1.1	2.1
2-Hexanone		ND		12	21
4-Chlorotoluene		ND		1.0	2.1
4-Isopropyltoluene		ND		1.3	2.1
4-Methyl-2-pentanone (MIBK)		ND		8.7	21
Acetone		ND UJ		15	210
Benzene		ND		1.4	2.1
Bromobenzene		ND		0.85	2.1
Bromoform		ND		1.4	2.1
Bromomethane		ND		2.0	4.2
Carbon disulfide		ND		1.6	2.1
Carbon tetrachloride		ND		1.4	2.1
Chlorobenzene		ND		1.0	2.1
Chlorobromomethane		ND		1.2	2.1
Chlorodibromomethane		ND		1.0	2.1
Chloroethane		ND		1.7	4.2
Chloroform		ND		1.3	2.1
Chloromethane		ND		1.4	4.2
cis-1,2-Dichloroethene		ND		1.0	2.1
cis-1,3-Dichloropropene		ND		0.85	2.1
Dibromomethane		ND		1.1	2.1
Dichlorobromomethane		ND		1.1	2.1
Dichlorodifluoromethane		ND		1.8	4.2
Ethyl ether		ND		0.90	2.1

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50053.D
Dilution:	1.0			Initial Weight/Volume:	6.35 g
Date Analyzed:	11/18/2010 1912			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.5	2.1
Ethylene Dibromide		ND		0.95	2.1
Hexachlorobutadiene		ND		1.3	2.1
Isopropyl ether		ND		0.95	2.1
Isopropylbenzene		ND		1.3	2.1
m-Xylene & p-Xylene		ND		3.0	4.2
Methyl tert-butyl ether		ND		1.3	2.1
Methylene Chloride		ND		8.3	8.5
n-Butylbenzene		ND		1.0	2.1
N-Propylbenzene		ND		1.4	2.1
Naphthalene		ND		2.0	21
o-Xylene		ND		1.1	2.1
sec-Butylbenzene		ND		1.2	2.1
Styrene		ND		0.85	2.1
Tert-amyl methyl ether		ND		1.3	2.1
Tert-butyl ethyl ether		ND		1.2	2.1
tert-Butylbenzene		ND		1.2	2.1
Tetrachloroethene		ND		1.5	2.1
Tetrahydrofuran		ND UJ		11	21
Toluene		ND		1.5	2.1
trans-1,2-Dichloroethene		ND		1.4	2.1
trans-1,3-Dichloropropene		ND		0.88	2.1
Trichloroethene		ND		1.8	2.1
Trichlorofluoromethane		ND		1.2	4.2
Vinyl chloride		ND		1.4	2.1
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.2	11
2,4,4-Trimethyl-1-pentene		ND		1.4	4.2
2,4,4-Trimethyl-2-pentene		ND		0.92	4.2
Cyclohexane		ND		0.85	21
Methyl acetate		ND UJ		12	42
Methylcyclohexane		ND		1.4	2.1

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	89		70 - 130

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50053.D
Dilution:	1.0			Initial Weight/Volume:	6.35 g
Date Analyzed:	11/18/2010 1912			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-055**

Lab Sample ID: 360-31096-4
Client Matrix: Solid

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50054.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/18/2010 1936			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND		1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND		100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		ND		17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.0
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.0
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.0
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.0
Ethyl ether		ND		1.1	2.5

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-055**

Lab Sample ID: 360-31096-4
Client Matrix: Solid

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50054.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/18/2010 1936			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	5.0
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.8	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.0
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	5.0
2,4,4-Trimethyl-2-pentene		ND		1.1	5.0
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	50
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC
12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-055**

Lab Sample ID: 360-31096-4
Client Matrix: Solid

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094	Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088	Lab File ID:	V50054.D
Dilution:	1.0		Initial Weight/Volume:	5.00 g
Date Analyzed:	11/18/2010 1936		Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400			

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50055.D
Dilution:	1.0			Initial Weight/Volume:	5.20 g
Date Analyzed:	11/18/2010 2000			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		0.99	2.5
1,1,2-Trichloroethane		ND		0.99	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		0.99	2.5
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		0.99	2.5
1,2-Dichloroethane		ND		0.99	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		0.99	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		0.99	2.5
1,4-Dioxane		ND	UJ	99	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		ND	UJ	17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		0.99	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	4.9
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	4.9
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		0.99	2.5
Dibromomethane		ND		1.2	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	4.9
Ethyl ether		ND		1.0	2.5

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid % Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50055.D
Dilution:	1.0			Initial Weight/Volume:	5.20 g
Date Analyzed:	11/18/2010 2000			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	4.9
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.7	9.9
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		0.99	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND UJ		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	4.9
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.9
2,4,4-Trimethyl-2-pentene		ND		1.1	4.9
Cyclohexane		ND		0.99	25
Methyl acetate		ND UJ		14	49
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	88		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094	Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088	Lab File ID:	V50055.D
Dilution:	1.0		Initial Weight/Volume:	5.20 g
Date Analyzed:	11/18/2010 2000		Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400			

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50056.D
Dilution:	1.0			Initial Weight/Volume:	5.45 g
Date Analyzed:	11/18/2010 2024			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.4
1,1,1-Trichloroethane		ND		2.0	2.4
1,1,2,2-Tetrachloroethane		ND		0.98	2.4
1,1,2-Trichloroethane		ND		0.98	2.4
1,1-Dichloroethane		ND		1.9	2.4
1,1-Dichloroethene		ND		1.6	2.4
1,1-Dichloropropene		ND		1.5	2.4
1,2,3-Trichlorobenzene		ND		1.1	2.4
1,2,3-Trichloropropane		ND		1.2	2.4
1,2,4-Trichlorobenzene		ND		0.98	2.4
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.4
1,2-Dibromo-3-Chloropropane		ND		2.7	24
1,2-Dichlorobenzene		ND		0.98	2.4
1,2-Dichloroethane		ND		0.98	2.4
1,2-Dichloropropane		ND		1.6	2.4
1,3,5-Trimethylbenzene		ND		1.5	2.4
1,3-Dichlorobenzene		ND		0.98	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.98	2.4
1,4-Dioxane		ND	UJ	98	240
2,2-Dichloropropane		ND		2.1	2.4
2-Butanone (MEK)		ND		11	24
2-Chlorotoluene		ND		1.3	2.4
2-Hexanone		ND		14	24
4-Chlorotoluene		ND		1.2	2.4
4-Isopropyltoluene		ND		1.5	2.4
4-Methyl-2-pentanone (MIBK)		ND		10	24
Acetone		ND	UJ	17	240
Benzene		ND		1.6	2.4
Bromobenzene		ND		0.98	2.4
Bromoform		ND		1.6	2.4
Bromomethane		ND		2.3	4.9
Carbon disulfide		ND		1.9	2.4
Carbon tetrachloride		ND		1.7	2.4
Chlorobenzene		ND		1.2	2.4
Chlorobromomethane		ND		1.4	2.4
Chlorodibromomethane		ND		1.2	2.4
Chloroethane		ND		2.0	4.9
Chloroform		ND		1.5	2.4
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.2	2.4
cis-1,3-Dichloropropene		ND		0.98	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.3	2.4
Dichlorodifluoromethane		ND		2.1	4.9
Ethyl ether		ND		1.0	2.4

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50056.D
Dilution:	1.0			Initial Weight/Volume:	5.45 g
Date Analyzed:	11/18/2010 2024			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.4
Ethylene Dibromide		ND		1.1	2.4
Hexachlorobutadiene		ND		1.5	2.4
Isopropyl ether		ND		1.1	2.4
Isopropylbenzene		ND		1.5	2.4
m-Xylene & p-Xylene		ND		3.4	4.9
Methyl tert-butyl ether		ND		1.5	2.4
Methylene Chloride		ND		9.6	9.8
n-Butylbenzene		ND		1.2	2.4
N-Propylbenzene		ND		1.7	2.4
Naphthalene		ND		2.3	24
o-Xylene		ND		1.3	2.4
sec-Butylbenzene		ND		1.4	2.4
Styrene		ND		0.98	2.4
Tert-amyl methyl ether		ND		1.5	2.4
Tert-butyl ethyl ether		ND		1.4	2.4
tert-Butylbenzene		ND		1.4	2.4
Tetrachloroethene		ND		1.8	2.4
Tetrahydrofuran		ND UJ		12	24
Toluene		ND		1.8	2.4
trans-1,2-Dichloroethene		ND		1.6	2.4
trans-1,3-Dichloropropene		ND		1.0	2.4
Trichloroethene		ND		2.1	2.4
Trichlorofluoromethane		ND		1.4	4.9
Vinyl chloride		ND		1.7	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.9
2,4,4-Trimethyl-2-pentene		ND		1.1	4.9
Cyclohexane		ND		0.98	24
Methyl acetate		ND UJ		14	49
Methylcyclohexane		ND		1.6	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	89		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50056.D
Dilution:	1.0			Initial Weight/Volume:	5.45 g
Date Analyzed:	11/18/2010 2024			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50057.D
Dilution:	1.0			Initial Weight/Volume:	5.55 g
Date Analyzed:	11/18/2010 2048			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.4
1,1,1-Trichloroethane		ND		1.9	2.4
1,1,2,2-Tetrachloroethane		ND		0.97	2.4
1,1,2-Trichloroethane		ND		0.97	2.4
1,1-Dichloroethane		ND		1.8	2.4
1,1-Dichloroethene		ND		1.6	2.4
1,1-Dichloropropene		ND		1.5	2.4
1,2,3-Trichlorobenzene		ND		1.1	2.4
1,2,3-Trichloropropane		ND		1.2	2.4
1,2,4-Trichlorobenzene		ND		0.97	2.4
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.4
1,2-Dibromo-3-Chloropropane		ND		2.7	24
1,2-Dichlorobenzene		ND		0.97	2.4
1,2-Dichloroethane		ND		0.97	2.4
1,2-Dichloropropane		ND		1.6	2.4
1,3,5-Trimethylbenzene		ND		1.5	2.4
1,3-Dichlorobenzene		ND		0.97	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.97	2.4
1,4-Dioxane		ND	UJ	97	240
2,2-Dichloropropane		ND		2.0	2.4
2-Butanone (MEK)		ND		10	24
2-Chlorotoluene		ND		1.3	2.4
2-Hexanone		ND		14	24
4-Chlorotoluene		ND		1.2	2.4
4-Isopropyltoluene		ND		1.5	2.4
4-Methyl-2-pentanone (MIBK)		ND		9.9	24
Acetone		ND	UJ	17	240
Benzene		ND		1.6	2.4
Bromobenzene		ND		0.97	2.4
Bromoform		ND		1.6	2.4
Bromomethane		ND		2.2	4.9
Carbon disulfide		ND		1.8	2.4
Carbon tetrachloride		ND		1.7	2.4
Chlorobenzene		ND		1.2	2.4
Chlorobromomethane		ND		1.3	2.4
Chlorodibromomethane		ND		1.2	2.4
Chloroethane		ND		1.9	4.9
Chloroform		ND		1.5	2.4
Chloromethane		ND		1.6	4.9
cis-1,2-Dichloroethene		ND		1.1	2.4
cis-1,3-Dichloropropene		ND		0.97	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.2	2.4
Dichlorodifluoromethane		ND		2.0	4.9
Ethyl ether		ND		1.0	2.4

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50057.D
Dilution:	1.0			Initial Weight/Volume:	5.55 g
Date Analyzed:	11/18/2010 2048			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.7	2.4
Ethylene Dibromide		ND		1.1	2.4
Hexachlorobutadiene		ND		1.5	2.4
Isopropyl ether		ND		1.1	2.4
Isopropylbenzene		ND		1.5	2.4
m-Xylene & p-Xylene		ND		3.4	4.9
Methyl tert-butyl ether		ND		1.5	2.4
Methylene Chloride		ND		9.5	9.7
n-Butylbenzene		ND		1.2	2.4
N-Propylbenzene		ND		1.7	2.4
Naphthalene		ND		2.2	24
o-Xylene		ND		1.3	2.4
sec-Butylbenzene		ND		1.4	2.4
Styrene		ND		0.97	2.4
Tert-amyl methyl ether		ND		1.5	2.4
Tert-butyl ethyl ether		ND		1.4	2.4
tert-Butylbenzene		ND		1.4	2.4
Tetrachloroethene		ND		1.7	2.4
Tetrahydrofuran		ND UJ		12	24
Toluene		ND		1.7	2.4
trans-1,2-Dichloroethene		ND		1.6	2.4
trans-1,3-Dichloropropene		ND		1.0	2.4
Trichloroethene		ND		2.0	2.4
Trichlorofluoromethane		ND		1.4	4.9
Vinyl chloride		ND		1.7	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	4.9
2,4,4-Trimethyl-2-pentene		ND		1.0	4.9
Cyclohexane		ND		0.97	24
Methyl acetate		ND UJ		14	49
Methylcyclohexane		ND		1.6	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	107		70 - 130
Dibromofluoromethane	100		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50057.D
Dilution:	1.0			Initial Weight/Volume:	5.55 g
Date Analyzed:	11/18/2010 2048			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

JC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50058.D
Dilution:	1.0			Initial Weight/Volume:	5.94 g
Date Analyzed:	11/18/2010 2112			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.0	2.2
1,1,1-Trichloroethane		ND		1.7	2.2
1,1,2,2-Tetrachloroethane		ND		0.87	2.2
1,1,2-Trichloroethane		ND		0.87	2.2
1,1-Dichloroethane		ND		1.7	2.2
1,1-Dichloroethene		ND		1.4	2.2
1,1-Dichloropropene		ND		1.3	2.2
1,2,3-Trichlorobenzene		ND		0.96	2.2
1,2,3-Trichloropropane		ND		1.0	2.2
1,2,4-Trichlorobenzene		ND		0.87	2.2
1,2,4-Trimethylbenzene		ND	UJ	1.2	2.2
1,2-Dibromo-3-Chloropropane		ND		2.4	22
1,2-Dichlorobenzene		ND		0.87	2.2
1,2-Dichloroethane		ND		0.87	2.2
1,2-Dichloropropane		ND		1.4	2.2
1,3,5-Trimethylbenzene		ND		1.3	2.2
1,3-Dichlorobenzene		ND		0.87	2.2
1,3-Dichloropropane		ND		0.99	2.2
1,4-Dichlorobenzene		ND		0.87	2.2
1,4-Dioxane		ND	UJ	87	220
2,2-Dichloropropane		ND		1.8	2.2
2-Butanone (MEK)		ND		9.4	22
2-Chlorotoluene		ND		1.1	2.2
2-Hexanone		ND		12	22
4-Chlorotoluene		ND		1.0	2.2
4-Isopropyltoluene		ND		1.3	2.2
4-Methyl-2-pentanone (MIBK)		ND		8.9	22
Acetone		ND	UJ	15	220
Benzene		ND		1.4	2.2
Bromobenzene		ND		0.87	2.2
Bromoform		ND		1.4	2.2
Bromomethane		ND		2.0	4.4
Carbon disulfide		ND		1.7	2.2
Carbon tetrachloride		ND		1.5	2.2
Chlorobenzene		ND		1.0	2.2
Chlorobromomethane		ND		1.2	2.2
Chlorodibromomethane		ND		1.0	2.2
Chloroethane		ND		1.7	4.4
Chloroform		ND		1.3	2.2
Chloromethane		ND		1.4	4.4
cis-1,2-Dichloroethene		ND		1.0	2.2
cis-1,3-Dichloropropene		ND		0.87	2.2
Dibromomethane		ND		1.1	2.2
Dichlorobromomethane		ND		1.1	2.2
Dichlorodifluoromethane		ND		1.8	4.4
Ethyl ether		ND		0.92	2.2

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50058.D
Dilution:	1.0			Initial Weight/Volume:	5.94 g
Date Analyzed:	11/18/2010 2112			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.6	2.2
Ethylene Dibromide		ND		0.98	2.2
Hexachlorobutadiene		ND		1.3	2.2
Isopropyl ether		ND		0.98	2.2
Isopropylbenzene		ND		1.3	2.2
m-Xylene & p-Xylene		ND		3.0	4.4
Methyl tert-butyl ether		ND		1.3	2.2
Methylene Chloride		ND		8.5	8.7
n-Butylbenzene		ND		1.0	2.2
N-Propylbenzene		ND		1.5	2.2
Naphthalene		ND		2.0	22
o-Xylene		ND		1.1	2.2
sec-Butylbenzene		ND		1.2	2.2
Styrene		ND		0.87	2.2
Tert-amyl methyl ether		ND		1.3	2.2
Tert-butyl ethyl ether		ND		1.3	2.2
tert-Butylbenzene		ND		1.2	2.2
Tetrachloroethene		ND		1.6	2.2
Tetrahydrofuran		ND	UJ	11	22
Toluene		ND		1.6	2.2
trans-1,2-Dichloroethene		ND		1.4	2.2
trans-1,3-Dichloropropene		ND		0.91	2.2
Trichloroethene		ND		1.8	2.2
Trichlorofluoromethane		ND		1.2	4.4
Vinyl chloride		ND		1.5	2.2
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.3	11
2,4,4-Trimethyl-1-pentene		ND		1.4	4.4
2,4,4-Trimethyl-2-pentene		ND		0.94	4.4
Cyclohexane		ND		0.87	22
Methyl acetate		ND	UJ	12	44
Methylcyclohexane		ND		1.4	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	90		70 - 130

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50058.D
Dilution:	1.0			Initial Weight/Volume:	5.94 g
Date Analyzed:	11/18/2010 2112			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50059.D
Dilution:	1.0			Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2136			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.1	2.3
1,1,1-Trichloroethane		ND		1.8	2.3
1,1,2,2-Tetrachloroethane		ND		0.91	2.3
1,1,2-Trichloroethane		ND		0.91	2.3
1,1-Dichloroethane		ND		1.7	2.3
1,1-Dichloroethene		ND		1.5	2.3
1,1-Dichloropropene		ND		1.4	2.3
1,2,3-Trichlorobenzene		ND		1.0	2.3
1,2,3-Trichloropropane		ND		1.1	2.3
1,2,4-Trichlorobenzene		ND		0.91	2.3
1,2,4-Trimethylbenzene		ND	UJ	1.3	2.3
1,2-Dibromo-3-Chloropropane		ND		2.6	23
1,2-Dichlorobenzene		ND		0.91	2.3
1,2-Dichloroethane		ND		0.91	2.3
1,2-Dichloropropane		ND		1.5	2.3
1,3,5-Trimethylbenzene		ND		1.4	2.3
1,3-Dichlorobenzene		ND		0.91	2.3
1,3-Dichloropropane		ND		1.0	2.3
1,4-Dichlorobenzene		ND		0.91	2.3
1,4-Dioxane		ND	UJ	91	230
2,2-Dichloropropane		ND		1.9	2.3
2-Butanone (MEK)		ND		9.9	23
2-Chlorotoluene		ND		1.2	2.3
2-Hexanone		ND		13	23
4-Chlorotoluene		ND		1.1	2.3
4-Isopropyltoluene		ND		1.4	2.3
4-Methyl-2-pentanone (MIBK)		ND		9.3	23
Acetone		ND	UJ	16	230
Benzene		ND		1.5	2.3
Bromobenzene		ND		0.91	2.3
Bromoform		ND		1.5	2.3
Bromomethane		ND		2.1	4.6
Carbon disulfide		ND		1.7	2.3
Carbon tetrachloride		ND		1.6	2.3
Chlorobenzene		ND		1.1	2.3
Chlorobromomethane		ND		1.3	2.3
Chlorodibromomethane		ND		1.1	2.3
Chloroethane		ND		1.8	4.6
Chloroform		ND		1.4	2.3
Chloromethane		ND		1.5	4.6
cis-1,2-Dichloroethene		ND		1.1	2.3
cis-1,3-Dichloropropene		ND		0.91	2.3
Dibromomethane		ND		1.1	2.3
Dichlorobromomethane		ND		1.2	2.3
Dichlorodifluoromethane		ND		1.9	4.6
Ethyl ether		ND		0.97	2.3

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50059.D
Dilution:	1.0			Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2136			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.6	2.3
Ethylene Dibromide		ND		1.0	2.3
Hexachlorobutadiene		ND		1.4	2.3
Isopropyl ether		ND		1.0	2.3
Isopropylbenzene		ND		1.4	2.3
m-Xylene & p-Xylene		ND		3.2	4.6
Methyl tert-butyl ether		ND		1.4	2.3
Methylene Chloride		ND		8.9	9.1
n-Butylbenzene		ND		1.1	2.3
N-Propylbenzene		ND		1.6	2.3
Naphthalene		ND		2.1	23
o-Xylene		ND		1.2	2.3
sec-Butylbenzene		ND		1.3	2.3
Styrene		ND		0.91	2.3
Tert-amyl methyl ether		ND		1.4	2.3
Tert-butyl ethyl ether		ND		1.3	2.3
tert-Butylbenzene		ND		1.3	2.3
Tetrachloroethene		ND		1.6	2.3
Tetrahydrofuran		ND	UJ	11	23
Toluene		ND		1.6	2.3
trans-1,2-Dichloroethene		ND		1.5	2.3
trans-1,3-Dichloropropene		ND		0.95	2.3
Trichloroethene		ND		1.9	2.3
Trichlorofluoromethane		ND		1.3	4.6
Vinyl chloride		ND		1.6	2.3
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.3	11
2,4,4-Trimethyl-1-pentene		ND		1.5	4.6
2,4,4-Trimethyl-2-pentene		ND		0.99	4.6
Cyclohexane		ND		0.91	23
Methyl acetate		ND	UJ	13	46
Methylcyclohexane		ND		1.5	2.3

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50059.D
Dilution:	1.0			Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2136			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50060.D
Dilution:	1.0			Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2200			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.1	2.4
1,1,1-Trichloroethane		ND		1.9	2.4
1,1,2,2-Tetrachloroethane		ND		0.94	2.4
1,1,2-Trichloroethane		ND		0.94	2.4
1,1-Dichloroethane		ND		1.8	2.4
1,1-Dichloroethene		ND		1.5	2.4
1,1-Dichloropropene		ND		1.4	2.4
1,2,3-Trichlorobenzene		ND		1.0	2.4
1,2,3-Trichloropropane		ND		1.1	2.4
1,2,4-Trichlorobenzene		ND		0.94	2.4
1,2,4-Trimethylbenzene		ND	UJ	1.3	2.4
1,2-Dibromo-3-Chloropropane		ND		2.6	24
1,2-Dichlorobenzene		ND		0.94	2.4
1,2-Dichloroethane		ND		0.94	2.4
1,2-Dichloropropane		ND		1.5	2.4
1,3,5-Trimethylbenzene		ND		1.4	2.4
1,3-Dichlorobenzene		ND		0.94	2.4
1,3-Dichloropropane		ND		1.1	2.4
1,4-Dichlorobenzene		ND		0.94	2.4
1,4-Dioxane		ND	UJ	94	240
2,2-Dichloropropane		ND		2.0	2.4
2-Butanone (MEK)		ND		10	24
2-Chlorotoluene		ND		1.2	2.4
2-Hexanone		ND		13	24
4-Chlorotoluene		ND		1.1	2.4
4-Isopropyltoluene		ND		1.4	2.4
4-Methyl-2-pentanone (MIBK)		ND		9.6	24
Acetone		ND	UJ	16	240
Benzene		ND		1.5	2.4
Bromobenzene		ND		0.94	2.4
Bromoform		ND		1.5	2.4
Bromomethane		ND		2.2	4.7
Carbon disulfide		ND		1.8	2.4
Carbon tetrachloride		ND		1.6	2.4
Chlorobenzene		ND		1.1	2.4
Chlorobromomethane		ND		1.3	2.4
Chlorodibromomethane		ND		1.1	2.4
Chloroethane		ND		1.9	4.7
Chloroform		ND		1.4	2.4
Chloromethane		ND		1.5	4.7
cis-1,2-Dichloroethene		ND		1.1	2.4
cis-1,3-Dichloropropene		ND		0.94	2.4
Dibromomethane		ND		1.2	2.4
Dichlorobromomethane		ND		1.2	2.4
Dichlorodifluoromethane		ND		2.0	4.7
Ethyl ether		ND		1.0	2.4

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50060.D
Dilution:	1.0			Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2200			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.7	2.4
Ethylene Dibromide		ND		1.1	2.4
Hexachlorobutadiene		ND		1.4	2.4
Isopropyl ether		ND		1.1	2.4
Isopropylbenzene		ND		1.4	2.4
m-Xylene & p-Xylene		ND		3.3	4.7
Methyl tert-butyl ether		ND		1.4	2.4
Methylene Chloride		ND		9.2	9.4
n-Butylbenzene		ND		1.1	2.4
N-Propylbenzene		ND		1.6	2.4
Naphthalene		ND		2.2	24
o-Xylene		ND		1.2	2.4
sec-Butylbenzene		ND		1.3	2.4
Styrene		ND		0.94	2.4
Tert-amyl methyl ether		ND		1.4	2.4
Tert-butyl ethyl ether		ND		1.4	2.4
tert-Butylbenzene		ND		1.3	2.4
Tetrachloroethene		ND		1.7	2.4
Tetrahydrofuran		ND UJ		12	24
Toluene		ND		1.7	2.4
trans-1,2-Dichloroethene		ND		1.5	2.4
trans-1,3-Dichloropropene		ND		0.98	2.4
Trichloroethene		ND		2.0	2.4
Trichlorofluoromethane		ND		1.3	4.7
Vinyl chloride		ND		1.6	2.4
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.5	4.7
2,4,4-Trimethyl-2-pentene		ND		1.0	4.7
Cyclohexane		ND		0.94	24
Methyl acetate		ND UJ		13	47
Methylcyclohexane		ND		1.5	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094	Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088	Lab File ID:	V50060.D
Dilution:	1.0		Initial Weight/Volume:	5.78 g
Date Analyzed:	11/18/2010 2200		Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400			

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-12-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50061.D
Dilution:	1.0			Initial Weight/Volume:	5.57 g
Date Analyzed:	11/18/2010 2224			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.6
1,1,1-Trichloroethane		ND		2.0	2.6
1,1,2,2-Tetrachloroethane		ND		1.0	2.6
1,1,2-Trichloroethane		ND		1.0	2.6
1,1-Dichloroethane		ND		1.9	2.6
1,1-Dichloroethene		ND		1.6	2.6
1,1-Dichloropropene		ND		1.5	2.6
1,2,3-Trichlorobenzene		ND		1.1	2.6
1,2,3-Trichloropropane		ND		1.2	2.6
1,2,4-Trichlorobenzene		ND		1.0	2.6
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.6
1,2-Dibromo-3-Chloropropane		ND		2.9	26
1,2-Dichlorobenzene		ND		1.0	2.6
1,2-Dichloroethane		ND		1.0	2.6
1,2-Dichloropropane		ND		1.6	2.6
1,3,5-Trimethylbenzene		ND		1.5	2.6
1,3-Dichlorobenzene		ND		1.0	2.6
1,3-Dichloropropane		ND		1.2	2.6
1,4-Dichlorobenzene		ND		1.0	2.6
1,4-Dioxane		ND	UJ	100	260
2,2-Dichloropropane		ND		2.1	2.6
2-Butanone (MEK)		ND		11	26
2-Chlorotoluene		ND		1.3	2.6
2-Hexanone		ND		14	26
4-Chlorotoluene		ND		1.2	2.6
4-Isopropyltoluene		ND		1.5	2.6
4-Methyl-2-pentanone (MIBK)		ND		10	26
Acetone		ND	UJ	18	260
Benzene		ND		1.6	2.6
Bromobenzene		ND		1.0	2.6
Bromoform		ND		1.6	2.6
Bromomethane		ND		2.4	5.1
Carbon disulfide		ND		1.9	2.6
Carbon tetrachloride		ND		1.7	2.6
Chlorobenzene		ND		1.2	2.6
Chlorobromomethane		ND		1.4	2.6
Chlorodibromomethane		ND		1.2	2.6
Chloroethane		ND		2.0	5.1
Chloroform		ND		1.5	2.6
Chloromethane		ND		1.6	5.1
cis-1,2-Dichloroethene		ND		1.2	2.6
cis-1,3-Dichloropropene		ND		1.0	2.6
Dibromomethane		ND		1.3	2.6
Dichlorobromomethane		ND		1.3	2.6
Dichlorodifluoromethane		ND		2.1	5.1
Ethyl ether		ND		1.1	2.6

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50061.D
Dilution:	1.0			Initial Weight/Volume:	5.57 g
Date Analyzed:	11/18/2010 2224			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.6
Ethylene Dibromide		ND		1.1	2.6
Hexachlorobutadiene		ND		1.5	2.6
Isopropyl ether		ND		1.1	2.6
Isopropylbenzene		ND		1.5	2.6
m-Xylene & p-Xylene		ND		3.6	5.1
Methyl tert-butyl ether		ND		1.5	2.6
Methylene Chloride		ND		10	10
n-Butylbenzene		ND		1.2	2.6
N-Propylbenzene		ND		1.7	2.6
Naphthalene		ND		2.4	26
o-Xylene		ND		1.3	2.6
sec-Butylbenzene		ND		1.4	2.6
Styrene		ND		1.0	2.6
Tert-amyl methyl ether		ND		1.5	2.6
Tert-butyl ethyl ether		ND		1.5	2.6
tert-Butylbenzene		ND		1.4	2.6
Tetrachloroethene		ND		1.8	2.6
Tetrahydrofuran		ND	UJ	13	26
Toluene		ND		1.8	2.6
trans-1,2-Dichloroethene		ND		1.6	2.6
trans-1,3-Dichloropropene		ND		1.1	2.6
Trichloroethene		ND		2.1	2.6
Trichlorofluoromethane		ND		1.5	5.1
Vinyl chloride		ND		1.7	2.6
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.5	13
2,4,4-Trimethyl-1-pentene		ND		1.7	5.1
2,4,4-Trimethyl-2-pentene		ND		1.1	5.1
Cyclohexane		ND		1.0	26
Methyl acetate		ND	UJ	14	51
Methylcyclohexane		ND		1.6	2.6

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		70 - 130
Toluene-d8 (Surr)	96		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50061.D
Dilution:	1.0			Initial Weight/Volume:	5.57 g
Date Analyzed:	11/18/2010 2224			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50062.D
Dilution:	1.0			Initial Weight/Volume:	4.76 g
Date Analyzed:	11/18/2010 2248			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.6	3.2
1,1,1-Trichloroethane		ND		2.6	3.2
1,1,2,2-Tetrachloroethane		ND		1.3	3.2
1,1,2-Trichloroethane		ND		1.3	3.2
1,1-Dichloroethane		ND		2.5	3.2
1,1-Dichloroethene		ND		2.1	3.2
1,1-Dichloropropene		ND		1.9	3.2
1,2,3-Trichlorobenzene		ND		1.4	3.2
1,2,3-Trichloropropane		ND		1.6	3.2
1,2,4-Trichlorobenzene		ND		1.3	3.2
1,2,4-Trimethylbenzene		ND	UJ	1.8	3.2
1,2-Dibromo-3-Chloropropane		ND		3.6	32
1,2-Dichlorobenzene		ND		1.3	3.2
1,2-Dichloroethane		ND		1.3	3.2
1,2-Dichloropropane		ND		2.1	3.2
1,3,5-Trimethylbenzene		ND		1.9	3.2
1,3-Dichlorobenzene		ND		1.3	3.2
1,3-Dichloropropane		ND		1.5	3.2
1,4-Dichlorobenzene		ND		1.3	3.2
1,4-Dioxane		ND	UJ	130	320
2,2-Dichloropropane		ND		2.7	3.2
2-Butanone (MEK)		ND		14	32
2-Chlorotoluene		ND		1.7	3.2
2-Hexanone		ND		18	32
4-Chlorotoluene		ND		1.6	3.2
4-Isopropyltoluene		ND		1.9	3.2
4-Methyl-2-pentanone (MIBK)		ND		13	32
Acetone		ND	UJ	22	320
Benzene		ND		2.1	3.2
Bromobenzene		ND		1.3	3.2
Bromoform		ND		2.1	3.2
Bromomethane		ND		3.0	6.5
Carbon disulfide		ND		2.5	3.2
Carbon tetrachloride		ND		2.2	3.2
Chlorobenzene		ND		1.6	3.2
Chlorobromomethane		ND		1.8	3.2
Chlorodibromomethane		ND		1.6	3.2
Chloroethane		ND		2.6	6.5
Chloroform		ND		1.9	3.2
Chloromethane		ND		2.1	6.5
cis-1,2-Dichloroethene		ND		1.5	3.2
cis-1,3-Dichloropropene		ND		1.3	3.2
Dibromomethane		ND		1.6	3.2
Dichlorobromomethane		ND		1.7	3.2
Dichlorodifluoromethane		ND		2.7	6.5
Ethyl ether		ND		1.4	3.2

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50062.D
Dilution:	1.0			Initial Weight/Volume:	4.76 g
Date Analyzed:	11/18/2010 2248			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		2.3	3.2
Ethylene Dibromide	ND		1.5	3.2
Hexachlorobutadiene	ND		1.9	3.2
Isopropyl ether	ND		1.5	3.2
Isopropylbenzene	ND		1.9	3.2
m-Xylene & p-Xylene	ND		4.5	6.5
Methyl tert-butyl ether	ND		1.9	3.2
Methylene Chloride	ND		13	13
n-Butylbenzene	ND		1.6	3.2
N-Propylbenzene	ND		2.2	3.2
Naphthalene	ND		3.0	32
o-Xylene	ND		1.7	3.2
sec-Butylbenzene	ND		1.8	3.2
Styrene	ND		1.3	3.2
Tert-amyl methyl ether	ND		1.9	3.2
Tert-butyl ethyl ether	ND		1.9	3.2
tert-Butylbenzene	ND		1.8	3.2
Tetrachloroethene	ND		2.3	3.2
Tetrahydrofuran	ND UJ		16	32
Toluene	ND		2.3	3.2
trans-1,2-Dichloroethene	ND		2.1	3.2
trans-1,3-Dichloropropene	ND		1.3	3.2
Trichloroethene	ND		2.7	3.2
Trichlorofluoromethane	ND		1.8	6.5
Vinyl chloride	ND		2.2	3.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.9	16
2,4,4-Trimethyl-1-pentene	ND		2.1	6.5
2,4,4-Trimethyl-2-pentene	ND		1.4	6.5
Cyclohexane	ND		1.3	32
Methyl acetate	ND UJ		18	65
Methylcyclohexane	ND		2.1	3.2

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	90		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50062.D
Dilution:	1.0			Initial Weight/Volume:	4.76 g
Date Analyzed:	11/18/2010 2248			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT.	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50063.D
Dilution:	1.0			Initial Weight/Volume:	6.01 g
Date Analyzed:	11/18/2010 2312			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.1	2.2
1,1,1-Trichloroethane		ND		1.8	2.2
1,1,2,2-Tetrachloroethane		ND		0.90	2.2
1,1,2-Trichloroethane		ND		0.90	2.2
1,1-Dichloroethane		ND		1.7	2.2
1,1-Dichloroethene		ND		1.4	2.2
1,1-Dichloropropene		ND		1.3	2.2
1,2,3-Trichlorobenzene		ND		0.99	2.2
1,2,3-Trichloropropane		ND		1.1	2.2
1,2,4-Trichlorobenzene		ND		0.90	2.2
1,2,4-Trimethylbenzene		ND	UJ	1.3	2.2
1,2-Dibromo-3-Chloropropane		ND		2.5	22
1,2-Dichlorobenzene		ND		0.90	2.2
1,2-Dichloroethane		ND		0.90	2.2
1,2-Dichloropropane		ND		1.4	2.2
1,3,5-Trimethylbenzene		ND		1.3	2.2
1,3-Dichlorobenzene		ND		0.90	2.2
1,3-Dichloropropane		ND		1.0	2.2
1,4-Dichlorobenzene		ND		0.90	2.2
1,4-Dioxane		ND	UJ	90	220
2,2-Dichloropropane		ND		1.9	2.2
2-Butanone (MEK)		ND		9.7	22
2-Chlorotoluene		ND		1.2	2.2
2-Hexanone		ND		13	22
4-Chlorotoluene		ND		1.1	2.2
4-Isopropyltoluene		ND		1.3	2.2
4-Methyl-2-pentanone (MIBK)		ND		9.2	22
Acetone		ND	UJ	15	220
Benzene		ND		1.4	2.2
Bromobenzene		ND		0.90	2.2
Bromoform		ND		1.4	2.2
Bromomethane		ND		2.1	4.5
Carbon disulfide		ND		1.7	2.2
Carbon tetrachloride		ND		1.5	2.2
Chlorobenzene		ND		1.1	2.2
Chlorobromomethane		ND		1.2	2.2
Chlorodibromomethane		ND		1.1	2.2
Chloroethane		ND		1.8	4.5
Chloroform		ND		1.3	2.2
Chloromethane		ND		1.4	4.5
cis-1,2-Dichloroethene		ND		1.1	2.2
cis-1,3-Dichloropropene		ND		0.90	2.2
Dibromomethane		ND		1.1	2.2
Dichlorobromomethane		ND		1.1	2.2
Dichlorodifluoromethane		ND		1.9	4.5
Ethyl ether		ND		0.95	2.2

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50063.D
Dilution:	1.0			Initial Weight/Volume:	6.01 g
Date Analyzed:	11/18/2010 2312			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene	ND		1.6	2.2
Ethylene Dibromide	ND		1.0	2.2
Hexachlorobutadiene	ND		1.3	2.2
Isopropyl ether	ND		1.0	2.2
Isopropylbenzene	ND		1.3	2.2
m-Xylene & p-Xylene	ND		3.1	4.5
Methyl tert-butyl ether	ND		1.3	2.2
Methylene Chloride	ND		8.8	9.0
n-Butylbenzene	ND		1.1	2.2
N-Propylbenzene	ND		1.5	2.2
Naphthalene	ND		2.1	22
o-Xylene	ND		1.2	2.2
sec-Butylbenzene	ND		1.3	2.2
Styrene	ND		0.90	2.2
Tert-amyl methyl ether	ND		1.3	2.2
Tert-butyl ethyl ether	ND		1.3	2.2
tert-Butylbenzene	ND		1.3	2.2
Tetrachloroethene	ND		1.6	2.2
Tetrahydrofuran	ND UJ		11	22
Toluene	ND		1.6	2.2
trans-1,2-Dichloroethene	ND		1.4	2.2
trans-1,3-Dichloropropene	ND		0.93	2.2
Trichloroethene	ND		1.9	2.2
Trichlorofluoromethane	ND		1.3	4.5
Vinyl chloride	ND		1.5	2.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.3	11
2,4,4-Trimethyl-1-pentene	ND		1.5	4.5
2,4,4-Trimethyl-2-pentene	ND		0.97	4.5
Cyclohexane	ND		0.90	22
Methyl acetate	ND UJ		13	45
Methylcyclohexane	ND		1.4	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	90		70 - 130

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50063.D
Dilution:	1.0			Initial Weight/Volume:	6.01 g
Date Analyzed:	11/18/2010 2312			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50064.D
Dilution:	1.0			Initial Weight/Volume:	3.82 g
Date Analyzed:	11/18/2010 2337			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.8	3.7
1,1,1-Trichloroethane		ND		3.0	3.7
1,1,2,2-Tetrachloroethane		ND		1.5	3.7
1,1,2-Trichloroethane		ND		1.5	3.7
1,1-Dichloroethane		ND		2.8	3.7
1,1-Dichloroethene		ND		2.4	3.7
1,1-Dichloropropene		ND		2.2	3.7
1,2,3-Trichlorobenzene		ND		1.6	3.7
1,2,3-Trichloropropane		ND		1.8	3.7
1,2,4-Trichlorobenzene		ND		1.5	3.7
1,2,4-Trimethylbenzene		ND	UJ	2.1	3.7
1,2-Dibromo-3-Chloropropane		ND		4.2	37
1,2-Dichlorobenzene		ND		1.5	3.7
1,2-Dichloroethane		ND		1.5	3.7
1,2-Dichloropropane		ND		2.4	3.7
1,3,5-Trimethylbenzene		ND		2.2	3.7
1,3-Dichlorobenzene		ND		1.5	3.7
1,3-Dichloropropane		ND		1.7	3.7
1,4-Dichlorobenzene		ND		1.5	3.7
1,4-Dioxane		ND	UJ	150	370
2,2-Dichloropropane		ND		3.1	3.7
2-Butanone (MEK)		ND		16	37
2-Chlorotoluene		ND		1.9	3.7
2-Hexanone		ND		21	37
4-Chlorotoluene		ND		1.8	3.7
4-Isopropyltoluene		ND		2.2	3.7
4-Methyl-2-pentanone (MIBK)		ND		15	37
Acetone		ND	UJ	26	370
Benzene		ND		2.4	3.7
Bromobenzene		ND		1.5	3.7
Bromoform		ND		2.4	3.7
Bromomethane		ND		3.4	7.5
Carbon disulfide		ND		2.8	3.7
Carbon tetrachloride		ND		2.5	3.7
Chlorobenzene		ND		1.8	3.7
Chlorobromomethane		ND		2.1	3.7
Chlorodibromomethane		ND		1.8	3.7
Chloroethane		ND		3.0	7.5
Chloroform		ND		2.2	3.7
Chloromethane		ND		2.4	7.5
cis-1,2-Dichloroethene		ND		1.8	3.7
cis-1,3-Dichloropropene		ND		1.5	3.7
Dibromomethane		ND		1.9	3.7
Dichlorobromomethane		ND		1.9	3.7
Dichlorodifluoromethane		ND		3.1	7.5
Ethyl ether		ND		1.6	3.7

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50064.D
Dilution:	1.0			Initial Weight/Volume:	3.82 g
Date Analyzed:	11/18/2010 2337			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		2.7	3.7
Ethylene Dibromide		ND		1.7	3.7
Hexachlorobutadiene		ND		2.2	3.7
Isopropyl ether		ND		1.7	3.7
Isopropylbenzene		ND		2.2	3.7
m-Xylene & p-Xylene		ND		5.2	7.5
Methyl tert-butyl ether		ND		2.2	3.7
Methylene Chloride		ND		15	15
n-Butylbenzene		ND		1.8	3.7
N-Propylbenzene		ND		2.5	3.7
Naphthalene		ND		3.4	37
o-Xylene		ND		1.9	3.7
sec-Butylbenzene		ND		2.1	3.7
Styrene		ND		1.5	3.7
Tert-amyl methyl ether		ND		2.2	3.7
Tert-butyl ethyl ether		ND		2.2	3.7
tert-Butylbenzene		ND		2.1	3.7
Tetrachloroethene		ND		2.7	3.7
Tetrahydrofuran		ND	UJ	19	37
Toluene		ND		2.7	3.7
trans-1,2-Dichloroethene		ND		2.4	3.7
trans-1,3-Dichloropropene		ND		1.6	3.7
Trichloroethene		ND		3.1	3.7
Trichlorofluoromethane		ND		2.1	7.5
Vinyl chloride		ND		2.5	3.7
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		2.2	19
2,4,4-Trimethyl-1-pentene		ND		2.5	7.5
2,4,4-Trimethyl-2-pentene		ND		1.6	7.5
Cyclohexane		ND		1.5	37
Methyl acetate		ND	UJ	21	75
Methylcyclohexane		ND		2.4	3.7

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		70 - 130
Toluene-d8 (Surr)	94		70 - 130
Dibromofluoromethane	91		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50064.D
Dilution:	1.0			Initial Weight/Volume:	3.82 g
Date Analyzed:	11/18/2010 2337			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50065.D
Dilution:	1.0			Initial Weight/Volume:	5.03 g
Date Analyzed:	11/19/2010 0001			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.6
1,1,1-Trichloroethane		ND		2.1	2.6
1,1,2,2-Tetrachloroethane		ND		1.0	2.6
1,1,2-Trichloroethane		ND		1.0	2.6
1,1-Dichloroethane		ND		2.0	2.6
1,1-Dichloroethene		ND		1.7	2.6
1,1-Dichloropropene		ND		1.5	2.6
1,2,3-Trichlorobenzene		ND		1.1	2.6
1,2,3-Trichloropropane		ND		1.2	2.6
1,2,4-Trichlorobenzene		ND		1.0	2.6
1,2,4-Trimethylbenzene		ND	UJ	1.4	2.6
1,2-Dibromo-3-Chloropropane		ND		2.9	26
1,2-Dichlorobenzene		ND		1.0	2.6
1,2-Dichloroethane		ND		1.0	2.6
1,2-Dichloropropane		ND		1.7	2.6
1,3,5-Trimethylbenzene		ND		1.5	2.6
1,3-Dichlorobenzene		ND		1.0	2.6
1,3-Dichloropropane		ND		1.2	2.6
1,4-Dichlorobenzene		ND		1.0	2.6
1,4-Dioxane		ND	UJ	100	260
2,2-Dichloropropane		ND		2.2	2.6
2-Butanone (MEK)		ND		11	26
2-Chlorotoluene		ND		1.3	2.6
2-Hexanone		ND		14	26
4-Chlorotoluene		ND		1.2	2.6
4-Isopropyltoluene		ND		1.5	2.6
4-Methyl-2-pentanone (MIBK)		ND		11	26
Acetone		ND	UJ	18	260
Benzene		ND		1.7	2.6
Bromobenzene		ND		1.0	2.6
Bromoform		ND		1.7	2.6
Bromomethane		ND		2.4	5.2
Carbon disulfide		ND		2.0	2.6
Carbon tetrachloride		ND		1.8	2.6
Chlorobenzene		ND		1.2	2.6
Chlorobromomethane		ND		1.4	2.6
Chlorodibromomethane		ND		1.2	2.6
Chloroethane		ND		2.1	5.2
Chloroform		ND		1.5	2.6
Chloromethane		ND		1.7	5.2
cis-1,2-Dichloroethene		ND		1.2	2.6
cis-1,3-Dichloropropene		ND		1.0	2.6
Dibromomethane		ND		1.3	2.6
Dichlorobromomethane		ND		1.3	2.6
Dichlorodifluoromethane		ND		2.2	5.2
Ethyl ether		ND		1.1	2.6

12-17-10 TC

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50065.D
Dilution:	1.0			Initial Weight/Volume:	5.03 g
Date Analyzed:	11/19/2010 0001			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.9	2.6
Ethylene Dibromide		ND		1.2	2.6
Hexachlorobutadiene		ND		1.5	2.6
Isopropyl ether		ND		1.2	2.6
Isopropylbenzene		ND		1.5	2.6
m-Xylene & p-Xylene		ND		3.6	5.2
Methyl tert-butyl ether		ND		1.5	2.6
Methylene Chloride		ND		10	10
n-Butylbenzene		ND		1.2	2.6
N-Propylbenzene		ND		1.8	2.6
Naphthalene		ND		2.4	26
o-Xylene		ND		1.3	2.6
sec-Butylbenzene		ND		1.4	2.6
Styrene		ND		1.0	2.6
Tert-amyl methyl ether		ND		1.5	2.6
Tert-butyl ethyl ether		ND		1.5	2.6
tert-Butylbenzene		ND		1.4	2.6
Tetrachloroethene		ND		1.9	2.6
Tetrahydrofuran		ND	UJ	13	26
Toluene		ND		1.9	2.6
trans-1,2-Dichloroethene		ND		1.7	2.6
trans-1,3-Dichloropropene		ND		1.1	2.6
Trichloroethene		ND		2.2	2.6
Trichlorofluoromethane		ND		1.5	5.2
Vinyl chloride		ND		1.8	2.6
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.5	13
2,4,4-Trimethyl-1-pentene		ND		1.7	5.2
2,4,4-Trimethyl-2-pentene		ND		1.1	5.2
Cyclohexane		ND		1.0	26
Methyl acetate		ND	UJ	14	52
Methylcyclohexane		ND		1.7	2.6

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	88		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50065.D
Dilution:	1.0			Initial Weight/Volume:	5.03 g
Date Analyzed:	11/19/2010 0001			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-056**

Lab Sample ID: 360-31096-16
Client Matrix: Solid

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50066.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/19/2010 0025			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane		ND		1.2	2.5
1,1,1-Trichloroethane		ND		2.0	2.5
1,1,2,2-Tetrachloroethane		ND		1.0	2.5
1,1,2-Trichloroethane		ND		1.0	2.5
1,1-Dichloroethane		ND		1.9	2.5
1,1-Dichloroethene		ND		1.6	2.5
1,1-Dichloropropene		ND		1.5	2.5
1,2,3-Trichlorobenzene		ND		1.1	2.5
1,2,3-Trichloropropane		ND		1.2	2.5
1,2,4-Trichlorobenzene		ND		1.0	2.5
1,2,4-Trimethylbenzene		ND		1.4	2.5
1,2-Dibromo-3-Chloropropane		ND		2.8	25
1,2-Dichlorobenzene		ND		1.0	2.5
1,2-Dichloroethane		ND		1.0	2.5
1,2-Dichloropropane		ND		1.6	2.5
1,3,5-Trimethylbenzene		ND		1.5	2.5
1,3-Dichlorobenzene		ND		1.0	2.5
1,3-Dichloropropane		ND		1.1	2.5
1,4-Dichlorobenzene		ND		1.0	2.5
1,4-Dioxane		ND		100	250
2,2-Dichloropropane		ND		2.1	2.5
2-Butanone (MEK)		ND		11	25
2-Chlorotoluene		ND		1.3	2.5
2-Hexanone		ND		14	25
4-Chlorotoluene		ND		1.2	2.5
4-Isopropyltoluene		ND		1.5	2.5
4-Methyl-2-pentanone (MIBK)		ND		10	25
Acetone		ND		17	250
Benzene		ND		1.6	2.5
Bromobenzene		ND		1.0	2.5
Bromoform		ND		1.6	2.5
Bromomethane		ND		2.3	5.0
Carbon disulfide		ND		1.9	2.5
Carbon tetrachloride		ND		1.7	2.5
Chlorobenzene		ND		1.2	2.5
Chlorobromomethane		ND		1.4	2.5
Chlorodibromomethane		ND		1.2	2.5
Chloroethane		ND		2.0	5.0
Chloroform		ND		1.5	2.5
Chloromethane		ND		1.6	5.0
cis-1,2-Dichloroethene		ND		1.2	2.5
cis-1,3-Dichloropropene		ND		1.0	2.5
Dibromomethane		ND		1.3	2.5
Dichlorobromomethane		ND		1.3	2.5
Dichlorodifluoromethane		ND		2.1	5.0
Ethyl ether		ND		1.1	2.5

TC 12/17/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-056**

Lab Sample ID: 360-31096-16
Client Matrix: Solid

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094		Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088		Lab File ID:	V50066.D
Dilution:	1.0			Initial Weight/Volume:	5.00 g
Date Analyzed:	11/19/2010 0025			Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Ethylbenzene		ND		1.8	2.5
Ethylene Dibromide		ND		1.1	2.5
Hexachlorobutadiene		ND		1.5	2.5
Isopropyl ether		ND		1.1	2.5
Isopropylbenzene		ND		1.5	2.5
m-Xylene & p-Xylene		ND		3.5	5.0
Methyl tert-butyl ether		ND		1.5	2.5
Methylene Chloride		ND		9.8	10
n-Butylbenzene		ND		1.2	2.5
N-Propylbenzene		ND		1.7	2.5
Naphthalene		ND		2.3	25
o-Xylene		ND		1.3	2.5
sec-Butylbenzene		ND		1.4	2.5
Styrene		ND		1.0	2.5
Tert-amyl methyl ether		ND		1.5	2.5
Tert-butyl ethyl ether		ND		1.4	2.5
tert-Butylbenzene		ND		1.4	2.5
Tetrachloroethene		ND		1.8	2.5
Tetrahydrofuran		ND		12	25
Toluene		ND		1.8	2.5
trans-1,2-Dichloroethene		ND		1.6	2.5
trans-1,3-Dichloropropene		ND		1.0	2.5
Trichloroethene		ND		2.1	2.5
Trichlorofluoromethane		ND		1.4	5.0
Vinyl chloride		ND		1.7	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1.4	12
2,4,4-Trimethyl-1-pentene		ND		1.6	5.0
2,4,4-Trimethyl-2-pentene		ND		1.1	5.0
Cyclohexane		ND		1.0	25
Methyl acetate		ND		14	50
Methylcyclohexane		ND		1.6	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		70 - 130
Toluene-d8 (Surr)	95		70 - 130
Dibromofluoromethane	88		70 - 130

TC 12-17-10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-056**

Lab Sample ID: 360-31096-16
Client Matrix: Solid

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8260C Volatile Organic Compounds (GC/MS)

Method:	8260C	Analysis Batch: 360-66094	Instrument ID:	HP #1 GC/MS
Preparation:	5035	Prep Batch: 360-66088	Lab File ID:	V50066.D
Dilution:	1.0		Initial Weight/Volume:	5.00 g
Date Analyzed:	11/19/2010 0025		Final Weight/Volume:	5 g
Date Prepared:	11/18/2010 1400			

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

TC 12-17-10

CASE NARRATIVE

Client: Olin Corporation

Project: Olin Chemical Superfund Site

Report Number: 360-31096-1

Samples were analyzed in accordance with analytical methods, SOPs, and QA/QC goals described in the Olin Chemical Superfund Site Remedial Investigation /Feasibility Study Work Plan Volume III-B Quality Assurance Project Plan (QAPP) August 14, 2009. Analytical methods include USEPA published methods for the majority of analytes. Custom laboratory methods that were developed by Test America are also used for a subset of analytes as described in the QAPP. Analytical QA/QC goals from the Massachusetts Contingency Plan (MCP) Compendium of MCP Methods published by the Massachusetts Department of Environmental Protection (MassDEP) have been identified as project goals in the QAPP for those methods addressed in the Compendium. Analytical methods are run in accordance with both USEPA methodologies and MassDEP analytical guidelines. Analytical methods meet requirements of USEPA methods and MassDEP Presumptive Certainty goals unless discussed in this narrative.

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

For those methods contained in the MassDEP Compendium, a separate MCP Analytical Method Report Certification Form is included for each method requested.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may be greater than project QLs identified in the QAPP. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes which exceed the calibration range.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/15/2010 and 11/16/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 and 3.6C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-TBK-055 (360-31096-4), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14), OC-SB-496-5.0/6.5-XXX (360-31096-15) and OC-TBK-056 (360-31096-16) were analyzed for volatile organic compounds (GC-MS) in accordance with SW846 8260C. The samples were prepared on 11/18/2010 and analyzed on 11/18/2010 and 11/19/2010.

For samples 360-31096-(1-16), Acetone failed the recovery criteria low for LCS/LCSD 360-66088/1-A. Refer to the QC report for details.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66094: acetone(low), methyl acetate(low), Methyl tert-butyl ether (low), Tert-butyl ethyl ether (low), 2-Butanone [MEK] (low), 1,2-dichloroethane(low), 4-Methyl-2-pentanone [MIBK] (low), and 1,2,4-Trimethylbenzene(high). Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for 14 analytes being outside limits; therefore, the data has been reported and flagged on the Form VII.

General method information:
Samples 360-31096-(2-3) in batch 66094 had a ratio of DI Water to soil above the method standard.

No other difficulties were encountered during the VOC analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL

Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10),

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low

GC Column (1): RTX-VMS ID: 0.25 (um)

Client Sample ID	Lab Sample ID	DBFM #	TOL #	BFB #
OC-SB-485-0.0/1.0-XXX	360-31096-1	92	95	98
OC-SB-485-11/13-XXX	360-31096-2	90	94	100
OC-SB-485-6.0/8.0-XXX	360-31096-3	89	96	99
OC-TBK-055	360-31096-4	90	96	98
OC-SB-488-0.0/1.0-XXX	360-31096-5	88	94	98
OC-SB-488-7.0/9.0-XXX	360-31096-6	89	94	99
OC-SB-490-0.0/1.0-XXX	360-31096-7	100	107	97
OC-SB-490-7.0/9.0-XXX	360-31096-8	90	94	99
OC-SB-494-0.0/1.0-XXX	360-31096-9	90	95	98
OC-SB-494-12/14-XXX	360-31096-10	90	96	98
OC-SB-494-6.0/8.0-XXX	360-31096-11	90	96	98
OC-SB-495-0.0/1.0-XXX	360-31096-12	90	95	97
OC-SB-495-4.0/6.0-XXX	360-31096-13	90	94	97
OC-SB-496-0.0/1.0-XXX	360-31096-14	91	94	96
OC-SB-496-5.0/6.5-XXX	360-31096-15	88	95	96
OC-TBK-056	360-31096-16	88	95	97
	MB 360-66088/3-A	90	95	99
	LCS 360-66088/1-A	92	101	95
	LCSD 360-66088/2-A	93	102	100

	QC LIMITS
DBFM = Dibromofluoromethane	70-130
TOL = Toluene-d8 (Surr)	70-130
BFB = 4-Bromofluorobenzene	70-130

Column to be used to flag recovery values

FORM II 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab File ID: V49627.D BFB Injection Date: 10/19/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 15:27

Analysis Batch No.: 64639

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.5	
75	30.0 - 60.0 % of mass 95	45.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	64.3	
175	5.0 - 9.0 % of mass 174	5.3	(8.2)1
176	95.0 - 101.0 % of mass 174	62.1	(96.6)1
177	5.0 - 9.0 % of mass 176	3.9	(6.3)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD05 360-64639/5	V49628.D	10/19/2010	15:51
	STD1 360-64639/6	V49629.D	10/19/2010	16:15
	STD5 360-64639/7	V49630.D	10/19/2010	16:57
	STD10 360-64639/8	V49631.D	10/19/2010	17:20
	STD20 360-64639/9	V49632.D	10/19/2010	17:44
	STD40 360-64639/10	V49633.D	10/19/2010	18:08
	STD80 360-64639/11	V49634.D	10/19/2010	18:32

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab File ID: V50043.D BFB Injection Date: 11/18/2010

Instrument ID: HP #1 GC/MS BFB Injection Time: 15:12

Analysis Batch No.: 66094

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	40.4	
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 - 120.00 % of mass 95	62.3	
175	5.0 - 9.0 % of mass 174	4.7	(7.6)1
176	95.0 - 101.0 % of mass 174	62.4	(100.2)1
177	5.0 - 9.0 % of mass 176	4.1	(6.5)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66094/3	V50045.D	11/18/2010	16:00
	LCS 360-66088/1-A	V50046.D	11/18/2010	16:24
	LCSD 360-66088/2-A	V50047.D	11/18/2010	16:48
	MB 360-66088/3-A	V50050.D	11/18/2010	18:00
OC-SB-485-0.0/1.0-XXX	360-31096-1	V50051.D	11/18/2010	18:24
OC-SB-485-11/13-XXX	360-31096-2	V50052.D	11/18/2010	18:48
OC-SB-485-6.0/8.0-XXX	360-31096-3	V50053.D	11/18/2010	19:12
OC-TBK-055	360-31096-4	V50054.D	11/18/2010	19:36
OC-SB-488-0.0/1.0-XXX	360-31096-5	V50055.D	11/18/2010	20:00
OC-SB-488-7.0/9.0-XXX	360-31096-6	V50056.D	11/18/2010	20:24
OC-SB-490-0.0/1.0-XXX	360-31096-7	V50057.D	11/18/2010	20:48
OC-SB-490-7.0/9.0-XXX	360-31096-8	V50058.D	11/18/2010	21:12
OC-SB-494-0.0/1.0-XXX	360-31096-9	V50059.D	11/18/2010	21:36
OC-SB-494-12/14-XXX	360-31096-10	V50060.D	11/18/2010	22:00
OC-SB-494-6.0/8.0-XXX	360-31096-11	V50061.D	11/18/2010	22:24
OC-SB-495-0.0/1.0-XXX	360-31096-12	V50062.D	11/18/2010	22:48
OC-SB-495-4.0/6.0-XXX	360-31096-13	V50063.D	11/18/2010	23:12
OC-SB-496-0.0/1.0-XXX	360-31096-14	V50064.D	11/18/2010	23:37
OC-SB-496-5.0/6.5-XXX	360-31096-15	V50065.D	11/19/2010	00:01
OC-TBK-056	360-31096-16	V50066.D	11/19/2010	00:25

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Sample No.: CCVIS 360-66094/3 Date Analyzed: 11/18/2010 16:00

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50045.D Heated Purge: (Y/N) N

Calibration ID: 9957

		12DCE		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		12327	6.22	257567	6.45	148954	8.85
UPPER LIMIT		24654	6.72	515134	6.95	297908	9.35
LOWER LIMIT		6164	5.72	128784	5.95	74477	8.35
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66088/1-A		11887	6.23	253032	6.45	149000	8.86
LCSD 360-66088/2-A		11945	6.23	249800	6.45	144116	8.86
MB 360-66088/3-A		11756	6.22	258541	6.45	145969	8.85
360-31096-1	OC-SB-485-0.0/1.0-XXX	12734	6.22	275712	6.45	157376	8.85
360-31096-2	OC-SB-485-11/13-XXX	12351	6.22	270368	6.45	151819	8.86
360-31096-3	OC-SB-485-6.0/8.0-XXX	12240	6.22	272597	6.45	155758	8.85
360-31096-4	OC-TBK-055	13200	6.22	295417	6.45	169572	8.86
360-31096-5	OC-SB-488-0.0/1.0-XXX	12436	6.22	278470	6.45	156477	8.85
360-31096-6	OC-SB-488-7.0/9.0-XXX	12298	6.22	272544	6.44	153339	8.85
360-31096-7	OC-SB-490-0.0/1.0-XXX	12288	6.22	244133	6.44	155993	8.85
360-31096-8	OC-SB-490-7.0/9.0-XXX	12839	6.22	281039	6.44	159418	8.85
360-31096-9	OC-SB-494-0.0/1.0-XXX	12307	6.22	269853	6.44	154171	8.86
360-31096-10	OC-SB-494-12/14-XXX	12484	6.22	272904	6.45	156965	8.86
360-31096-11	OC-SB-494-6.0/8.0-XXX	12611	6.22	275024	6.44	159192	8.85
360-31096-12	OC-SB-495-0.0/1.0-XXX	12246	6.22	273266	6.44	155705	8.85
360-31096-13	OC-SB-495-4.0/6.0-XXX	12485	6.22	279543	6.44	161624	8.85
360-31096-14	OC-SB-496-0.0/1.0-XXX	12714	6.22	274872	6.45	154523	8.86
360-31096-15	OC-SB-496-5.0/6.5-XXX	12789	6.22	289456	6.44	165534	8.85
360-31096-16	OC-TBK-056	12219	6.22	274084	6.44	158805	8.85

12DCE = 1,2-Dichloroethane-d4 ISTD
FB = Fluorobenzene
CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Sample No.: CCVIS 360-66094/3 Date Analyzed: 11/18/2010 16:00

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um)

Lab File ID (Standard): V50045.D Heated Purge: (Y/N) N

Calibration ID: 9957

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		37816	10.70				
UPPER LIMIT		75632	11.20				
LOWER LIMIT		18908	10.20				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 360-66088/1-A		37481	10.69				
LCSD 360-66088/2-A		38315	10.70				
MB 360-66088/3-A		39344	10.69				
360-31096-1	OC-SB-485-0.0/1.0-XXX	42955	10.69				
360-31096-2	OC-SB-485-11/13-XXX	42111	10.70				
360-31096-3	OC-SB-485-6.0/8.0-XXX	42756	10.70				
360-31096-4	OC-TBK-055	45766	10.70				
360-31096-5	OC-SB-488-0.0/1.0-XXX	42412	10.70				
360-31096-6	OC-SB-488-7.0/9.0-XXX	40713	10.69				
360-31096-7	OC-SB-490-0.0/1.0-XXX	41790	10.69				
360-31096-8	OC-SB-490-7.0/9.0-XXX	43278	10.69				
360-31096-9	OC-SB-494-0.0/1.0-XXX	42926	10.69				
360-31096-10	OC-SB-494-12/14-XXX	42868	10.69				
360-31096-11	OC-SB-494-6.0/8.0-XXX	43336	10.69				
360-31096-12	OC-SB-495-0.0/1.0-XXX	41372	10.69				
360-31096-13	OC-SB-495-4.0/6.0-XXX	42622	10.69				
360-31096-14	OC-SB-496-0.0/1.0-XXX	39232	10.69				
360-31096-15	OC-SB-496-5.0/6.5-XXX	43741	10.69				
360-31096-16	OC-TBK-056	43072	10.69				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.6302 0.5057	0.5422 0.4539	0.6376	0.5918	0.5651	Ave		0.5609				12.0		15.0			
2,4,4-Trimethyl-2-pentene	0.1788 0.1635	0.1486 0.1556	0.1989	0.1795	0.1798	Ave		0.1721				10.0		15.0			
Dibromomethane	0.1116 0.1139	0.0988 0.1157	0.1113	0.1064	0.1080	Ave		0.1094				5.2		15.0			
1,2-Dichloropropane	0.2842 0.2539	0.2611 0.2474	0.2660	0.2581	0.2570	Ave		0.2611			0.1000	4.5		15.0			
Dichlorobromomethane	0.3455 0.3229	0.2876 0.3351	0.3208	0.2988	0.3092	Ave		0.3171			0.2000	6.4		15.0			
cis-1,3-Dichloropropene	0.3482 0.3919	0.3158 0.4084	0.3396	0.3447	0.3637	Ave		0.3589			0.2000	8.9		15.0			
Toluene	0.6683 0.6769	0.6021 0.6928	0.6557	0.6600	0.6792	Ave		0.6621			0.4000	4.4		15.0			
4-Methyl-2-pentanone (MIBK)	0.1202 0.1231	0.1142 0.1125	0.1366	0.1247	0.1193	Ave		0.1215			0.1000	6.5		15.0			
Tetrachloroethene	0.1688 0.1823	0.1732 0.1815	0.1906	0.1875	0.1891	Lin2F		0.1819							0.9980		0.9900
trans-1,3-Dichloropropene	0.2631 0.2649	0.2203 0.2616	0.2380	0.2455	0.2439	Ave		0.2482			0.1000	6.6		15.0			
1,1,2-Trichloroethane	0.1701 0.1211	0.1226 0.1260	0.1171	0.1143	0.1140	Lin1F		0.1223							0.9980		0.9900
Chlorodibromomethane	0.1657 0.1812	0.1499 0.1896	0.1663	0.1643	0.1661	Ave		0.1690			0.1000	7.6		15.0			
1,3-Dichloropropane	0.2540 0.2734	0.2376 0.2849	0.2421	0.2386	0.2449	Ave		0.2536				7.3		15.0			
Ethylene Dibromide	0.1254 0.1387	0.1260 0.1408	0.1180	0.1200	0.1213	Ave		0.1272				7.1		15.0			
2-Hexanone	0.0677 0.0768	0.0678 0.0759	0.0719	0.0710	0.0677	Lin2F		0.0712							0.9960		0.9900
Chlorobenzene	1.0627 0.9706	0.9713 0.8717	1.0399	1.0334	0.9781	Ave		0.9897			0.5000	6.5		15.0			
Ethylbenzene	2.1702 1.8831	1.9278 1.6648	2.1443	2.0671	1.9570	Ave		1.9735			0.1000	8.8		15.0			
1,1,1,2-Tetrachloroethane	0.4041 0.3748	0.3529 0.3524	0.4316	0.3970	0.3751	Ave		0.3840				7.5		15.0			
m-Xylene & p-Xylene	1.6041 1.4464	1.4824 1.2541	1.6401	1.5967	1.5190	Ave		1.5061			0.1000	8.7		15.0			
o-Xylene	1.7538 1.6426	1.6111 1.5033	1.8534	1.7395	1.6805	Ave		1.6834			0.3000	6.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Styrene	1.2526 1.1571	1.1382 1.0605	1.2406	1.2195	1.1584	Ave		1.1753			0.3000	5.7		15.0			
Bromoform	0.4503 0.4884	0.4070 0.5244	0.4807	0.4610	0.4602	Ave		0.4674			0.1000	7.8		15.0			
Isopropylbenzene	2.0977 1.9899	1.9733 1.8033	2.3384	2.2169	2.1003	Ave		2.0742			0.1000	8.4		15.0			
Bromobenzene	0.9254 0.7523	0.8493 0.6343	0.8605	0.8339	0.7828	Ave		0.8055				12.0		15.0			
N-Propylbenzene	2.6345 2.2976	2.4737 1.9633	2.7220	2.6229	2.4885	Ave		2.4575				11.0		15.0			
1,1,2,2-Tetrachloroethane	1.0444 0.8807	0.9559 0.8996	1.0437	0.9058	0.8693	Ave		0.9428			0.3000	7.9		15.0			
2-Chlorotoluene	1.8050 1.5148	1.6546 1.2827	1.8250	1.7386	1.6097	Ave		1.6329				12.0		15.0			
1,3,5-Trimethylbenzene	1.8425 1.5324	1.6848 1.2880	1.8913	1.7871	1.6734	Ave		1.6714				12.0		15.0			
1,2,3-Trichloropropane	0.0688 0.0627	0.0763 0.0558	0.0702	0.0666	0.0597	Ave		0.0657				11.0		15.0			
4-Chlorotoluene	1.5858 1.4350	1.4261 1.2970	1.5566	1.5253	1.4434	Ave		1.4670				6.7		15.0			
tert-Butylbenzene	1.4423 1.3828	1.3481 1.2109	1.5691	1.5216	1.4497	Ave		1.4178				8.4		15.0			
1,2,4-Trimethylbenzene	1.8537 1.6176	1.6847 1.4089	1.8972	1.8102	1.7048	Ave		1.7110				9.7		15.0			
sec-Butylbenzene	2.4617 2.1517	2.2481 1.8752	2.5731	2.4344	2.3187	Ave		2.2947				10.0		15.0			
4-Isopropyltoluene	1.8471 1.6602	1.7523 1.4307	1.9824	1.8948	1.7861	Ave		1.7648				10.0		15.0			
1,3-Dichlorobenzene	0.8884 0.7706	0.8439 0.6817	0.9072	0.8653	0.8043	Ave		0.8231			0.6000	9.5		15.0			
1,4-Dichlorobenzene	2.9281 2.6648	2.6230 2.6276	2.8210	2.6997	2.6969	Ave		2.7230			0.5000	4.1		15.0			
n-Butylbenzene	5.9340 6.1834	5.7271 5.9156	6.8181	6.5415	6.6550	Ave		6.2535				6.7		15.0			
1,2-Dichlorobenzene	2.4372 2.3768	2.2345 2.3063	2.5624	2.3941	2.4143	Ave		2.3894			0.4000	4.3		15.0			
1,2-Dibromo-3-Chloropropane	0.1081 0.1429	0.1404 0.1325	0.1502	0.1315	0.1288	Ave		0.1335			0.0500	10.0		15.0			
Hexachlorobutadiene	0.8455 0.9800	0.7323 0.9263	1.0598	0.9539	1.0073	Ave		0.9293				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trichlorobenzene	1.3308 1.5398	1.2432 1.4548	1.6417	1.5254	1.5291	Ave		1.4664				9.3		15.0			
Naphthalene	2.1295 2.3739	1.8952 2.2375	2.4784	2.2292	2.2730	Ave		2.2310				8.3		15.0			
1,2,3-Trichlorobenzene	1.0451 1.1525	0.9495 1.0860	1.2307	1.1257	1.1583	Ave		1.1068			0.2000	8.2		15.0			
Dibromofluoromethane	0.2370 0.2495	0.2402 0.2577	0.2465	0.2413	0.2420	Ave		0.2449				2.9		15.0			
Toluene-d8 (Surr)	0.8087 0.9412	0.8314 1.0360	0.8346	0.8647	0.8865	Ave		0.8862				8.9		15.0			
4-Bromofluorobenzene	0.5134 0.5176	0.5214 0.5062	0.4999	0.5100	0.4859	Ave		0.5078				2.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD05 360-64639/5	V49628.D
Level 2	STD1 360-64639/6	V49629.D
Level 3	STD5 360-64639/7	V49630.D
Level 4	STD10 360-64639/8	V49631.D
Level 5	STD20 360-64639/9	V49632.D
Level 6	STD40 360-64639/10	V49633.D
Level 7	STD80 360-64639/11	V49634.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	3068 225433	6436 432108	30155	60990	120279	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Chloromethane	FB	Ave	4563 336528	7923 649277	43790	88563	175549	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Vinyl chloride	FB	Ave	3006 247279	5932 479682	34404	68911	133703	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Bromomethane	FB	Ave	1987 137103	3314 246181	19425	39614	76584	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Chloroethane	FB	Ave	2177 126946	3693 218508	19437	38605	74381	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	3101 239463	5911 449376	32534	67942	132469	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Ethyl ether	FB	Ave	1638 118864	2849 220745	15715	28253	55743	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1-Dichloroethene	FB	Ave	2603 160349	4178 304642	23741	44002	86924	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Carbon disulfide	FB	Ave	8127 620418	14710 1185459	91495	172429	341002	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	1336 106009	2442 204263	15243	28377	56832	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Methylene Chloride	FB	Lin1F	4158 183312	6373 350749	27897	49306	96205	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Acetone	FB	Lin1F	5862 235693	8924 427472	38564	57670	114174	5.00 400	10.0 800	50.0	100	200
trans-1,2-Dichloroethene	FB	Ave	3947 299277	7208 572413	42589	80093	159017	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Methyl acetate	FB	Ave	10042 671707	16862 1221318	92496	163887	315891	5.00 400	10.0 800	50.0	100	200
Methyl tert-butyl ether	FB	Ave	4355 332288	8823 626156	46993	85424	163789	0.500 40.0	1.00 80.0	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Isopropyl ether	FB	Ave	9096 710289	17051 1370640	97480	181209	356778	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	4904 360094	8651 707204	49039	93255	185086	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Tert-butyl ethyl ether	FB	Ave	7126 504683	13067 938818	74137	133227	258516	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,4-Dioxane	12DCE	Ave	+++++ 5861	+++++ 10859	829	1433	2785	+++++ 400	+++++ 800	50.0	100	200
cis-1,2-Dichloroethene	FB	Ave	3828 278362	6867 544794	37754	71771	142986	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	2879 218929	6043 380879	33100	62820	117038	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Chlorobromomethane	FB	Ave	1183 84818	1942 160098	11762	21728	42013	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Cyclohexane	FB	Ave	5270 370223	9169 685602	57198	103028	199212	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Chloroform	FB	Lin	5472 321040	8571 623322	45694	83781	166156	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	2870 198384	4900 393563	27274	53765	107370	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Tetrahydrofuran	FB	Lin1F	5276 244360	7341 441597	34297	60254	112956	5.00 400	10.0 800	50.0	100	200
1,1,1-Trichloroethane	FB	Ave	3147 246884	6225 486031	34239	66039	131175	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2-Butanone (MEK)	FB	Lin2F	4949 377091	9351 709164	47610	87663	167559	5.00 400	10.0 800	50.0	100	200
1,1-Dichloropropene	FB	Ave	3327 256655	5700 500137	33319	63449	130563	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Benzene	FB	Ave	9076 718366	16968 1376011	93029	179188	361157	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Tert-amyl methyl ether	FB	Ave	5270 386129	9080 738346	54186	98303	189758	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	1970 155536	3541 301322	19562	35763	73243	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2,4,4-Trimethyl-1-pentene	FB	Ave	2634 140589	4374 267922	21662	40047	78771	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Trichloroethene	FB	Ave	2761 175597	4505 310809	22422	42554	88451	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	4913 295449	8043 497847	46524	86571	165158	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2,4,4-Trimethyl-2-pentene	FB	Ave	1394 95538	2205 170704	14513	26260	52555	0.500 40.0	1.00 80.0	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	870 66549	1465 126949	8121	15559	31554	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	2216 148363	3873 271363	19407	37758	75108	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Dichlorobromomethane	FB	Ave	2694 188631	4266 367585	23407	43702	90364	0.500 40.0	1.00 80.0	5.00	10.0	20.0
cis-1,3-Dichloropropene	FB	Ave	2715 228945	4685 447886	24783	50413	106298	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Toluene	FB	Ave	5210 395508	8932 759827	47845	96543	198485	0.500 40.0	1.00 80.0	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	9375 718926	16948 1234319	99657	182475	348591	5.00 400	10.0 800	50.0	100	200
Tetrachloroethene	FB	Lin2F	1316 106523	2570 199081	13908	27420	55275	0.500 40.0	1.00 80.0	5.00	10.0	20.0
trans-1,3-Dichloropropene	FB	Ave	2051 154785	3268 286902	17369	35911	71269	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1,2-Trichloroethane	FB	Lin1F	1326 70767	1818 138198	8543	16721	33308	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Chlorodibromomethane	FB	Ave	1292 105845	2224 207955	12134	24027	48550	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,3-Dichloropropane	FB	Ave	1980 159744	3525 312445	17669	34899	71581	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Ethylene Dibromide	FB	Ave	978 81029	1869 154456	8607	17546	35454	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2-Hexanone	FB	Lin2F	5277 448547	10054 832411	52501	103789	197828	5.00 400	10.0 800	50.0	100	200
Chlorobenzene	CBZ	Ave	4852 360838	8733 648707	45006	92658	182964	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	9908 700049	17334 1238956	92804	185346	366074	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	1845 139337	3173 262279	18680	35595	70169	0.500 40.0	1.00 80.0	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	14647 1075431	26658 1866628	141966	286341	568259	1.00 80.0	2.00 160	10.0	20.0	40.0
o-Xylene	CBZ	Ave	8007 610624	14486 1118815	80213	155968	314351	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Styrene	CBZ	Ave	5719 430150	10234 789260	53692	109343	216677	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Bromoform	DCB	Ave	654 51164	1160 97897	6436	12617	24366	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	9577 739727	17743 1342083	101203	198773	392873	0.500 40.0	1.00 80.0	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Bromobenzene	CBZ	Ave	4225 279669	7636 472034	37240	74771	146430	0.500 40.0	1.00 80.0	5.00	10.0	20.0
N-Propylbenzene	CBZ	Ave	12028 854119	22242 1461151	117805	235179	465491	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	1517 92268	2724 167952	13974	24791	46030	0.500 40.0	1.00 80.0	5.00	10.0	20.0
2-Chlorotoluene	CBZ	Ave	8241 563110	14877 954621	78986	155892	301094	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,3,5-Trimethylbenzene	CBZ	Ave	8412 569654	15149 958569	81855	160236	313022	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2,3-Trichloropropane	CBZ	Ave	314 23295	686 41511	3040	5969	11161	0.500 40.0	1.00 80.0	5.00	10.0	20.0
4-Chlorotoluene	CBZ	Ave	7240 533458	12823 965261	67369	136765	269985	0.500 40.0	1.00 80.0	5.00	10.0	20.0
tert-Butylbenzene	CBZ	Ave	6585 514072	12121 901171	67908	136433	271167	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2,4-Trimethylbenzene	CBZ	Ave	8463 601353	15148 1048552	82111	162313	318888	0.500 40.0	1.00 80.0	5.00	10.0	20.0
sec-Butylbenzene	CBZ	Ave	11239 799889	20214 1395599	111363	218280	433722	0.500 40.0	1.00 80.0	5.00	10.0	20.0
4-Isopropyltoluene	CBZ	Ave	8433 617195	15756 1064791	85797	169897	334095	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,3-Dichlorobenzene	CBZ	Ave	4056 286481	7588 507364	39264	77584	150444	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	4253 279179	7475 490563	37769	73892	142798	0.500 40.0	1.00 80.0	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	8619 647807	16321 1104417	91286	179045	352370	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	3540 249003	6368 430583	34307	65528	127830	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	157 14973	400 24744	2011	3600	6821	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Hexachlorobutadiene	DCB	Ave	1228 102670	2087 172935	14189	26109	53337	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	1933 161318	3543 271597	21980	41750	80963	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Naphthalene	DCB	Ave	3093 248706	5401 417734	33183	61013	120349	0.500 40.0	1.00 80.0	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	1518 120741	2706 202751	16478	30812	61329	0.500 40.0	1.00 80.0	5.00	10.0	20.0
Dibromofluoromethane	FB	Ave	73902 72884	71274 70662	71937	70597	70734	20.0 20.0	20.0 20.0	20.0	20.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 64639

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS GC Column: RTX-VMS ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/19/2010 15:51 Calibration End Date: 10/19/2010 18:32 Calibration ID: 9957

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Toluene-d8 (Surr)	FB	Ave	252192 274959	246686 284068	243615	252979	259092	20.0 20.0	20.0 20.0	20.0	20.0	20.0
4-Bromofluorobenzene	CBZ	Ave	93762 96200	93759 94174	86537	91455	90896	20.0 20.0	20.0 20.0	20.0	20.0	20.0

Curve Type Legend:
Ave = Average ISTD
Lin = Linear ISTD
Lin1F = Linear 1/conc ISTD forced zero
Lin2F = Linear 1/conc^2 ISTD forced zero

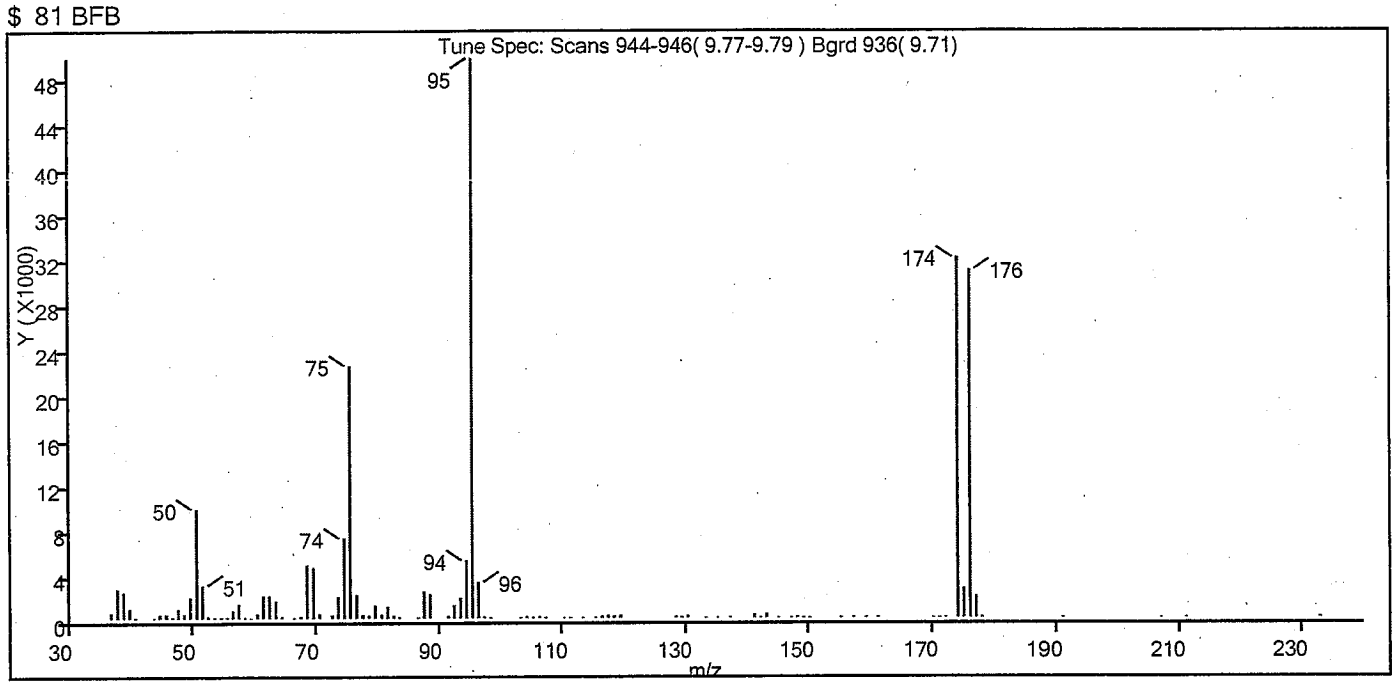
Report Date: 21-Oct-2010 08:41:15 Chrom Revision: 1.2 26-Aug-2010 12:10:50

MS Tune Report

Data File: \\wessvr06\chromdata\HPGCMS1.i\20101020-3942.b\V49627.D
Injection Date: 19-Oct-2010 15:27:30
Client ID:
Lims Batch ID: 64639
Operator ID: CR
Tune Method: BFB Method 8260

Limit Group: VMS - 8260C VOA Calibration MCP
Instrument ID: HP #1 GC/MS
Lims Sample ID: 4

$ 81 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.47
75	30.00 - 60.00% of mass 95	45.08
96	5.00 - 9.00% of mass 95	6.43
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	64.33
175	5.00 - 9.00% of mass 174	5.27 (8.19)
176	95.00 - 101.00% of mass 174	62.15 (96.60)
177	5.00 - 9.00% of mass 176	3.91 (6.29)

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield
Job No.: 360-31096-1
SDG No.: 360-31096-1
Client Sample ID:
Lab Sample ID: MB 360-66088/3-A
Matrix: Solid
Lab File ID: V50050.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 5(g)
Date Analyzed: 11/18/2010 18:00
Soil Aliquot Vol: 5 (mL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66094
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.5	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.5	2.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.5	1.0
79-00-5	1,1,2-Trichloroethane	ND		2.5	1.0
75-34-3	1,1-Dichloroethane	ND		2.5	1.9
75-35-4	1,1-Dichloroethene	ND		2.5	1.6
563-58-6	1,1-Dichloropropene	ND		2.5	1.5
87-61-6	1,2,3-Trichlorobenzene	ND		2.5	1.1
96-18-4	1,2,3-Trichloropropane	ND		2.5	1.2
120-82-1	1,2,4-Trichlorobenzene	ND		2.5	1.0
95-63-6	1,2,4-Trimethylbenzene	ND		2.5	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	ND		25	2.8
95-50-1	1,2-Dichlorobenzene	ND		2.5	1.0
107-06-2	1,2-Dichloroethane	ND		2.5	1.0
78-87-5	1,2-Dichloropropane	ND		2.5	1.6
108-67-8	1,3,5-Trimethylbenzene	ND		2.5	1.5
541-73-1	1,3-Dichlorobenzene	ND		2.5	1.0
142-28-9	1,3-Dichloropropane	ND		2.5	1.1
106-46-7	1,4-Dichlorobenzene	ND		2.5	1.0
123-91-1	1,4-Dioxane	ND		250	100
594-20-7	2,2-Dichloropropane	ND		2.5	2.1
78-93-3	2-Butanone (MEK)	ND		25	11
95-49-8	2-Chlorotoluene	ND		2.5	1.3
591-78-6	2-Hexanone	ND		25	14
106-43-4	4-Chlorotoluene	ND		2.5	1.2
99-87-6	4-Isopropyltoluene	ND		2.5	1.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		25	10
67-64-1	Acetone	ND		250	17
71-43-2	Benzene	ND		2.5	1.6
108-86-1	Bromobenzene	ND		2.5	1.0
75-25-2	Bromoform	ND		2.5	1.6
74-83-9	Bromomethane	ND		5.0	2.3
75-15-0	Carbon disulfide	ND		2.5	1.9
56-23-5	Carbon tetrachloride	ND		2.5	1.7
108-90-7	Chlorobenzene	ND		2.5	1.2
74-97-5	Chlorobromomethane	ND		2.5	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Client Sample ID: Lab Sample ID: MB 360-66088/3-A

Matrix: Solid Lab File ID: V50050.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(g) Date Analyzed: 11/18/2010 18:00

Soil Aliquot Vol: 5 (mL) Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VMS ID: 0.25(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 66094 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Chlorodibromomethane	ND		2.5	1.2
75-00-3	Chloroethane	ND		5.0	2.0
67-66-3	Chloroform	ND		2.5	1.5
74-87-3	Chloromethane	ND		5.0	1.6
156-59-2	cis-1,2-Dichloroethene	ND		2.5	1.2
10061-01-5	cis-1,3-Dichloropropene	ND		2.5	1.0
74-95-3	Dibromomethane	ND		2.5	1.3
75-27-4	Dichlorobromomethane	ND		2.5	1.3
75-71-8	Dichlorodifluoromethane	ND		5.0	2.1
60-29-7	Ethyl ether	ND		2.5	1.1
100-41-4	Ethylbenzene	ND		2.5	1.8
106-93-4	Ethylene Dibromide	ND		2.5	1.1
87-68-3	Hexachlorobutadiene	ND		2.5	1.5
108-20-3	Isopropyl ether	ND		2.5	1.1
98-82-8	Isopropylbenzene	ND		2.5	1.5
179601-23-1	m-Xylene & p-Xylene	ND		5.0	3.5
1634-04-4	Methyl tert-butyl ether	ND		2.5	1.5
75-09-2	Methylene Chloride	ND		10	9.8
104-51-8	n-Butylbenzene	ND		2.5	1.2
103-65-1	N-Propylbenzene	ND		2.5	1.7
91-20-3	Naphthalene	ND		25	2.3
95-47-6	o-Xylene	ND		2.5	1.3
135-98-8	sec-Butylbenzene	ND		2.5	1.4
100-42-5	Styrene	ND		2.5	1.0
994-05-8	Tert-amyl methyl ether	ND		2.5	1.5
637-92-3	Tert-butyl ethyl ether	ND		2.5	1.4
98-06-6	tert-Butylbenzene	ND		2.5	1.4
127-18-4	Tetrachloroethene	ND		2.5	1.8
109-99-9	Tetrahydrofuran	ND		25	12
108-88-3	Toluene	ND		2.5	1.8
156-60-5	trans-1,2-Dichloroethene	ND		2.5	1.6
10061-02-6	trans-1,3-Dichloropropene	ND		2.5	1.0
79-01-6	Trichloroethene	ND		2.5	2.1
75-69-4	Trichlorofluoromethane	ND		5.0	1.4
75-01-4	Vinyl chloride	ND		2.5	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		12	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Westfield
Job No.: 360-31096-1
SDG No.: 360-31096-1
Client Sample ID:
Lab Sample ID: MB 360-66088/3-A
Matrix: Solid
Lab File ID: V50050.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 5(g)
Date Analyzed: 11/18/2010 18:00
Soil Aliquot Vol: 5 (mL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66094
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-39-1	2,4,4-Trimethyl-1-pentene	ND		5.0	1.6
107-40-4	2,4,4-Trimethyl-2-pentene	ND		5.0	1.1
110-82-7	Cyclohexane	ND		25	1.0
79-20-9	Methyl acetate	ND		50	14
108-87-2	Methylcyclohexane	ND		2.5	1.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene	99		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130
1868-53-7	Dibromofluoromethane	90		70-130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Westfield
Job No.: 360-31096-1
SDG No.: 360-31096-1
Client Sample ID:
Lab Sample ID: MB 360-66088/3-A
Matrix: Solid
Lab File ID: V50050.D
Analysis Method: 8260C
Date Collected:
Sample wt/vol: 5(g)
Date Analyzed: 11/18/2010 18:00
Soil Aliquot Vol: 5 (mL)
Dilution Factor: 1
Soil Extract Vol.:
GC Column: RTX-VMS ID: 0.25(um)
% Moisture:
Level: (low/med) Low
Analysis Batch No.: 66094
Units: ug/Kg
Number TICs Found: 0
TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Instrument ID: HP #1 GC/MS Start Date: 11/18/2010 15:12

Analysis Batch Number: 66094 End Date: 11/19/2010 00:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 360-66094/2		11/18/2010 15:12	1	V50043.D	RTX-VMS 0.25(um)
CCVIS 360-66094/3		11/18/2010 16:00	1	V50045.D	RTX-VMS 0.25(um)
LCS 360-66088/1-A		11/18/2010 16:24	1	V50046.D	RTX-VMS 0.25(um)
LCSD 360-66088/2-A		11/18/2010 16:48	1	V50047.D	RTX-VMS 0.25(um)
MB 360-66088/3-A		11/18/2010 18:00	1	V50050.D	RTX-VMS 0.25(um)
360-31096-1	OC-SB-485-0.0/1.0-XXX	11/18/2010 18:24	1	V50051.D	RTX-VMS 0.25(um)
360-31096-2	OC-SB-485-11/13-XXX	11/18/2010 18:48	1	V50052.D	RTX-VMS 0.25(um)
360-31096-3	OC-SB-485-6.0/8.0-XXX	11/18/2010 19:12	1	V50053.D	RTX-VMS 0.25(um)
360-31096-4	OC-TBK-055	11/18/2010 19:36	1	V50054.D	RTX-VMS 0.25(um)
360-31096-5	OC-SB-488-0.0/1.0-XXX	11/18/2010 20:00	1	V50055.D	RTX-VMS 0.25(um)
360-31096-6	OC-SB-488-7.0/9.0-XXX	11/18/2010 20:24	1	V50056.D	RTX-VMS 0.25(um)
360-31096-7	OC-SB-490-0.0/1.0-XXX	11/18/2010 20:48	1	V50057.D	RTX-VMS 0.25(um)
360-31096-8	OC-SB-490-7.0/9.0-XXX	11/18/2010 21:12	1	V50058.D	RTX-VMS 0.25(um)
360-31096-9	OC-SB-494-0.0/1.0-XXX	11/18/2010 21:36	1	V50059.D	RTX-VMS 0.25(um)
360-31096-10	OC-SB-494-12/14-XXX	11/18/2010 22:00	1	V50060.D	RTX-VMS 0.25(um)
360-31096-11	OC-SB-494-6.0/8.0-XXX	11/18/2010 22:24	1	V50061.D	RTX-VMS 0.25(um)
360-31096-12	OC-SB-495-0.0/1.0-XXX	11/18/2010 22:48	1	V50062.D	RTX-VMS 0.25(um)
360-31096-13	OC-SB-495-4.0/6.0-XXX	11/18/2010 23:12	1	V50063.D	RTX-VMS 0.25(um)
360-31096-14	OC-SB-496-0.0/1.0-XXX	11/18/2010 23:37	1	V50064.D	RTX-VMS 0.25(um)
360-31096-15	OC-SB-496-5.0/6.5-XXX	11/19/2010 00:01	1	V50065.D	RTX-VMS 0.25(um)
360-31096-16	OC-TBK-056	11/19/2010 00:25	1	V50066.D	RTX-VMS 0.25(um)

GC/MS VOA Worksheet

Batch Number: 360-66088
Method: 5035
Analyst: Rouleau, Catherine M

Date Open: Nov 18 2010 2:00PM
Batch End:

Lab ID	Client ID	Method Chain	Basis	Initial weight/volume of sample	Final weight/volume of sample	Preservation Type
LCS~360-66088/1		5035, 8260C		5 g	5 g	DI Water
LCSD~360-66088/2		5035, 8260C		5 g	5 g	DI Water
MB~360-66088/3		5035, 8260C		5 g	5 g	DI Water
360-31096-A-1	OC-SB-485-0.0/1.0-XXX	5035, 8260C	T	4.63 g	5 g	DI Water
360-31096-A-2	OC-SB-485-11/13-XXX	5035, 8260C	T	6.96 g	5 g	DI Water
360-31096-A-3	OC-SB-485-6.0/8.0-XXX	5035, 8260C	T	6.35 g	5 g	DI Water
360-31096-A-4	OC-TBK-055	5035, 8260C	T	5.00 g	5 g	DI Water
360-31096-A-5	OC-SB-488-0.0/1.0-XXX	5035, 8260C	T	5.20 g	5 g	DI Water
360-31096-A-6	OC-SB-488-7.0/9.0-XXX	5035, 8260C	T	5.45 g	5 g	DI Water
360-31096-A-7	OC-SB-490-0.0/1.0-XXX	5035, 8260C	T	5.55 g	5 g	DI Water
360-31096-A-8	OC-SB-490-7.0/9.0-XXX	5035, 8260C	T	5.94 g	5 g	DI Water
360-31096-A-9	OC-SB-494-0.0/1.0-XXX	5035, 8260C	T	5.78 g	5 g	DI Water
360-31096-A-10	OC-SB-494-12/14-XXX	5035, 8260C	T	5.78 g	5 g	DI Water
360-31096-A-11	OC-SB-494-6.0/8.0-XXX	5035, 8260C	T	5.57 g	5 g	DI Water
360-31096-A-12	OC-SB-495-0.0/1.0-XXX	5035, 8260C	T	4.76 g	5 g	DI Water
360-31096-A-13	OC-SB-495-4.0/6.0-XXX	5035, 8260C	T	6.01 g	5 g	DI Water
360-31096-A-14	OC-SB-496-0.0/1.0-XXX	5035, 8260C	T	3.82 g	5 g	DI Water
360-31096-A-15	OC-SB-496-5.0/6.5-XXX	5035, 8260C	T	5.03 g	5 g	DI Water
360-31096-A-16	OC-TBK-056	5035, 8260C	T	5.00 g	5 g	DI Water

GC/MS VOA Worksheet

Batch Number: 360-66088
Method: 5035
Analyst: Rouleau, Catherine M

Date Open: Nov 18 2010 2:00PM
Batch End:

Comments

Lab ID	Client ID	Method Chain	Basis	Analysis comment
LCS~360-66088/1		5035, 8260C		
LCSD~360-66088/2		5035, 8260C		
MB~360-66088/3		5035, 8260C		
360-31096-A-1	OC-SB-485-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-2	OC-SB-485-11/13-XXX	5035, 8260C	T	1:1 ratio high
360-31096-A-3	OC-SB-485-6.0/8.0-XX X	5035, 8260C	T	1:1 ratio high
360-31096-A-4	OC-TBK-055	5035, 8260C	T	
360-31096-A-5	OC-SB-488-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-6	OC-SB-488-7.0/9.0-XX X	5035, 8260C	T	
360-31096-A-7	OC-SB-490-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-8	OC-SB-490-7.0/9.0-XX X	5035, 8260C	T	
360-31096-A-9	OC-SB-494-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-10	OC-SB-494-12/14-XXX	5035, 8260C	T	
360-31096-A-11	OC-SB-494-6.0/8.0-XX X	5035, 8260C	T	
360-31096-A-12	OC-SB-495-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-13	OC-SB-495-4.0/6.0-XX X	5035, 8260C	T	
360-31096-A-14	OC-SB-496-0.0/1.0-XX X	5035, 8260C	T	
360-31096-A-15	OC-SB-496-5.0/6.5-XX X	5035, 8260C	T	
360-31096-A-16	OC-TBK-056	5035, 8260C	T	

Batch Comment: 8260LL

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / II / III (circle one)

SITE: Olin Chemical Superfund Site Project #: 6107100016.12 SDG #: 360-31096-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
Data completeness				
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☐	☐	☐	Data summaries match EDD	
Holding Times and Preservation				
☑	☐	☐	Hold times met (Waters – Extract within 7 days, analyze within 40 days. Soils – extract within 14 days, analyze within 40 days)	
Instrument Performance Check (Tune)				
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
Initial Calibration				See below.
☐	☒	☐	%RSD less than or equal to 30%	
☑	☐	☐	RRF greater than or equal to 0.05	
Continuing Calibration				
☑	☐	☐	%D less than or equal to 25%	
☑	☐	☐	RRF greater than or equal to 0.05.	
Blank Contamination				Evaluate all blanks for contamination. Highest contaminant level used for action level.
☐	☑	☐	Method blank contamination	
☐	☐	☑	Equipment/Rinseate blank contamination	
Surrogate Recoveries				

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / II / III (circle one)

☑	☐	☐	Surrogates percent recovery criteria met: Soil = (base/neutral 30%-130%, acid 30%-130%) Water = (base/neutral 30%-130%, acid 15%-110%)	
Matrix Spikes and Laboratory Control Samples				
☐	☒	☐	MS/MSD percent recovery criteria met Soil and Water = (base/neutral 40%-140%, acid 30%-130%)	See below.
☑	☐	☐	MS/MSD RPD criteria met (soils <50%, water <30%)	
☑	☐	☐	LCS/LCSD percent recovery criteria met soil/water (base 40%-140%, acid 30%-130%)	
☑	☐	☐	LCS/LCSD RPD criteria met (soils <50%, water <30%)	
Field Duplicates				
☐	☐	☑	RPD criteria met (soils <50%, water <30%)	
Internal Standard				
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
Target Compounds				
☑	☐	☐	Reviewed narrative for anomalies	
Tentatively Identified Compounds (TICs)				
☐	☑	☐	TCL compounds reported as TICs	

Validator's Signature: _____

Date: 12/14/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

Initial Calibration:

The laboratory performed quadratic regressions for benzoic acid and 2,4-dintirophenol. The regression coefficient (r2) for benzoic acid (0.9890) and 2,4-dintirophenol (0.9810) was less than the QC limit of 0.99. Reported detections of benzoic acid were qualified estimated (J). Non-detect results for benzoic acid and 2,4-dinitrophenol were qualified estimated (UJ) at the reporting limits.

MS/MSD:

Sample OC-SB-485-11/13-XXX was selected for MS/MSD analysis. The MS and MSD percent recoveries of aniline (36 and 37) were less than the lower QC limit of 40. The result for aniline in the unspiked sample was non-detect and the reporting limit was qualified estimated (UJ).

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHECKED FOR COMPLETENESS
OF PARAMETERS ORDERED BY:
12/13/10

ANALYTICAL REPORT

Job Number: 360-31096-1

SDG Number: 360-31096-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
11/23/2010 3:05 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
11/23/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE

Client: Olin Corporation

Project: Olin Chemical Superfund Site

Report Number: 360-31096-1

Samples were analyzed in accordance with analytical methods, SOPs, and QA/QC goals described in the Olin Chemical Superfund Site Remedial Investigation /Feasibility Study Work Plan Volume III-B Quality Assurance Project Plan (QAPP) August 14, 2009. Analytical methods include USEPA published methods for the majority of analytes. Custom laboratory methods that were developed by Test America are also used for a subset of analytes as described in the QAPP. Analytical QA/QC goals from the Massachusetts Contingency Plan (MCP) Compendium of MCP Methods published by the Massachusetts Department of Environmental Protection (MassDEP) have been identified as project goals in the QAPP for those methods addressed in the Compendium. Analytical methods are run in accordance with both USEPA methodologies and MassDEP analytical guidelines. Analytical methods meet requirements of USEPA methods and MassDEP Presumptive Certainty goals unless discussed in this narrative.

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

For those methods contained in the MassDEP Compendium, a separate MCP Analytical Method Report Certification Form is included for each method requested.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may be greater than project QLs identified in the QAPP. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes which exceed the calibration range.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/15/2010 and 11/16/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 and 3.6C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-TBK-055 (360-31096-4), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14), OC-SB-496-5.0/6.5-XXX (360-31096-15) and OC-TBK-056 (360-31096-16) were analyzed for volatile organic compounds (GC-MS) in accordance with SW846 8260C. The samples were prepared on 11/18/2010 and analyzed on 11/18/2010 and 11/19/2010.

For samples 360-31096-(1-16), Acetone failed the recovery criteria low for LCS/LCSD 360-66088/1-A. Refer to the QC report for details.

The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66094: acetone(low), methyl acetate(low), Methyl tert-butyl ether (low), Tert-butyl ethyl ether (low), 2-Butanone [MEK] (low), 1,2-dichloroethane(low), 4-Methyl-2-pentanone [MIBK] (low), and 1,2,4-Trimethylbenzene(high). Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for 14 analytes being outside limits; therefore, the data has been reported and flagged on the Form VII.

General method information:
Samples 360-31096-(2-3) in batch 66094 had a ratio of DI Water to soil above the method standard.

No other difficulties were encountered during the VOC analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL

Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10),

OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/18/2010 and analyzed on 11/20/2010.

Aniline failed the recovery criteria low for the MS/MSD of sample OC-SB-485-11/13-XXXMS (360-31096-2) in batch 360-66135. The associated laboratory control sample (LCS) recovery met acceptance criteria. Refer to the QC report for details.

For samples 360-31096-(1-3,5-15), the continuing calibration verification (CCV) for analytical batch 66135 exceeded control criteria high for 2,4-Dinitrophenol and Benzoic acid.

General method information:
The 11/19/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid, 2-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 2,3,4,6-Tetrachlorophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, and Di-n-octyl phthalate. Benzoic Acid (r value 0.989), 2,4-Dinitrophenol (0.981), 4,6-Dinitro-2-methylphenol (0.988), did not meet 0.990 curve criteria.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-TBK-055 (360-31096-4), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14), OC-SB-496-5.0/6.5-XXX (360-31096-15) and OC-TBK-056 (360-31096-16) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/17/2010 and analyzed on 11/20/2010.

General method information:
At the request of the client, only the carbon ranges are reported for this job.

The 09/20/10 calibration curve has a quadratic curve fit for the following compounds: m & p-Xylene, o-Xylene, and Naphthalene.

Sample 360-31096- (2) in batch 66164 had a ratio of methanol to soil above the method standard.

No other difficulties were encountered during the VPH analyses.

All quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/18/2010 and analyzed on 11/19/2010.

General method information:
According to EPH method reference 11.2.6.2, using GC/MS, the laboratory has identified a single component contaminant that appears at the same retention time in all laboratory and field samples. This contaminant is derived from the method's SPE cartridge and is not included in the calculation of the C11-C22 Aromatics range.

The 11/16/10 calibration curve has a quadratic curve fit for the following compounds: Phenanthrene.

At the request of the client, only the carbon ranges are reported for this job.

No difficulties were encountered during the EPH analyses.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for percent solids in accordance with EPA Moisture. The samples were analyzed on 11/17/2010.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31096-1	OC-SB-485-0.0/1.0-XXX	Solid	11/15/2010 1200	11/15/2010 1730
360-31096-2	OC-SB-485-11/13-XXX	Solid	11/15/2010 1210	11/15/2010 1730
360-31096-3	OC-SB-485-6.0/8.0-XXX	Solid	11/15/2010 1205	11/15/2010 1730
360-31096-4	OC-TBK-055	Solid	11/15/2010 1200	11/15/2010 1730
360-31096-5	OC-SB-488-0.0/1.0-XXX	Solid	11/15/2010 1530	11/16/2010 1720
360-31096-6	OC-SB-488-7.0/9.0-XXX	Solid	11/15/2010 1540	11/16/2010 1720
360-31096-7	OC-SB-490-0.0/1.0-XXX	Solid	11/16/2010 1105	11/16/2010 1720
360-31096-8	OC-SB-490-7.0/9.0-XXX	Solid	11/16/2010 1115	11/16/2010 1720
360-31096-9	OC-SB-494-0.0/1.0-XXX	Solid	11/16/2010 1200	11/16/2010 1720
360-31096-10	OC-SB-494-12/14-XXX	Solid	11/16/2010 1210	11/16/2010 1720
360-31096-11	OC-SB-494-6.0/8.0-XXX	Solid	11/16/2010 1205	11/16/2010 1720
360-31096-12	OC-SB-495-0.0/1.0-XXX	Solid	11/16/2010 1315	11/16/2010 1720
360-31096-13	OC-SB-495-4.0/6.0-XXX	Solid	11/16/2010 1320	11/16/2010 1720
360-31096-14	OC-SB-496-0.0/1.0-XXX	Solid	11/16/2010 1355	11/16/2010 1720
360-31096-15	OC-SB-496-5.0/6.5-XXX	Solid	11/16/2010 1405	11/16/2010 1720
360-31096-16	OC-TBK-056	Solid	11/16/2010 1105	11/16/2010 1720

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13463A.D
Dilution:	1.0			Initial Weight/Volume:	30.37 g
Date Analyzed:	11/20/2010 0457			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	36
1,2,4,5-Tetrachlorobenzene		ND		20	36
1,2,4-Trichlorobenzene		ND		20	36
1,2-Dichlorobenzene		ND		20	36
1,3-Dichlorobenzene		ND		20	36
1,4-Dichlorobenzene		ND		20	36
1-Methylnaphthalene		ND		20	36
2,2'-oxybis[1-chloropropane]		ND		20	36
2,3,4,6-Tetrachlorophenol		ND		20	36
2,4,5-Trichlorophenol		ND		20	36
2,4,6-Trichlorophenol		ND		20	36
2,4-Dichlorophenol		ND		20	36
2,4-Dimethylphenol		ND		20	36
2,4-Dinitrophenol	UDJ	ND R		20	36
2,4-Dinitrotoluene		ND		20	36
2,6-Dinitrotoluene		ND		20	36
2-Chloronaphthalene		ND		20	36
2-Chlorophenol		ND		20	36
2-Methylnaphthalene		ND		20	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		20	180
2-Nitrophenol		ND		20	36
3 & 4 Methylphenol		ND		20	36
3,3'-Dichlorobenzidine		ND		20	73
3-Nitroaniline		ND		20	180
4,6-Dinitro-2-methylphenol		ND		20	180
4-Bromophenyl phenyl ether		ND		20	36
4-Chloro-3-methylphenol		ND		20	73
4-Chloroaniline		ND		20	73
4-Chlorophenyl phenyl ether		ND		20	36
4-Nitroaniline		ND		20	180
4-Nitrophenol		ND		20	180
Acenaphthene		ND		20	36
Acenaphthylene		ND		20	36
Acetophenone		36		20	36
Aniline		ND		20	36
Anthracene		ND		20	36
Atrazine		ND		20	36
Azobenzene		ND		20	36
Benzaldehyde		ND		20	36
Benzo[a]anthracene		ND		20	36
Benzo[a]pyrene		ND		20	36
Benzo[b]fluoranthene		ND		20	36
Benzo[g,h,i]perylene		ND		20	36
Benzo[k]fluoranthene		ND		20	36
Benzoic acid		180 J		20	180

11/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13463A.D
Dilution:	1.0			Initial Weight/Volume:	30.37 g
Date Analyzed:	11/20/2010 0457			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20	36
Benzyl alcohol		ND		31	73
Bis(2-chloroethoxy)methane		ND		20	36
Bis(2-chloroethyl)ether		ND		20	36
Bis(2-ethylhexyl) phthalate		26	J	20	36
Butyl benzyl phthalate		ND		20	36
Caprolactam		ND		20	36
Carbazole		ND		20	36
Chrysene		ND		20	36
Dibenz(a,h)anthracene		ND		20	36
Dibenzofuran		ND		20	36
Diethyl phthalate		ND		20	36
Dimethyl phthalate		ND		20	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		20	36
Fluoranthene		ND		20	36
Fluorene		ND		20	36
Hexachlorobenzene		ND		20	36
Hexachlorobutadiene		ND		20	36
Hexachlorocyclopentadiene		ND		20	73
Hexachloroethane		ND		20	36
Indeno[1,2,3-cd]pyrene		ND		20	36
Isophorone		ND		20	36
Naphthalene		74	J	20	87
Nitrobenzene		ND		20	36
N-Nitrosodi-n-propylamine		ND		20	36
N-Nitrosodiphenylamine		ND		20	36
Pentachlorophenol		ND		20	36
Phenanthrene		ND		20	44
Phenol		ND		20	36
Diphenyl oxide		ND		20	36
Pyrene		ND		20	36
N-Nitrosodimethylamine		ND		20	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	81		30 - 130
2-Fluorobiphenyl	65		30 - 130
2-Fluorophenol	66		30 - 130
Nitrobenzene-d5	67		30 - 130
Phenol-d5	68		30 - 130
Terphenyl-d14	90		30 - 130

12/13/10

Analytical Data

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13463A.D
Dilution:	1.0			Initial Weight/Volume:	30.37 g
Date Analyzed:	11/20/2010 0457			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.58	22000	T J ✓
~~108-38-3~~	~~Benzene, 1,3-dimethyl-~~	~~5.95~~	~~310~~	~~T J N~~
108-38-3	Benzene, 1,3-dimethyl-	6.29	~~130~~ 440	T J N
620-14-4	Benzene, 1-ethyl-3-methyl-	7.17	120	T J N
526-73-8	Benzene, 1,2,3-trimethyl-	7.56	310	T J N
933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	8.46	120	T J N
18435-45-5	1-Nonadecene	15.46	580	T J N
629-96-9	1-Eicosanol	16.00	1100	T J N
~~7683-64-9~~	~~Squalene~~	~~16.36~~	~~150~~	~~J N~~
	Unknown	20.98	150	T J ✓

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13464A.D
Dilution:	1.0			Initial Weight/Volume:	30.92 g
Date Analyzed:	11/20/2010 0532			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol	NDJ	~~ND~~		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		21	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	71
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	71
4-Chloroaniline		ND		19	71
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND	J	19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		50	J	19	180

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13464A.D
Dilution:	1.0			Initial Weight/Volume:	30.92 g
Date Analyzed:	11/20/2010 0532			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		30	71
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		ND		19	36
Butyl benzyl phthalate		ND		19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		31	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		ND		19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	71
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		ND		19	85
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		ND		19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	85		30 - 130
2-Fluorobiphenyl	69		30 - 130
2-Fluorophenol	68		30 - 130
Nitrobenzene-d5	70		30 - 130
Phenol-d5	73		30 - 130
Terphenyl-d14	86		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid % Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13464A.D
Dilution:	1.0			Initial Weight/Volume:	30.92 g
Date Analyzed:	11/20/2010 0532			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	4.58	37	J N
	Unknown	5.58	23000	J
	Unknown	6.41	77	J
	~~Unknown~~	~~6.56~~	~~24~~	~~J~~
~~111-77-3~~	~~Ethanol, 2-(2-methoxyethoxy)-~~	~~6.78~~	~~48~~	~~J N~~
	Unknown	9.33	41	J
2885-0-9	1-Octadecanethiol	15.46	55	J N
	Unknown	15.99	24	J
301-2-0	9-Octadecenamide, (Z)-	16.27	23	J N
~~7683-64-9~~	~~Squalene~~	~~16.36~~	~~270~~	~~J N~~

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13467A.D
Dilution:	1.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/20/2010 0717			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		ND UJ		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		21	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	71
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	71
4-Chloroaniline		ND		19	71
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		44	J	19	180

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-486-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13467A.D
Dilution:	1.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/20/2010 0717			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		30	71
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		ND		19	36
Butyl benzyl phthalate		ND		19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		31	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		ND		19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	71
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		ND		19	86
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		ND		19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	82		30 - 130
2-Fluorobiphenyl	70		30 - 130
2-Fluorophenol	69		30 - 130
Nitrobenzene-d5	70		30 - 130
Phenol-d5	73		30 - 130
Terphenyl-d14	87		30 - 130

Analytical Data

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid % Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13467A.D
Dilution:	1.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/20/2010 0717			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
763-93-9	3-Hexen-2-one	4.60	42	J N
	~~Unknown~~	~~5.60~~	~~24000~~	~~J~~
	Unknown	6.42	83	J
~~111-77-3~~	~~Ethanol, 2-(2-methoxyethoxy)-~~	~~6.78~~	~~50~~	~~J N~~
104-76-7	1-Hexanol, 2-ethyl-	7.87	40	J N
	~~Unknown~~	~~9.33~~	~~41~~	~~J~~
57-10-3	n-Hexadecanoic acid	13.75	31	J N
1000131-11-8	Z-5-Nonadecene	15.46	49	J N
	Unknown	15.87	24	J
~~7683-64-9~~	~~Squalene~~	~~16.35~~	~~300~~	~~J N~~

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13468A.D
Dilution:	1.0			Initial Weight/Volume:	30.32 g
Date Analyzed:	11/20/2010 0752			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		18	34
1,2,4,5-Tetrachlorobenzene		ND		18	34
1,2,4-Trichlorobenzene		ND		18	34
1,2-Dichlorobenzene		ND		18	34
1,3-Dichlorobenzene		ND		18	34
1,4-Dichlorobenzene		ND		18	34
1-Methylnaphthalene		ND		18	34
2,2'-oxybis[1-chloropropane]		ND		18	34
2,3,4,6-Tetrachlorophenol		ND		18	34
2,4,5-Trichlorophenol		ND		18	34
2,4,6-Trichlorophenol		ND		18	34
2,4-Dichlorophenol		ND		18	34
2,4-Dimethylphenol		ND		18	34
2,4-Dinitrophenol		ND J ~~ND~~		18	34
2,4-Dinitrotoluene		ND		18	34
2,6-Dinitrotoluene		ND		18	34
2-Chloronaphthalene		ND		18	34
2-Chlorophenol		ND		18	34
2-Methylnaphthalene		ND		18	34
2-Methylphenol		ND		20	34
2-Nitroaniline		ND		18	170
2-Nitrophenol		ND		18	34
3 & 4 Methylphenol		ND		18	34
3,3'-Dichlorobenzidine		ND		18	68
3-Nitroaniline		ND		18	170
4,6-Dinitro-2-methylphenol		ND		18	170
4-Bromophenyl phenyl ether		ND		18	34
4-Chloro-3-methylphenol		ND		18	68
4-Chloroaniline		ND		18	68
4-Chlorophenyl phenyl ether		ND		18	34
4-Nitroaniline		ND		18	170
4-Nitrophenol		ND		18	170
Acenaphthene		ND		18	34
Acenaphthylene		ND		18	34
Acetophenone		ND		18	34
Aniline		ND		18	34
Anthracene		ND		18	34
Atrazine		ND		18	34
Azobenzene		ND		18	34
Benzaldehyde		ND		18	34
Benzo[a]anthracene		ND		18	34
Benzo[a]pyrene		ND		18	34
Benzo[b]fluoranthene		ND		18	34
Benzo[g,h,i]perylene		ND		18	34
Benzo[k]fluoranthene		ND		18	34
Benzoic acid		44	J	18	170

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid % Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13468A.D
Dilution:	1.0			Initial Weight/Volume:	30.32 g
Date Analyzed:	11/20/2010 0752			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		18	34
Benzyl alcohol		ND		29	68
Bis(2-chloroethoxy)methane		ND		18	34
Bis(2-chloroethyl)ether		ND		18	34
Bis(2-ethylhexyl) phthalate		ND		18	34
Butyl benzyl phthalate		ND		18	34
Caprolactam		ND		18	34
Carbazole		ND		18	34
Chrysene		ND		18	34
Dibenz(a,h)anthracene		ND		18	34
Dibenzofuran		ND		18	34
Diethyl phthalate		ND		18	34
Dimethyl phthalate		ND		18	34
Di-n-butyl phthalate		ND		30	34
Di-n-octyl phthalate		ND		18	34
Fluoranthene		ND		18	34
Fluorene		ND		18	34
Hexachlorobenzene		ND		18	34
Hexachlorobutadiene		ND		18	34
Hexachlorocyclopentadiene		ND		18	68
Hexachloroethane		ND		18	34
Indeno[1,2,3-cd]pyrene		ND		18	34
Isophorone		ND		18	34
Naphthalene		ND		18	81
Nitrobenzene		ND		18	34
N-Nitrosodi-n-propylamine		ND		18	34
N-Nitrosodiphenylamine		ND		18	34
Pentachlorophenol		ND		18	34
Phenanthrene		ND		18	41
Phenol		ND		18	34
Diphenyl oxide		ND		18	34
Pyrene		ND		18	34
N-Nitrosodimethylamine		ND		18	34

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	77		30 - 130
2-Fluorobiphenyl	69		30 - 130
2-Fluorophenol	69		30 - 130
Nitrobenzene-d5	68		30 - 130
Phenol-d5	72		30 - 130
Terphenyl-d14	87		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid % Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13468A.D
Dilution:	1.0			Initial Weight/Volume:	30.32 g
Date Analyzed:	11/20/2010 0752			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	4.59	35	T J N
	Unknown	5.59	22000	T J ~
~~111-76-2~~	~~Ethanol, 2-butoxy-~~	~~6.42~~	~~110~~	~~T J N~~
	~~Unknown~~	~~6.56~~	~~23~~	~~T J~~
~~111-77-3~~	~~Ethanol, 2-(2-methoxyethoxy)~~	~~6.78~~	~~51~~	~~T J N~~
	~~Unknown~~	~~9.33~~	~~37~~	~~T J~~
57-10-3	n-Hexadecanoic acid	13.75	22	T J N
74685-30-6	5-Eicosene, (E)-	15.46	130	T J N
	Unknown	16.00	51	T J ~
~~7683-64-9~~	~~Squalene~~	~~16.35~~	~~200~~	~~T J N~~

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13469A.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/20/2010 0827			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	35
1,2,4,5-Tetrachlorobenzene		ND		19	35
1,2,4-Trichlorobenzene		ND		19	35
1,2-Dichlorobenzene		ND		19	35
1,3-Dichlorobenzene		ND		19	35
1,4-Dichlorobenzene		ND		19	35
1-Methylnaphthalene		ND		19	35
2,2'-oxybis[1-chloropropane]		ND		19	35
2,3,4,6-Tetrachlorophenol		ND		19	35
2,4,5-Trichlorophenol		ND		19	35
2,4,6-Trichlorophenol		ND		19	35
2,4-Dichlorophenol		ND		19	35
2,4-Dimethylphenol		ND		19	35
2,4-Dinitrophenol		MDJ ~~ND~~ R		19	35
2,4-Dinitrotoluene		ND		19	35
2,6-Dinitrotoluene		ND		19	35
2-Chloronaphthalene		ND		19	35
2-Chlorophenol		ND		19	35
2-Methylnaphthalene		ND		19	35
2-Methylphenol		ND		21	35
2-Nitroaniline		ND		19	170
2-Nitrophenol		ND		19	35
3 & 4 Methylphenol		ND		19	35
3,3'-Dichlorobenzidine		ND		19	69
3-Nitroaniline		ND		19	170
4,6-Dinitro-2-methylphenol		ND		19	170
4-Bromophenyl phenyl ether		ND		19	35
4-Chloro-3-methylphenol		ND		19	69
4-Chloroaniline		ND		19	69
4-Chlorophenyl phenyl ether		ND		19	35
4-Nitroaniline		ND		19	170
4-Nitrophenol		ND		19	170
Acenaphthene		ND		19	35
Acenaphthylene		ND		19	35
Acetophenone		ND		19	35
Aniline		ND		19	35
Anthracene		ND		19	35
Atrazine		ND		19	35
Azobenzene		ND		19	35
Benzaldehyde		ND		19	35
Benzo[a]anthracene		ND		19	35
Benzo[a]pyrene		ND		19	35
Benzo[b]fluoranthene		ND		19	35
Benzo[g,h,i]perylene		ND		19	35
Benzo[k]fluoranthene		ND		19	35
Benzoic acid		MDJ ~~ND~~ R		19	170

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid % Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13469A.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/20/2010 0827			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	35
Benzyl alcohol		ND		30	69
Bis(2-chloroethoxy)methane		ND		19	35
Bis(2-chloroethyl)ether		ND		19	35
Bis(2-ethylhexyl) phthalate		ND		19	35
Butyl benzyl phthalate		ND		19	35
Caprolactam		ND		19	35
Carbazole		ND		19	35
Chrysene		ND		19	35
Dibenz(a,h)anthracene		ND		19	35
Dibenzofuran		ND		19	35
Diethyl phthalate		ND		19	35
Dimethyl phthalate		ND		19	35
Di-n-butyl phthalate		ND		30	35
Di-n-octyl phthalate		ND		19	35
Fluoranthene		ND		19	35
Fluorene		ND		19	35
Hexachlorobenzene		ND		19	35
Hexachlorobutadiene		ND		19	35
Hexachlorocyclopentadiene		ND		19	69
Hexachloroethane		ND		19	35
Indeno[1,2,3-cd]pyrene		ND		19	35
Isophorone		ND		19	35
Naphthalene		ND		19	83
Nitrobenzene		ND		19	35
N-Nitrosodi-n-propylamine		ND		19	35
N-Nitrosodiphenylamine		ND		19	35
Pentachlorophenol		ND		19	35
Phenanthrene		ND		19	42
Phenol		ND		19	35
Diphenyl oxide		ND		19	35
Pyrene		ND		19	35
N-Nitrosodimethylamine		ND		19	35

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	84		30 - 130
2-Fluorobiphenyl	70		30 - 130
2-Fluorophenol	69		30 - 130
Nitrobenzene-d5	70		30 - 130
Phenol-d5	75		30 - 130
Terphenyl-d14	87		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid % Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13469A.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/20/2010 0827			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	4.59	40	T J N
	Unknown	5.80	24000	T J
111-76-2	Ethanol, 2-butoxy-	6.42	110	T J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	6.78	54	T J N
526-73-8	Benzene, 1,2,3-trimethyl-	7.55	56	T J N
	Unknown	9.33	40	T J
74685-30-6	5-Eicosene, (E)-	15.47	65	T J N
112-84-5	Erucylamide	16.27	35	T J N
7683-64-9	Squalene	16.35	190	J N
	Unknown	16.97	34	T J

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13470A.D
Dilution:	1.0			Initial Weight/Volume:	30.87 g
Date Analyzed:	11/20/2010 0902			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	35
1,2,4,5-Tetrachlorobenzene		ND		19	35
1,2,4-Trichlorobenzene		ND		19	35
1,2-Dichlorobenzene		ND		19	35
1,3-Dichlorobenzene		ND		19	35
1,4-Dichlorobenzene		ND		19	35
1-Methylnaphthalene		ND		19	35
2,2'-oxybis[1-chloropropane]		ND		19	35
2,3,4,6-Tetrachlorophenol		ND		19	35
2,4,5-Trichlorophenol		ND		19	35
2,4,6-Trichlorophenol		ND		19	35
2,4-Dichlorophenol		ND		19	35
2,4-Dimethylphenol		ND		19	35
2,4-Dinitrophenol		NO J ~~ND~~		19	35
2,4-Dinitrotoluene		ND		19	35
2,6-Dinitrotoluene		ND		19	35
2-Chloronaphthalene		ND		19	35
2-Chlorophenol		ND		19	35
2-Methylnaphthalene		ND		19	35
2-Methylphenol		ND		21	35
2-Nitroaniline		ND		19	170
2-Nitrophenol		ND		19	35
3 & 4 Methylphenol		ND		19	35
3,3'-Dichlorobenzidine		ND		19	70
3-Nitroaniline		ND		19	170
4,6-Dinitro-2-methylphenol		ND		19	170
4-Bromophenyl phenyl ether		ND		19	35
4-Chloro-3-methylphenol		ND		19	70
4-Chloroaniline		ND		19	70
4-Chlorophenyl phenyl ether		ND		19	35
4-Nitroaniline		ND		19	170
4-Nitrophenol		ND		19	170
Acenaphthene		ND		19	35
Acenaphthylene		ND		19	35
Acetophenone		ND		19	35
Aniline		ND		19	35
Anthracene		ND		19	35
Atrazine		ND		19	35
Azobenzene		ND		19	35
Benzaldehyde		ND		19	35
Benzo[a]anthracene		ND		19	35
Benzo[a]pyrene		ND		19	35
Benzo[b]fluoranthene		ND		19	35
Benzo[g,h,i]perylene		ND		19	35
Benzo[k]fluoranthene		ND		19	35
Benzoic acid		33	J	19	170

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13470A.D
Dilution:	1.0			Initial Weight/Volume:	30.87 g
Date Analyzed:	11/20/2010 0902			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	35
Benzyl alcohol		ND		30	70
Bis(2-chloroethoxy)methane		ND		19	35
Bis(2-chloroethyl)ether		ND		19	35
Bis(2-ethylhexyl) phthalate		ND		19	35
Butyl benzyl phthalate		ND		19	35
Caprolactam		ND		19	35
Carbazole		ND		19	35
Chrysene		ND		19	35
Dibenz(a,h)anthracene		ND		19	35
Dibenzofuran		ND		19	35
Diethyl phthalate		ND		19	35
Dimethyl phthalate		ND		19	35
Di-n-butyl phthalate		ND		31	35
Di-n-octyl phthalate		ND		19	35
Fluoranthene		ND		19	35
Fluorene		ND		19	35
Hexachlorobenzene		ND		19	35
Hexachlorobutadiene		ND		19	35
Hexachlorocyclopentadiene		ND		19	70
Hexachloroethane		ND		19	35
Indeno[1,2,3-cd]pyrene		ND		19	35
Isophorone		ND		19	35
Naphthalene		ND		19	84
Nitrobenzene		ND		19	35
N-Nitrosodi-n-propylamine		ND		19	35
N-Nitrosodiphenylamine		ND		19	35
Pentachlorophenol		ND		19	35
Phenanthrene		ND		19	42
Phenol		ND		19	35
Diphenyl oxide		ND		19	35
Pyrene		ND		19	35
N-Nitrosodimethylamine		ND		19	35

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	79		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	66		30 - 130
Nitrobenzene-d5	65		30 - 130
Phenol-d5	70		30 - 130
Terphenyl-d14	87		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13470A.D
Dilution:	1.0			Initial Weight/Volume:	30.87 g
Date Analyzed:	11/20/2010 0902			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	4.59	35	J N
	Unknown	5.59	22000	J
~~111-76-2~~	~~Ethanol, 2-butoxy-~~	~~6.42~~	~~92~~	~~J N~~
	~~Unknown~~	~~6.56~~	~~21~~	~~J~~
~~111-77-3~~	~~Ethanol, 2-(2-methoxyethoxy)-~~	~~6.78~~	~~50~~	~~J N~~
	Unknown	7.58	18	J
	Unknown	7.69	20	J
	~~Unknown~~	~~9.33~~	~~34~~	~~J~~
57-10-3	n-Hexadecanoic acid	13.75	29	J N
~~7683-64-9~~	~~Squalene~~	~~16.35~~	~~260~~	~~J N~~

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13471A.D
Dilution:	1.0			Initial Weight/Volume:	30.28 g
Date Analyzed:	11/20/2010 0936			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		18	34
1,2,4,5-Tetrachlorobenzene		ND		18	34
1,2,4-Trichlorobenzene		ND		18	34
1,2-Dichlorobenzene		ND		18	34
1,3-Dichlorobenzene		ND		18	34
1,4-Dichlorobenzene		ND		18	34
1-Methylnaphthalene		ND		18	34
2,2'-oxybis[1-chloropropane]		ND		18	34
2,3,4,6-Tetrachlorophenol		ND		18	34
2,4,5-Trichlorophenol		ND		18	34
2,4,6-Trichlorophenol		ND		18	34
2,4-Dichlorophenol		ND		18	34
2,4-Dimethylphenol		ND		18	34
2,4-Dinitrophenol		NDJ ~~ND~~		18	34
2,4-Dinitrotoluene		ND		18	34
2,6-Dinitrotoluene		ND		18	34
2-Chloronaphthalene		ND		18	34
2-Chlorophenol		ND		18	34
2-Methylnaphthalene		ND		18	34
2-Methylphenol		ND		21	34
2-Nitroaniline		ND		18	170
2-Nitrophenol		ND		18	34
3 & 4 Methylphenol		ND		18	34
3,3'-Dichlorobenzidine		ND		18	68
3-Nitroaniline		ND		18	170
4,6-Dinitro-2-methylphenol		ND		18	170
4-Bromophenyl phenyl ether		ND		18	34
4-Chloro-3-methylphenol		ND		18	68
4-Chloroaniline		ND		18	68
4-Chlorophenyl phenyl ether		ND		18	34
4-Nitroaniline		ND		18	170
4-Nitrophenol		ND		18	170
Acenaphthene		ND		18	34
Acenaphthylene		ND		18	34
Acetophenone		ND		18	34
Aniline		ND		18	34
Anthracene		ND		18	34
Atrazine		ND		18	34
Azobenzene		ND		18	34
Benzaldehyde		ND		18	34
Benzo[a]anthracene		ND		18	34
Benzo[a]pyrene		ND		18	34
Benzo[b]fluoranthene		ND		18	34
Benzo[g,h,i]perylene		ND		18	34
Benzo[k]fluoranthene		ND		18	34
Benzoic acid		NDJ ~~ND~~		18	170

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13471A.D
Dilution:	1.0			Initial Weight/Volume:	30.28 g
Date Analyzed:	11/20/2010 0936			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		18	34
Benzyl alcohol	ND		29	68
Bis(2-chloroethoxy)methane	ND		18	34
Bis(2-chloroethyl)ether	ND		18	34
Bis(2-ethylhexyl) phthalate	ND		18	34
Butyl benzyl phthalate	ND		18	34
Caprolactam	ND		18	34
Carbazole	ND		18	34
Chrysene	ND		18	34
Dibenz(a,h)anthracene	ND		18	34
Dibenzofuran	ND		18	34
Diethyl phthalate	ND		18	34
Dimethyl phthalate	ND		18	34
Di-n-butyl phthalate	ND		30	34
Di-n-octyl phthalate	ND		18	34
Fluoranthene	ND		18	34
Fluorene	ND		18	34
Hexachlorobenzene	ND		18	34
Hexachlorobutadiene	ND		18	34
Hexachlorocyclopentadiene	ND		18	68
Hexachloroethane	ND		18	34
Indeno[1,2,3-cd]pyrene	ND		18	34
Isophorone	ND		18	34
Naphthalene	ND		18	82
Nitrobenzene	ND		18	34
N-Nitrosodi-n-propylamine	ND		18	34
N-Nitrosodiphenylamine	ND		18	34
Pentachlorophenol	ND		18	34
Phenanthrene	ND		18	41
Phenol	ND		18	34
Diphenyl oxide	ND		18	34
Pyrene	ND		18	34
N-Nitrosodimethylamine	ND		18	34

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	79		30 - 130
2-Fluorobiphenyl	65		30 - 130
2-Fluorophenol	64		30 - 130
Nitrobenzene-d5	66		30 - 130
Phenol-d5	68		30 - 130
Terphenyl-d14	82		30 - 130

Analytical Data

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid % Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13471A.D
Dilution:	1.0			Initial Weight/Volume:	30.28 g
Date Analyzed:	11/20/2010 0936			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 10

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	4.59	40	T J N
	Unknown	5.59	21000	T J N
	Unknown	6.42	78	T J N
~~111-77-3~~	~~Ethanol, 2-(2-methoxyethoxy)~~	~~6.78~~	~~41~~	~~T J N~~
108-67-8	Benzene, 1,3,5-trimethyl-	7.55	37	T J N
~~-~~	~~Unknown~~	~~9.33~~	~~37~~	~~T J~~
1000216-79-4	Trifluoroacetic acid, n-octadecyl ester	15.47	110	T J N
297-3-0	Cyclotetracosane	16.01	110	T J N
~~7683-64-9~~	~~Squalene~~	~~16.35~~	~~220~~	~~T J N~~
	Unknown	20.96	42	T J N

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid % Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13472A.D
Dilution:	1.0			Initial Weight/Volume:	30.17 g
Date Analyzed:	11/20/2010 1011			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	35
1,2,4,5-Tetrachlorobenzene		ND		19	35
1,2,4-Trichlorobenzene		ND		19	35
1,2-Dichlorobenzene		ND		19	35
1,3-Dichlorobenzene		ND		19	35
1,4-Dichlorobenzene		ND		19	35
1-Methylnaphthalene		ND		19	35
2,2'-oxybis[1-chloropropane]		ND		19	35
2,3,4,6-Tetrachlorophenol		ND		19	35
2,4,5-Trichlorophenol		ND		19	35
2,4,6-Trichlorophenol		ND		19	35
2,4-Dichlorophenol		ND		19	35
2,4-Dimethylphenol		ND		19	35
2,4-Dinitrophenol	NDJ	~~ND~~ R		19	35
2,4-Dinitrotoluene		ND		19	35
2,6-Dinitrotoluene		ND		19	35
2-Chloronaphthalene		ND		19	35
2-Chlorophenol		ND		19	35
2-Methylnaphthalene		ND		19	35
2-Methylphenol		ND		21	35
2-Nitroaniline		ND		19	170
2-Nitrophenol		ND		19	35
3 & 4 Methylphenol		ND		19	35
3,3'-Dichlorobenzidine		ND		19	70
3-Nitroaniline		ND		19	170
4,6-Dinitro-2-methylphenol		ND		19	170
4-Bromophenyl phenyl ether		ND		19	35
4-Chloro-3-methylphenol		ND		19	70
4-Chloroaniline		ND		19	70
4-Chlorophenyl phenyl ether		ND		19	35
4-Nitroaniline		ND		19	170
4-Nitrophenol		ND		19	170
Acenaphthene		ND		19	35
Acenaphthylene		ND		19	35
Acetophenone		ND		19	35
Aniline		ND		19	35
Anthracene		ND		19	35
Atrazine		ND		19	35
Azobenzene		ND		19	35
Benzaldehyde		150		19	35
Benzo[a]anthracene		ND		19	35
Benzo[a]pyrene		ND		19	35
Benzo[b]fluoranthene		ND		19	35
Benzo[g,h,i]perylene		ND		19	35
Benzo[k]fluoranthene		ND		19	35
Benzoic acid		79	J	19	170

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid % Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13472A.D
Dilution:	1.0			Initial Weight/Volume:	30.17 g
Date Analyzed:	11/20/2010 1011			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		19	35
Benzyl alcohol	ND		30	70
Bis(2-chloroethoxy)methane	ND		19	35
Bis(2-chloroethyl)ether	ND		19	35
Bis(2-ethylhexyl) phthalate	ND		19	35
Butyl benzyl phthalate	ND		19	35
Caprolactam	ND		19	35
Carbazole	ND		19	35
Chrysene	ND		19	35
Dibenz(a,h)anthracene	ND		19	35
Dibenzofuran	ND		19	35
Diethyl phthalate	ND		19	35
Dimethyl phthalate	ND		19	35
Di-n-butyl phthalate	ND		31	35
Di-n-octyl phthalate	ND		19	35
Fluoranthene	ND		19	35
Fluorene	ND		19	35
Hexachlorobenzene	ND		19	35
Hexachlorobutadiene	ND		19	35
Hexachlorocyclopentadiene	ND		19	70
Hexachloroethane	ND		19	35
Indeno[1,2,3-cd]pyrene	ND		19	35
Isophorone	ND		19	35
Naphthalene	ND		19	84
Nitrobenzene	ND		19	35
N-Nitrosodi-n-propylamine	ND		19	35
N-Nitrosodiphenylamine	ND		19	35
Pentachlorophenol	ND		19	35
Phenanthrene	ND		19	42
Phenol	ND		19	35
Diphenyl oxide	ND		19	35
Pyrene	ND		19	35
N-Nitrosodimethylamine	ND		19	35

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	83		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	63		30 - 130
Nitrobenzene-d5	67		30 - 130
Phenol-d5	71		30 - 130
Terphenyl-d14	87		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13472A.D
Dilution:	1.0			Initial Weight/Volume:	30.17 g
Date Analyzed:	11/20/2010 1011			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	~~Unknown~~	~~5.60~~	~~22000~~	~~T J~~
108-38-3	Benzene, 1,3-dimethyl-	5.95	110	T J N
108-67-8	Benzene, 1,3,5-trimethyl-	7.56	120	T J N
57-10-3	n-Hexadecanoic acid	13.75	94	T J N
74685-30-6	5-Eicosene, (E)-	15.46	220	T J N
77899-3-7	1-Heneicosyl formate	16.00	390	T J N
~~7683-64-9~~	~~Squalene~~	~~16.36~~	~~280~~	~~T J N~~
	Unknown	18.71	130	T J
559-74-0	Friedelin	20.97	240	T J N
	Unknown	22.95	190	T J

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13473A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1045			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol	NDJ	~~ND R~~		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	72
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	72
4-Chloroaniline		ND		19	72
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		53		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid	NDJ	~~ND R~~		19	180

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13473A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1045			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		31	72
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		22	J	19	36
Butyl benzyl phthalate		110		19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		ND		19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	72
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		62	J	19	87
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		ND		19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	88		30 - 130
2-Fluorobiphenyl	72		30 - 130
2-Fluorophenol	69		30 - 130
Nitrobenzene-d5	69		30 - 130
Phenol-d5	74		30 - 130
Terphenyl-d14	95		30 - 130

Analytical Data

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13473A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1045			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 10

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.60	24000	T J
106-42-3	p-Xylene	5.95	170	T J N
620-14-4	Benzene, 1-ethyl-3-methyl-	7.17	260	T J N
611-14-3	Benzene, 1-ethyl-2-methyl-	7.21	150	T J N
526-73-8	Benzene, 1,2,3-trimethyl-	7.27	130	T J N
95-63-6	Benzene, 1,2,4-trimethyl-	7.55	380	T J N
934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	8.19	180	T J N
488-23-3	Benzene, 1,2,3,4-tetramethyl-	8.76	96	T J N
874-41-9	Benzene, 1-ethyl-2,4-dimethyl-	8.79	130	T J N
	Unknown	16.35	540	T J N

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13474A.D
Dilution:	1.0			Initial Weight/Volume:	30.12 g
Date Analyzed:	11/20/2010 1118			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	38
1,2,4,5-Tetrachlorobenzene		ND		20	38
1,2,4-Trichlorobenzene		ND		20	38
1,2-Dichlorobenzene		ND		20	38
1,3-Dichlorobenzene		ND		20	38
1,4-Dichlorobenzene		ND		20	38
1-Methylnaphthalene		ND		20	38
2,2'-oxybis[1-chloropropane]		ND		20	38
2,3,4,6-Tetrachlorophenol		ND		20	38
2,4,5-Trichlorophenol		ND		20	38
2,4,6-Trichlorophenol		ND		20	38
2,4-Dichlorophenol		ND		20	38
2,4-Dimethylphenol		ND		20	38
2,4-Dinitrophenol	NOJ	~~ND~~ R		20	38
2,4-Dinitrotoluene		ND		20	38
2,6-Dinitrotoluene		ND		20	38
2-Chloronaphthalene		ND		20	38
2-Chlorophenol		ND		20	38
2-Methylnaphthalene		ND		20	38
2-Methylphenol		ND		23	38
2-Nitroaniline		ND		20	190
2-Nitrophenol		ND		20	38
3 & 4 Methylphenol		ND		20	38
3,3'-Dichlorobenzidine		ND		20	76
3-Nitroaniline		ND		20	190
4,6-Dinitro-2-methylphenol		ND		20	190
4-Bromophenyl phenyl ether		ND		20	38
4-Chloro-3-methylphenol		ND		20	76
4-Chloroaniline		ND		20	76
4-Chlorophenyl phenyl ether		ND		20	38
4-Nitroaniline		ND		20	190
4-Nitrophenol		ND		20	190
Acenaphthene		ND		20	38
Acenaphthylene		ND		20	38
Acetophenone		ND		20	38
Aniline		ND		20	38
Anthracene		ND		20	38
Atrazine		ND		20	38
Azobenzene		ND		20	38
Benzaldehyde		ND		20	38
Benzo[a]anthracene		ND		20	38
Benzo[a]pyrene		ND		20	38
Benzo[b]fluoranthene		ND		20	38
Benzo[g,h,i]perylene		ND		20	38
Benzo[k]fluoranthene		ND		20	38
Benzoic acid		88	J	20	190

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13474A.D
Dilution:	1.0			Initial Weight/Volume:	30.12 g
Date Analyzed:	11/20/2010 1118			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20	38
Benzyl alcohol		ND		32	76
Bis(2-chloroethoxy)methane		ND		20	38
Bis(2-chloroethyl)ether		ND		20	38
Bis(2-ethylhexyl) phthalate		ND		20	38
Butyl benzyl phthalate		ND		20	38
Caprolactam		ND		20	38
Carbazole		ND		20	38
Chrysene		ND		20	38
Dibenz(a,h)anthracene		ND		20	38
Dibenzofuran		ND		20	38
Diethyl phthalate		ND		20	38
Dimethyl phthalate		ND		20	38
Di-n-butyl phthalate		ND		33	38
Di-n-octyl phthalate		ND		20	38
Fluoranthene		ND		20	38
Fluorene		ND		20	38
Hexachlorobenzene		ND		20	38
Hexachlorobutadiene		ND		20	38
Hexachlorocyclopentadiene		ND		20	76
Hexachloroethane		ND		20	38
Indeno[1,2,3-cd]pyrene		ND		20	38
Isophorone		ND		20	38
Naphthalene		ND		20	91
Nitrobenzene		ND		20	38
N-Nitrosodi-n-propylamine		ND		20	38
N-Nitrosodiphenylamine		ND		20	38
Pentachlorophenol		ND		20	38
Phenanthrene		ND		20	45
Phenol		ND		20	38
Diphenyl oxide		ND		20	38
Pyrene		ND		20	38
N-Nitrosodimethylamine		ND		20	38

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	81		30 - 130
2-Fluorobiphenyl	62		30 - 130
2-Fluorophenol	61		30 - 130
Nitrobenzene-d5	63		30 - 130
Phenol-d5	69		30 - 130
Terphenyl-d14	81		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13474A.D
Dilution:	1.0			Initial Weight/Volume:	30.12 g
Date Analyzed:	11/20/2010 1118			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
108-88-3	Toluene	3.90	780	T J N
763-93-9	3-Hexen-2-one	4.60	41	T J N
	~~Unknown~~	~~5.60~~	~~23000~~	~~T J N~~
	Unknown	6.42	76	T J N
544-63-8	Tetradecanoic acid	13.75	55	T J N
112-88-9	1-Octadecene	14.88	42	T J N
7206-21-5	5-Octadecene, (E)-	15.46	69	T J N
112-95-8	Eicosane	15.99	45	T J N
111-2-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.36	280	T J N
559-74-0	Friedelin	20.96	240	T J N

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13475A.D
Dilution:	1.0			Initial Weight/Volume:	30.30 g
Date Analyzed:	11/20/2010 1152			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		22	41
1,2,4,5-Tetrachlorobenzene		ND		22	41
1,2,4-Trichlorobenzene		ND		22	41
1,2-Dichlorobenzene		ND		22	41
1,3-Dichlorobenzene		ND		22	41
1,4-Dichlorobenzene		ND		22	41
1-Methylnaphthalene		23	J	22	41
2,2'-oxybis[1-chloropropane]		ND		22	41
2,3,4,6-Tetrachlorophenol		ND		22	41
2,4,5-Trichlorophenol		ND		22	41
2,4,6-Trichlorophenol		ND		22	41
2,4-Dichlorophenol		ND		22	41
2,4-Dimethylphenol		ND		22	41
2,4-Dinitrophenol	NO J	ND ~~R~~		22	41
2,4-Dinitrotoluene		ND		22	41
2,6-Dinitrotoluene		ND		22	41
2-Chloronaphthalene		ND		22	41
2-Chlorophenol		ND		22	41
2-Methylnaphthalene		26	J	22	41
2-Methylphenol		ND		24	41
2-Nitroaniline		ND		22	200
2-Nitrophenol		ND		22	41
3 & 4 Methylphenol		ND		22	41
3,3'-Dichlorobenzidine		ND		22	82
3-Nitroaniline		ND		22	200
4,6-Dinitro-2-methylphenol		ND		22	200
4-Bromophenyl phenyl ether		ND		22	41
4-Chloro-3-methylphenol		ND		22	82
4-Chloroaniline		ND		22	82
4-Chlorophenyl phenyl ether		ND		22	41
4-Nitroaniline		ND		22	200
4-Nitrophenol		ND		22	200
Acenaphthene		ND		22	41
Acenaphthylene		ND		22	41
Acetophenone		ND		22	41
Aniline		ND		22	41
Anthracene		ND		22	41
Atrazine		ND		22	41
Azobenzene		ND		22	41
Benzaldehyde		280		22	41
Benzo[a]anthracene		73		22	41
Benzo[a]pyrene		33	J	22	41
Benzo[b]fluoranthene		70		22	41
Benzo[g,h,i]perylene		25	J	22	41
Benzo[k]fluoranthene		ND		22	41
Benzoic acid		620 J		22	200

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13475A.D
Dilution:	1.0			Initial Weight/Volume:	30.30 g
Date Analyzed:	11/20/2010 1152			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		22	41
Benzyl alcohol		ND		35	82
Bis(2-chloroethoxy)methane		ND		22	41
Bis(2-chloroethyl)ether		ND		22	41
Bis(2-ethylhexyl) phthalate		31	J	22	41
Butyl benzyl phthalate		ND		22	41
Caprolactam		ND		22	41
Carbazole		ND		22	41
Chrysene		29	J	22	41
Dibenz(a,h)anthracene		ND		22	41
Dibenzofuran		ND		22	41
Diethyl phthalate		ND		22	41
Dimethyl phthalate		ND		22	41
Di-n-butyl phthalate		ND		36	41
Di-n-octyl phthalate		ND		22	41
Fluoranthene		61		22	41
Fluorene		ND		22	41
Hexachlorobenzene		ND		22	41
Hexachlorobutadiene		ND		22	41
Hexachlorocyclopentadiene		ND		22	82
Hexachloroethane		ND		22	41
Indeno[1,2,3-cd]pyrene		22	J	22	41
Isophorone		ND		22	41
Naphthalene		42	J	22	98
Nitrobenzene		ND		22	41
N-Nitrosodi-n-propylamine		ND		22	41
N-Nitrosodiphenylamine		ND		22	41
Pentachlorophenol		ND		22	41
Phenanthrene		86		22	49
Phenol		ND		22	41
Diphenyl oxide		ND		22	41
Pyrene		150		22	41
N-Nitrosodimethylamine		ND		22	41

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	74		30 - 130
2-Fluorobiphenyl	58		30 - 130
2-Fluorophenol	50		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	62		30 - 130
Terphenyl-d14	81		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid % Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13475A.D
Dilution:	1.0			Initial Weight/Volume:	30.30 g
Date Analyzed:	11/20/2010 1152			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.59	25000	J N
629-96-9	1-Eicosanol	15.46	1400	J N
~~661-19-8~~	~~1-Docosanol~~	~~16.01~~	~~2300~~	~~J N~~
~~7683-64-9~~	~~Squalene~~	~~16.36~~	~~610~~	~~J N~~
112-95-8	Eicosane	17.35	610	J N
	Unknown	17.41	880	J N
	Unknown	17.57	510	J N
14021-23-9	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	18.55	1000	J N
1000194-63-7	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	18.72	1900	J N
	Unknown	20.99	880	J N

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Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13476A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1226			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		~~ND~~ ND J		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		21	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	71
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	71
4-Chloroaniline		ND		19	71
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		110	J	19	180

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid % Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13476A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1226			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		19	36
Benzyl alcohol	ND		30	71
Bis(2-chloroethoxy)methane	ND		19	36
Bis(2-chloroethyl)ether	ND		19	36
Bis(2-ethylhexyl) phthalate	21	J	19	36
Butyl benzyl phthalate	ND		19	36
Caprolactam	ND		19	36
Carbazole	ND		19	36
Chrysene	ND		19	36
Dibenz(a,h)anthracene	ND		19	36
Dibenzofuran	ND		19	36
Diethyl phthalate	ND		19	36
Dimethyl phthalate	ND		19	36
Di-n-butyl phthalate	ND		31	36
Di-n-octyl phthalate	ND		19	36
Fluoranthene	ND		19	36
Fluorene	ND		19	36
Hexachlorobenzene	ND		19	36
Hexachlorobutadiene	ND		19	36
Hexachlorocyclopentadiene	ND		19	71
Hexachloroethane	ND		19	36
Indeno[1,2,3-cd]pyrene	ND		19	36
Isophorone	ND		19	36
Naphthalene	ND		19	86
Nitrobenzene	ND		19	36
N-Nitrosodi-n-propylamine	ND		19	36
N-Nitrosodiphenylamine	ND		19	36
Pentachlorophenol	ND		19	36
Phenanthrene	ND		19	43
Phenol	ND		19	36
Diphenyl oxide	ND		19	36
Pyrene	ND		19	36
N-Nitrosodimethylamine	ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	76		30 - 130
2-Fluorobiphenyl	59		30 - 130
2-Fluorophenol	54		30 - 130
Nitrobenzene-d5	63		30 - 130
Phenol-d5	65		30 - 130
Terphenyl-d14	93		30 - 130

Analytical Data

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid % Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13476A.D
Dilution:	1.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	11/20/2010 1226			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	5.58	22000	J
~~111-76-2~~	~~Ethanol, 2-butoxy-~~	~~6.42~~	~~99~~	~~J N~~
630-2-4	Octacosane	14.89	46	J N
2136-70-1	Ethanol, 2-(tetradecyloxy)-	15.46	140	J N
14739-72-1	Heneicosane, 11-pentyl-	15.73	44	J N
593-45-3	Octadecane	15.99	87	J N
~~7683-64-9~~	~~Squalene~~	~~16.35~~	~~450~~	~~J N~~
13475-75-7	Pentadecane, 8-hexyl-	16.59	69	J N
	Unknown	16.97	140	J
629-92-5	Nonadecane	17.34	41	J N

N. Cole 12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13477A.D
Dilution:	1.0			Initial Weight/Volume:	30.15 g
Date Analyzed:	11/20/2010 1300			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	38
1,2,4,5-Tetrachlorobenzene		ND		20	38
1,2,4-Trichlorobenzene		ND		20	38
1,2-Dichlorobenzene		ND		20	38
1,3-Dichlorobenzene		ND		20	38
1,4-Dichlorobenzene		ND		20	38
1-Methylnaphthalene		ND		20	38
2,2'-oxybis[1-chloropropane]		ND		20	38
2,3,4,6-Tetrachlorophenol		ND		20	38
2,4,5-Trichlorophenol		ND		20	38
2,4,6-Trichlorophenol		ND		20	38
2,4-Dichlorophenol		ND		20	38
2,4-Dimethylphenol		ND		20	38
2,4-Dinitrophenol	NDS	~~ND~~		20	38
2,4-Dinitrotoluene		ND		20	38
2,6-Dinitrotoluene		ND		20	38
2-Chloronaphthalene		ND		20	38
2-Chlorophenol		ND		20	38
2-Methylnaphthalene		ND		20	38
2-Methylphenol		ND		23	38
2-Nitroaniline		ND		20	190
2-Nitrophenol		ND		20	38
3 & 4 Methylphenol		ND		20	38
3,3'-Dichlorobenzidine		ND		20	76
3-Nitroaniline		ND		20	190
4,6-Dinitro-2-methylphenol		ND		20	190
4-Bromophenyl phenyl ether		ND		20	38
4-Chloro-3-methylphenol		ND		20	76
4-Chloroaniline		ND		20	76
4-Chlorophenyl phenyl ether		ND		20	38
4-Nitroaniline		ND		20	190
4-Nitrophenol		ND		20	190
Acenaphthene		ND		20	38
Acenaphthylene		ND		20	38
Acetophenone		ND		20	38
Aniline		ND		20	38
Anthracene		ND		20	38
Atrazine		ND		20	38
Azobenzene		ND		20	38
Benzaldehyde		35	J	20	38
Benzo[a]anthracene		23	J	20	38
Benzo[a]pyrene		ND		20	38
Benzo[b]fluoranthene		28	J	20	38
Benzo[g,h,i]perylene		ND		20	38
Benzo[k]fluoranthene		ND		20	38
Benzoic acid		280 J		20	190

11/23/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13477A.D
Dilution:	1.0			Initial Weight/Volume:	30.15 g
Date Analyzed:	11/20/2010 1300			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		20	38
Benzyl alcohol	ND		32	76
Bis(2-chloroethoxy)methane	ND		20	38
Bis(2-chloroethyl)ether	ND		20	38
Bis(2-ethylhexyl) phthalate	65		20	38
Butyl benzyl phthalate	ND		20	38
Caprolactam	ND		20	38
Carbazole	ND		20	38
Chrysene	ND		20	38
Dibenz(a,h)anthracene	ND		20	38
Dibenzofuran	ND		20	38
Diethyl phthalate	ND		20	38
Dimethyl phthalate	ND		20	38
Di-n-butyl phthalate	ND		33	38
Di-n-octyl phthalate	ND		20	38
Fluoranthene	27	J	20	38
Fluorene	ND		20	38
Hexachlorobenzene	ND		20	38
Hexachlorobutadiene	ND		20	38
Hexachlorocyclopentadiene	ND		20	76
Hexachloroethane	ND		20	38
Indeno[1,2,3-cd]pyrene	ND		20	38
Isophorone	ND		20	38
Naphthalene	ND		20	91
Nitrobenzene	ND		20	38
N-Nitrosodi-n-propylamine	ND		20	38
N-Nitrosodiphenylamine	ND		20	38
Pentachlorophenol	ND		20	38
Phenanthrene	24	J	20	45
Phenol	ND		20	38
Diphenyl oxide	ND		20	38
Pyrene	45		20	38
N-Nitrosodimethylamine	ND		20	38

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	86		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	61		30 - 130
Nitrobenzene-d5	68		30 - 130
Phenol-d5	71		30 - 130
Terphenyl-d14	93		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13477A.D
Dilution:	1.0			Initial Weight/Volume:	30.15 g
Date Analyzed:	11/20/2010 1300			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13478A.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/20/2010 1335			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		18	34
1,2,4,5-Tetrachlorobenzene		ND		18	34
1,2,4-Trichlorobenzene		ND		18	34
1,2-Dichlorobenzene		ND		18	34
1,3-Dichlorobenzene		ND		18	34
1,4-Dichlorobenzene		ND		18	34
1-Methylnaphthalene		ND		18	34
2,2'-oxybis[1-chloropropane]		ND		18	34
2,3,4,6-Tetrachlorophenol		ND		18	34
2,4,5-Trichlorophenol		ND		18	34
2,4,6-Trichlorophenol		ND		18	34
2,4-Dichlorophenol		ND		18	34
2,4-Dimethylphenol		ND		18	34
2,4-Dinitrophenol	NDJ	~~ND~~ R		18	34
2,4-Dinitrotoluene		ND		18	34
2,6-Dinitrotoluene		ND		18	34
2-Chloronaphthalene		ND		18	34
2-Chlorophenol		ND		18	34
2-Methylnaphthalene		ND		18	34
2-Methylphenol		ND		20	34
2-Nitroaniline		ND		18	170
2-Nitrophenol		ND		18	34
3 & 4 Methylphenol		ND		18	34
3,3'-Dichlorobenzidine		ND		18	68
3-Nitroaniline		ND		18	170
4,6-Dinitro-2-methylphenol		ND		18	170
4-Bromophenyl phenyl ether		ND		18	34
4-Chloro-3-methylphenol		ND		18	68
4-Chloroaniline		ND		18	68
4-Chlorophenyl phenyl ether		ND		18	34
4-Nitroaniline		ND		18	170
4-Nitrophenol		ND		18	170
Acenaphthene		ND		18	34
Acenaphthylene		ND		18	34
Acetophenone		ND		18	34
Aniline		ND		18	34
Anthracene		ND		18	34
Atrazine		ND		18	34
Azobenzene		ND		18	34
Benzaldehyde		ND		18	34
Benzo[a]anthracene		ND		18	34
Benzo[a]pyrene		ND		18	34
Benzo[b]fluoranthene		ND		18	34
Benzo[g,h,i]perylene		ND		18	34
Benzo[k]fluoranthene		ND		18	34
Benzoic acid		190 J		18	170

12/13/10

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13478A.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/20/2010 1335			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		18	34
Benzyl alcohol	ND		29	68
Bis(2-chloroethoxy)methane	ND		18	34
Bis(2-chloroethyl)ether	ND		18	34
Bis(2-ethylhexyl) phthalate	82		18	34
Butyl benzyl phthalate	ND		18	34
Caprolactam	ND		18	34
Carbazole	ND		18	34
Chrysene	ND		18	34
Dibenz(a,h)anthracene	ND		18	34
Dibenzofuran	ND		18	34
Diethyl phthalate	ND		18	34
Dimethyl phthalate	ND		18	34
Di-n-butyl phthalate	ND		30	34
Di-n-octyl phthalate	ND		18	34
Fluoranthene	ND		18	34
Fluorene	ND		18	34
Hexachlorobenzene	ND		18	34
Hexachlorobutadiene	ND		18	34
Hexachlorocyclopentadiene	ND		18	68
Hexachloroethane	ND		18	34
Indeno[1,2,3-cd]pyrene	ND		18	34
Isophorone	ND		18	34
Naphthalene	ND		18	82
Nitrobenzene	ND		18	34
N-Nitrosodi-n-propylamine	ND		18	34
N-Nitrosodiphenylamine	ND		18	34
Pentachlorophenol	ND		18	34
Phenanthrene	ND		18	41
Phenol	ND		18	34
Diphenyl oxide	ND		18	34
Pyrene	ND		18	34
N-Nitrosodimethylamine	ND		18	34

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	88		30 - 130
2-Fluorobiphenyl	68		30 - 130
2-Fluorophenol	60		30 - 130
Nitrobenzene-d5	70		30 - 130
Phenol-d5	71		30 - 130
Terphenyl-d14	96		30 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66135		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66027		Lab File ID:	B13478A.D
Dilution:	1.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/20/2010 1335			Final Weight/Volume:	1.0 mL
Date Prepared:	11/18/2010 1309			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Lab File ID: B13460A.D Lab Sample ID: MB 360-66027/1-A

Matrix: Solid Date Extracted: 11/18/2010 13:09

Instrument ID: Inst. B Date Analyzed: 11/20/2010 03:12

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 360-66027/2-A	B13461A.D	11/20/2010 03:47
	LCSD 360-66027/3-A	B13462A.D	11/20/2010 04:22
OC-SB-485-0.0/1.0-XXX	360-31096-1	B13463A.D	11/20/2010 04:57
OC-SB-485-11/13-XXX	360-31096-2	B13464A.D	11/20/2010 05:32
OC-SB-485-11/13-XXX MS	360-31096-2 MS	B13465A.D	11/20/2010 06:07
OC-SB-485-11/13-XXX MSD	360-31096-2 MSD	B13466A.D	11/20/2010 06:42
OC-SB-485-6.0/8.0-XXX	360-31096-3	B13467A.D	11/20/2010 07:17
OC-SB-488-0.0/1.0-XXX	360-31096-5	B13468A.D	11/20/2010 07:52
OC-SB-488-7.0/9.0-XXX	360-31096-6	B13469A.D	11/20/2010 08:27
OC-SB-490-0.0/1.0-XXX	360-31096-7	B13470A.D	11/20/2010 09:02
OC-SB-490-7.0/9.0-XXX	360-31096-8	B13471A.D	11/20/2010 09:36
OC-SB-494-0.0/1.0-XXX	360-31096-9	B13472A.D	11/20/2010 10:11
OC-SB-494-12/14-XXX	360-31096-10	B13473A.D	11/20/2010 10:45
OC-SB-494-6.0/8.0-XXX	360-31096-11	B13474A.D	11/20/2010 11:18
OC-SB-495-0.0/1.0-XXX	360-31096-12	B13475A.D	11/20/2010 11:52
OC-SB-495-4.0/6.0-XXX	360-31096-13	B13476A.D	11/20/2010 12:26
OC-SB-496-0.0/1.0-XXX	360-31096-14	B13477A.D	11/20/2010 13:00
OC-SB-496-5.0/6.5-XXX	360-31096-15	B13478A.D	11/20/2010 13:35

MB
TIC's only

LCS OK

Scan OK
IS OK

MS
OC-SB-485-11/13-XXX
aniline 36/37

ICAL RRF
Benzoic Acid 0.0057 Quadratic 0.9890
2,4-Dinitrophenol 0.0415 Quadratic 0.9910 > R

CCAL OK

FORM IV 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Westfield | Job No.: 360-31096-1

SDG No.: 360-31096-1

Client Sample ID: | Lab Sample ID: MB 360-66027/1-A

Matrix: Solid | Lab File ID: B13460A.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3546 | Date Extracted: 11/18/2010 13:09

Sample wt/vol: 30.00(g) | Date Analyzed: 11/20/2010 03:12

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 66135 | Units: ug/Kg

Number TICs Found: 10 | TIC Result Total: 24218.8

CAS NO.	COMPOUND NAME	RT	RESULT	Q
141-79-7	3-Penten-2-one, 4-methyl-	4.61	45.1	T J N
	Unknown	5.04	16.5	T J
	Unknown	5.61	23800	T J
111-76-2	Ethanol, 2-butoxy-	6.42	128	T J N
	Unknown	6.57	22.8	T J
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	6.78	50.9	T J N
	Unknown	8.78	14.3	T J
	Unknown	9.33	38.1	T J
661-19-8	1-Docosanol	15.46	37.6	T J N
7683-64-9	Squalene	16.35	65.5	T J N

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 66131

SDG No.: 360-31096-1

Instrument ID: Inst. B GC Column: Rtx-5ms ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2010 20:11 Calibration End Date: 11/20/2010 00:52 Calibration ID: 10233

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acetophenone	1.3827 1.4512	1.2996 1.4579	1.3368 1.4757	1.4277 1.4569	1.4210	Ave		1.4122			0.0100	4.3		20.0			
N-Nitrosodi-n-propylamine	0.3901 0.3924	0.3438 0.4012	0.3524 0.4083	0.3607 0.4189	0.3799	Ave		0.3831				6.8		20.0			
3 & 4 Methylphenol	0.9359 1.0642	0.9887 1.0935	1.0033 1.1281	1.0622 1.1093	1.0448	Ave		1.0478			0.6000	5.9		20.0			
Hexachloroethane	0.5515 0.5213	0.5029 0.5370	0.5087 0.5418	0.5251 0.5480	0.5259	Ave		0.5291			0.3000	3.2		20.0			
Nitrobenzene	0.2271 0.2534	0.2190 0.2565	0.2318 0.2657	0.2445 0.2643	0.2496	Ave		0.2458			0.2000	6.7		20.0			
Isophorone	0.4114 0.4795	0.4075 0.4860	0.4286 0.4849	0.4344 0.4855	0.4793	Ave		0.4552			0.4000	7.5		20.0			
2-Nitrophenol	0.0959 0.1602	0.1146 0.1617	0.1202 0.1744	0.1493 0.1769	0.1492	Ave		0.1447			0.1000	20.0		20.0			
2,4-Dimethylphenol	0.2149 0.2426	0.2359 0.2508	0.2220 0.2616	0.2220 0.2675	0.2424	Ave		0.2400			0.2000	7.6		20.0			
Benzoic acid	0.3304	0.2427	0.5298	0.1018 0.6465	0.1536	QuaF	2G	0.0057	0.0325						0.9890		0.9900
Bis(2-chloroethoxy)methane	0.3083 0.3173	0.3112 0.3263	0.3048 0.3237	0.3128 0.3192	0.3269	Ave		0.3167			0.3000	2.5		20.0			
2,4-Dichlorophenol	0.2029 0.2545	0.2234 0.2466	0.2238 0.2586	0.2392 0.2612	0.2504	Ave		0.2401			0.2000	8.2		20.0			
1,2,4-Trichlorobenzene	0.3104 0.3105	0.3302 0.3108	0.3142 0.3079	0.3101 0.3101	0.3187	Ave		0.3137				2.2		20.0			
Naphthalene	1.0405 0.9232	0.9658 0.9023	0.9292 0.9003	0.9052 0.8985	0.9340	Ave		0.9332			0.7000	4.9		20.0			
4-Chloroaniline	0.3234 0.3354	0.3042 0.3228	0.3157 0.3569	0.3308 0.3530	0.3115	Ave		0.3282			0.0100	5.5		20.0			
Hexachlorobutadiene	0.1675 0.1610	0.1582 0.1656	0.1675 0.1644	0.1572 0.1684	0.1681	Ave		0.1642			0.0100	2.7		20.0			
Caprolactam	0.0559 0.0773	0.0525 0.0761	0.0609 0.0860	0.0617 0.0849	0.0710	Ave		0.0696				18.0		20.0			
4-Chloro-3-methylphenol	0.1773 0.2268	0.1926 0.2256	0.2085 0.2329	0.2115 0.2363	0.2247	Ave		0.2151				9.1		20.0			
2-Methylnaphthalene	0.5827 0.5941	0.5742 0.5740	0.5925 0.5721	0.5773 0.5749	0.5964	Ave		0.5820			0.4000	1.7		20.0			
1-Methylnaphthalene	0.6458 0.6012	0.6112 0.5866	0.5880 0.5796	0.5887 0.5912	0.6142	Ave		0.6007				3.4		20.0			
Hexachlorocyclopentadiene	0.1658 0.2408	0.2048 0.1935	0.2084 0.2821	0.2481 0.2792	0.1885	Ave		0.2235				18.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Westfield Job No.: 360-31096-1 Analy Batch No.: 66131

SDG No.: 360-31096-1

Instrument ID: Inst. B GC Column: Rtx-5ms ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2010 20:11 Calibration End Date: 11/20/2010 00:52 Calibration ID: 10233

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2,4,5-Tetrachlorobenzene	0.2784 0.2617	0.2623 0.2542	0.2565 0.2520	0.2479 0.2647	0.2612	Ave		0.2599				3.4		20.0			
2,4,6-Trichlorophenol	0.2206 0.3385	0.2640 0.3405	0.2546 0.3504	0.2987 0.3548	0.3146	Ave		0.3041			0.2000	16.0		20.0			
2,4,5-Trichlorophenol	0.2277 0.3441	0.2372 0.3439	0.2822 0.3584	0.3180 0.3726	0.3224	Ave		0.3118			0.2000	17.0		20.0			
1,1'-Biphenyl	1.4308 1.4131	1.4131 1.4412	1.4105 1.4109	1.4129 1.4403	1.4147	Ave		1.4208				0.9		20.0			
2-Chloronaphthalene	1.3673 1.2893	1.2536 1.2714	1.2350 1.2792	1.2589 1.2795	1.1957	Ave		1.2700				3.6		20.0			
Diphenyl oxide	0.4282 0.3919	0.3996 0.3852	0.3965 0.3829	0.3790 0.3839	0.3965	Ave		0.3937				3.8		20.0			
2-Nitroaniline	0.1842 0.3033	0.1853 0.2876	0.2162 0.3504	0.2557 0.3586	0.2568	QuaF		0.2462	0.0059						0.9980		0.9900
Dimethyl phthalate	1.1437 1.2285	1.1366 1.2018	1.1407 1.2257	1.1968 1.2210	1.2131	Ave		1.1898			0.0100	3.2		20.0			
2,6-Dinitrotoluene	0.1842 0.2755	0.1877 0.2752	0.2025 0.2927	0.2530 0.2921	0.2688	Ave		0.2480			0.2000	18.0		20.0			
Acenaphthylene	1.5971 1.7673	1.5581 1.7564	1.6257 1.7480	1.7101 1.7466	1.7493	Ave		1.6954			0.9000	4.7		20.0			
3-Nitroaniline	0.1292 0.2573	0.1679 0.2274	0.1865 0.2786	0.2413 0.2629	0.2066	LinF		0.2604							0.9910		0.9900
Acenaphthene	1.2690 1.1424	1.1553 1.1622	1.1269 1.1484	1.1319 1.1575	1.1522	Ave		1.1606			0.9000	3.6		20.0			
2,4-Dinitrophenol	0.1081		0.0339 0.1315	0.0710 0.1482	0.0650	QuaF		0.0415	0.0054		0.0100				0.9810	*	0.9900
4-Nitrophenol	0.2057	0.1030 0.1606	0.1187 0.2230	0.1761 0.2251	0.1472	QuaF		0.1485	0.0040		0.0100				0.9900		0.9900
2,4-Dinitrotoluene	0.3372	0.2043 0.3138	0.2256 0.3525	0.2965 0.3658	0.3043	Ave		0.3000			0.2000	19.0		20.0			
Dibenzofuran	1.5968 1.4551	1.4428 1.4051	1.4265 1.4593	1.4519 1.4648	1.4435	Ave		1.4607			0.8000	3.7		20.0			
2,3,4,6-Tetrachlorophenol	0.2500	0.1319 0.2310	0.1616 0.2720	0.2172 0.2843	0.2250	QuaF		0.2058	0.0040						0.9980		0.9900
Diethyl phthalate	1.0783 1.2650	1.0747 1.2221	1.0775 1.2519	1.2055 1.2694	1.2370	Ave		1.1868			0.0100	7.1		20.0			
4-Chlorophenyl phenyl ether	0.5249 0.5678	0.5397 0.5595	0.5302 0.5690	0.5583 0.5853	0.5591	Ave		0.5549				3.5		20.0			
Fluorene	1.2129 1.2476	1.2229 1.1871	1.1463 1.2449	1.2124 1.2828	1.2307	Ave		1.2208			0.9000	3.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: B13465A.D

Lab ID: 360-31096-2 MS Client ID: OC-SB-485-11/13-XXX MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1'-Biphenyl	365	ND	303	83	40-140	
1,2,4,5-Tetrachlorobenzene	365	ND	272	75	40-140	
1,2,4-Trichlorobenzene	365	ND	249	68	40-140	
1,2-Dichlorobenzene	365	ND	255	70	40-140	
1,3-Dichlorobenzene	365	ND	245	67	40-140	
1,4-Dichlorobenzene	365	ND	253	69	40-140	
1-Methylnaphthalene	365	ND	281	77	40-140	
2,2'-oxybis[1-chloropropane]	365	ND	291	80	40-140	
2,3,4,6-Tetrachlorophenol	365	ND	361	99	40-140	
2,4,5-Trichlorophenol	365	ND	377	103	30-130	
2,4,6-Trichlorophenol	365	ND	363	99	30-130	
2,4-Dichlorophenol	365	ND	321	88	30-130	
2,4-Dimethylphenol	365	ND	347	95	30-130	
2,4-Dinitrophenol	365	ND	332	91	30-130	
2,4-Dinitrotoluene	365	ND	372	102	40-140	
2,6-Dinitrotoluene	365	ND	351	96	40-140	
2-Chloronaphthalene	365	ND	257	70	40-140	
2-Chlorophenol	365	ND	302	83	30-130	
2-Methylnaphthalene	365	ND	293	80	40-140	
2-Methylphenol	365	ND	317	87	30-130	
2-Nitroaniline	365	ND	373	102	40-140	
2-Nitrophenol	365	ND	329	90	30-130	
3 & 4 Methylphenol	365	ND	367	100	30-130	
3,3'-Dichlorobenzidine	365	ND	259	71	40-140	
3-Nitroaniline	365	ND	289	79	40-140	
4,6-Dinitro-2-methylphenol	365	ND	367	100	30-130	
4-Bromophenyl phenyl ether	365	ND	327	90	40-140	
4-Chloro-3-methylphenol	365	ND	336	92	30-130	
4-Chloroaniline	365	ND	193	53	40-140	
4-Chlorophenyl phenyl ether	365	ND	321	88	40-140	
4-Nitroaniline	365	ND	359	98	40-140	
4-Nitrophenol	365	ND	376	103	30-130	
Acenaphthene	365	ND	321	88	40-140	
Acenaphthylene	365	ND	292	80	40-140	
Acetophenone	365	ND	295	81	40-140	
Aniline	365	ND	133	36	40-140	F
Anthracene	365	ND	347	95	40-140	
Atrazine	365	ND	339	93	40-140	
Azobenzene	365	ND	325	89	40-140	
Benzaldehyde	365	ND	265	73	40-140	
Benzo[a]anthracene	365	ND	328	90	40-140	
Benzo[a]pyrene	365	ND	369	101	40-140	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31096-1

SDG No.: 360-31096-1

Matrix: Solid Level: Low Lab File ID: B13466A.D

Lab ID: 360-31096-2 MSD Client ID: OC-SB-485-11/13-XXX MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1'-Biphenyl	360	300	83	1	30	40-140	
1,2,4,5-Tetrachlorobenzene	360	273	76	0	30	40-140	
1,2,4-Trichlorobenzene	360	244	68	2	30	40-140	
1,2-Dichlorobenzene	360	244	68	4	30	40-140	
1,3-Dichlorobenzene	360	234	65	4	30	40-140	
1,4-Dichlorobenzene	360	240	67	5	30	40-140	
1-Methylnaphthalene	360	273	76	3	30	40-140	
2,2'-oxybis[1-chloropropane]	360	282	78	3	30	40-140	
2,3,4,6-Tetrachlorophenol	360	349	97	3	30	40-140	
2,4,5-Trichlorophenol	360	374	104	1	30	30-130	
2,4,6-Trichlorophenol	360	355	99	2	30	30-130	
2,4-Dichlorophenol	360	317	88	1	30	30-130	
2,4-Dimethylphenol	360	346	96	0	30	30-130	
2,4-Dinitrophenol	360	270	75	21	30	30-130	
2,4-Dinitrotoluene	360	354	98	5	30	40-140	
2,6-Dinitrotoluene	360	347	97	1	30	40-140	
2-Chloronaphthalene	360	255	71	1	30	40-140	
2-Chlorophenol	360	285	79	6	30	30-130	
2-Methylnaphthalene	360	285	79	3	30	40-140	
2-Methylphenol	360	303	84	5	30	30-130	
2-Nitroaniline	360	360	100	4	30	40-140	
2-Nitrophenol	360	314	87	5	30	30-130	
3 & 4 Methylphenol	360	352	98	4	30	30-130	
3,3'-Dichlorobenzidine	360	332	92	24	30	40-140	
3-Nitroaniline	360	285	79	2	30	40-140	
4,6-Dinitro-2-methylphenol	360	318	88	14	30	30-130	
4-Bromophenyl phenyl ether	360	325	90	1	30	40-140	
4-Chloro-3-methylphenol	360	332	92	1	30	30-130	
4-Chloroaniline	360	215	60	11	30	40-140	
4-Chlorophenyl phenyl ether	360	316	88	2	30	40-140	
4-Nitroaniline	360	375	104	5	30	40-140	
4-Nitrophenol	360	366	102	3	30	30-130	
Acenaphthene	360	321	89	0	30	40-140	
Acenaphthylene	360	290	81	0	30	40-140	
Acetophenone	360	281	78	5	30	40-140	
Aniline	360	132	37	1	30	40-140	F
Anthracene	360	344	96	1	30	40-140	
Atrazine	360	334	93	2	30	40-140	
Azobenzene	360	321	89	1	30	40-140	
Benzaldehyde	360	226	63	16	30	40-140	
Benzo[a]anthracene	360	322	89	2	30	40-140	
Benzo[a]pyrene	360	354	98	4	30	40-140	

Column to be used to flag recovery and RPD values

FORM III 8270D

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for OLIN CHEMICAL SUPERFUND SITE

Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / (II) / III (circle one)

SITE: Olin Chemical Superfund Site Project #: 6107100016.12 SDG #: 360-31167-1

LAB #: TAL-Westfield

Sample IDs: Attach tracking sheet and/or sample listing.

This checklist is designed to be used with USEPA Region I Validation Guidelines Part II (12/1996). During Level III validation, calculation and transcription checks are completed for instrument tuning, surrogates, target compounds, spike recoveries, calibration data, and internal standards as specified in the guideline. These checks are documented on attached validation notes.

YES	NO	NA		
Data completeness				
☑	☐	☐	All data summaries, QC forms and raw data available from hard copy or electronic data package	Contact lab if missing data. Lab to respond with 24 hours.
☐	☐	☐	Data summaries match EDD	
Holding Times and Preservation				
☑	☐	☐	Hold times met (Waters – Extract within 7 days, analyze within 40 days. Soils – extract within 14 days, analyze within 40 days)	
Instrument Performance Check (Tune)				
☑	☐	☐	Tune available for each 12-hour period samples were analyzed	
☑	☐	☐	Appropriate number of significant figures reported (at least 2)	
☑	☐	☐	Mass/Charge list (m/z) criteria met	
Initial Calibration				
☑	☐	☐	%RSD less than or equal to 30%	
☑	☐	☐	RRF greater than or equal to 0.05	
Continuing Calibration				See below.
☑	☐	☐	%D less than or equal to 25%	
☑	☐	☐	RRF greater than or equal to 0.05.	
Blank Contamination				Evaluate all blanks for contamination. Highest contaminant level used for action level.
☐	☑	☐	Method blank contamination	
☐	☐	☑	Equipment/Rinseate blank contamination	
Surrogate Recoveries				

SEMIVOLATILE ORGANICS

REGION I VALIDATION CHECKLIST for
OLIN CHEMICAL SUPERFUND SITE
Criteria and Qualifications: REGION I Organics Guideline (1996)

TIER I / II / III (circle one)

☑	☐	☐	Surrogates percent recovery criteria met: Soil = (base/neutral 30%-130%, acid 30%-130%) Water = (base/neutral 30%-130%, acid 15%-110%)	
Matrix Spikes and Laboratory Control Samples				
☐	☒	☐	MS/MSD percent recovery criteria met Soil and Water = (base/neutral 40%-140%, acid 30%-130%)	See below.
☐	☒	☐	MS/MSD RPD criteria met (soils <50%, water <30%)	
☐	☒	☐	LCS/LCSD percent recovery criteria met soil/water (base 40%-140%, acid 30%-130%)	See below.
☑	☐	☐	LCS/LCSD RPD criteria met (soils <50%, water <30%)	
Field Duplicates				
☑	☐	☐	RPD criteria met (soils <50%, water <30%)	
Internal Standard				
☑	☐	☐	Area counts within -50 to +100 percent of calib. std.	
☑	☐	☐	Retention Time within 30 seconds of calib. std.	
Target Compounds				
☑	☐	☐	Reviewed narrative for anomalies	
Tentatively Identified Compounds (TICs)				
☐	☑	☐	TCL compounds reported as TICs	

Validator's Signature: _____

Date: 12/15/10

Reference:

MACTEC, Quality Assurance Project Plan for Remedial Investigation/Feasibility Study – Olin Chemical Superfund Site, Wilmington Property, 51 Eames Street, Wilmington, MA", MACTEC Engineering and Consulting. Draft .October 2008.

Continuing Calibration:

For a subset of samples, the continuing calibration percent difference of benzoic acid (36.4), hexachlorocyclopentadiene (55.4), 2-nitroaniline (39.3), 2,4-dinitrophenol (52.6), 4-nitrophenol (30.4), 4-nitroaniline (41.6), and 4,6-dintiro-2-methylphenol (35.3) exceeded the QC limit of 25. Associated sample results for benzoic acid, hexachlorocyclopentadiene, 2-nitroaniline, 2,4-dinitrophenol, 4-nitrophenol, 4-nitroaniline, and 4,6-dintiro-2-methylphenol were non-detect and the reporting limits were qualified estimated (UJ).

For a subset of samples, the continuing calibration percent difference of benzoic acid (-29) exceeded the QC limit of 25. Associated sample results for benzoic acid that were non-detect were qualified estimated (UJ) at the reporting limits. Reported detections of benzoic acid were qualified estimated (J).

LCS:

The LCS and LCSD percent recoveries of aniline (38 and 38) were less than the lower QC limit of 40. Sample results for aniline were non-detect and the reporting limits were qualified estimated (UJ).

MS/MSD:

Sample OC-SB-475-16/18-XXX was selected for MS/MSD analysis. The MS and/or MSD percent recoveries of aniline (36 and 38), benzoic acid (7), hexachlorocyclopentadiene (35), and pentachlorophenol (131), and the RPD for benzoic acid (107) were outside of the QC limits. The result for aniline in the unspiked sample was qualified previously under the LCS criteria. The unspiked sample result for benzoic acid was qualified estimated (J). The unspiked sample result for hexachlorocyclopentadiene was qualified estimated (UJ) at the reporting limit. The unspiked sample result for pentachlorophenol was non-detect, no further action was required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

FILE COPY

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/15/10

Job Number: 360-31167-1

SDG Number: 360-31167

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/6/2010 11:45 AM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/06/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

failed the recovery criteria low for LCS 360-66310/1-A. Bromomethane, Chloroethane and Trichlorofluoromethane failed the recovery criteria low for LCSD 360-66310/2-A. Acetone exceeded the rpd limit.

For samples 360-31167-(5, 5MS/MSD, 11), Acetone failed the recovery criteria low for LCSD 360-66285/2-A. Refer to the QC report for details.

Matrix Spike:
Dichlorodifluoromethane and Trichlorofluoromethane failed the recovery criteria low for the MS/MSD of sample OC-SB-475-16/18-XXXMS/MSD (360-31167-5) in batch 360-66263. Several analytes exceeded the rpd limit. The sample size used in the preparation of the matrix spike/matrix spike duplicate (MS/MSD) associated with batch 66263 exceeded 10% difference. As the relative percent difference (RPD) calculation is based upon the MS/MSD concentration as opposed to the MS/MSD percent recovery, elevated %RPD values were obtained.

CCV:
For samples 360-31167-(6,7), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66169: Carbon disulfide (low), Acetone (low), 1,2,4-Trimethylbenzene (high), 2,4,4-Trimethyl-1-Pentene (low) and Methyl acetate (low).

For the following samples360-31167-1,2,3,4,8), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66227: 2-Butanone [MEK] (low), Acetone (low), Methyl acetate (low), 1,2,4-Trimthylbenzene (high).

For samples 360-31167-(6DL, 7DL, 9,10,12,13), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66242: Cyclohexane (low), 2,2-Dichloropropane (low), 2,4,4-Trimethyl-1-Pentene (low), Acetone (low) and 1,2,4-Trimethylbenzene (high).

For samples 360-31167-(5, 5MS/MSD, 11), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66263: Methyl acetate (low), Acetone (low), and 124-Trimethylbenzene(high).

For samples 360-31167-(9DL,10DL,12DL,13DL, 15, 15DL, 16, 17), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66287; Acetone(low), Methyl acetate(low), and 1,2,4-Trimethylbenzene (high).

For samples 360-66366-14, 18, 19, 20), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66366; Methyl acetate (low) and 1,2,4-trimethylbenzene (high).

General method information:
Samples OC-SB-475-8.0/10-DUP (360-31167-6)[5X], OC-SB-475-8.0/10-XXX (360-31167-7)[5X], OC-SB-476-13/15-XXX (360-31167-9) [10X], OC-SB-476-8.0/10-XXX (360-31167-10)[25X], OC-SB-477-10/12-XXX (360-31167-12)[25X], OC-SB-477-8.0/10-XXX (360-31167-13)[25X] and OC-SB-478-10/12-XXX (360-31167-15)[25X] required dilution prior to analysis due to the abundance of target analytes. The reporting limits have been adjusted accordingly.

Samples 360-31167-(16, 17) in batch 66287 were not run as a low level due to high non-targets that are heavier then Naphthalene. A low level analysis would have damage the instrument.

Samples 360-31167-(5MS) in batch 66263 and 360-31167-(8) in batch 66227 had a ratio of DI water to soil below the method standard.

Sample 360-31167-(16) in batch 66287and 360-31167-(18), in batch 66366 had a ratio of methanol to soil above the method standard.

No other difficulties were encountered during the VOC analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL
Samples OC-SB-474-0.0/1.0-XXX (360-31167-1), OC-SB-474-10.5/12.5-XXX (360-31167-2), OC-SB-474-8.0/10-XXX (360-31167-3), OC-SB-475-0.0/1.0-XXX (360-31167-4), OC-SB-475-16/18-XXX (360-31167-5), OC-SB-475-8.0/10-DUP (360-31167-6), OC-SB-475-8.0/10-XXX (360-31167-7), OC-SB-476-0.0/1.0-XXX (360-31167-8), OC-SB-476-13/15-XXX (360-31167-9), OC-SB-476-8.0/10-XXX (360-31167-10), OC-SB-477-0.0/1.0-XXX (360-31167-11), OC-SB-477-10/12-XXX (360-31167-12), OC-SB-477-8.0/10-XXX (360-31167-13), OC-SB-478-0.0/1.0-XXX (360-31167-14), OC-SB-478-10/12-XXX (360-31167-15), OC-SB-478-8.0/10-XXX (360-31167-16), OC-SB-497-0.0/1.0-XXX (360-31167-17), OC-SB-497-11/13-XXX (360-31167-18) and OC-SB-497-6.0/8.0-XXX (360-31167-19) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/23/2010 and analyzed on 11/24/2010, 11/25/2010, 11/30/2010 and 12/01/2010.

Surrogates:
Due to a required dilution, surrogates recoveries for samples OC-SB-476-8.0/10-XXX (360-31167-10), OC-SB-477-10/12-XXX (360-31167-12), OC-SB-477-8.0/10-XXX (360-31167-13), OC-SB-478-10/12-XXX (360-31167-15), OC-SB-475-8.0/10-DUP (360-31167-6), OC-SB-475-8.0/10-XXX (360-31167-7) and OC-SB-476-13/15-XXX (360-31167-9) were diluted outside of control limits.

LCS:

For all samples, Aniline failed the recovery criteria low for LCS/LCSD 360-66249/2-A. Refer to the QC report for details.

Matrix Spike:
Aniline and Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample OC-SB-475-16/18-XXXMS (360-31167-5) in batch 360-66299. For the MSD of sample OC-SB-475-16/18-XXXMSD (360-31167-5) in batch 360-66299, Aniline and Benzoic acid failed the recovery criteria low. Pentachlorophenol failed the recovery criteria high. Also, Benzoic acid exceeded the rpd limit.
Due to the high concentration of Bis(2-ethylhexyl) phthalate the matrix spike / matrix spike duplicate (MS/MSD) for batch 66249 was reported with an 'E' flag.

CCV:
For samples 360-31167-(6,7,8DL,9,10,11,12,13,15,16,17,18,19), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66453: benzoic acid, 2-Nitrophenol, Hexachlorocyclopentadiene, 2-Nitroaniline, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline, and 4,6-Dintro-2-methylphenol.

For samples 360-31167-(1,2,3,4,5,5MS/MSD,8,14), the following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 66299: Benzoic acid, Pentachlorophenol, 2,4-Dinitrophenol.

General method information:
Samples OC-SB-474-0.0/1.0-XXX (360-31167-1)[10X], OC-SB-475-8.0/10-DUP (360-31167-6)[1000X], OC-SB-475-8.0/10-DUP (360-31167-6)[20X], OC-SB-475-8.0/10-XXX (360-31167-7)[1000X], OC-SB-475-8.0/10-XXX (360-31167-7)[20X], OC-SB-476-0.0/1.0-XXX (360-31167-8)[5X], OC-SB-476-13/15-XXX (360-31167-9)[200X], OC-SB-476-13/15-XXX (360-31167-9)[5000X], OC-SB-476-8.0/10-XXX (360-31167-10)[10000X], OC-SB-476-8.0/10-XXX (360-31167-10)[500X], OC-SB-477-0.0/1.0-XXX (360-31167-11)[5X], OC-SB-477-10/12-XXX (360-31167-12)[100X], OC-SB-477-10/12-XXX (360-31167-12)[25X], OC-SB-477-8.0/10-XXX (360-31167-13)[1000X], OC-SB-477-8.0/10-XXX (360-31167-13)[20000X], OC-SB-478-0.0/1.0-XXX (360-31167-14)[10X], OC-SB-478-10/12-XXX (360-31167-15)[50X], OC-SB-478-10/12-XXX (360-31167-15)[5000X], OC-SB-478-8.0/10-XXX (360-31167-16) [4X], OC-SB-497-0.0/1.0-XXX (360-31167-17)[2X], OC-SB-497-11/13-XXX (360-31167-18)[2X] and OC-SB-497-6.0/8.0-XXX (360-31167-19)[10X] required dilution prior to analysis due to either the abundance of target and non-target analytes analytes. The reporting limits have been adjusted accordingly.

The 11/19/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 2,4-Dinitrophenol; 4,6-Dinitro-2-Methylphenol, and Pentachlorophenol.

The 11/29/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 2,4-Dinitrophenol; 4,6-Dinitro-2-Methylphenol, 4-Nitrophenol; 2,3,4,6-Tetrachlorophenol; Pentachlorophenol; Dibenz(a,h)anthracene; and Benzo[g,h,i]perylene.

The 11/30/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 4-Chloroaniline, 3-Nitroaniline, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, and 3,3'-Dichlorobenzidine.

A TIC is present in samples 360-31167-1and 4 that isn't represented in the report due to it's close proximity to a peak of interest. This compound is most likely the same compound present in numerous other samples at or near the retention time of perylene-d12 or Benzo(a)pyrene. Retention times vary depending on the instrument, but it appears to be the same compound that was identified as p,p'-dioctyldiphenyl amine in other samples run on a different instrument. The amount can't be determined because the processing program will not assign this peak as a TIC due to the peak already is identified as the internal standard.

Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): OC-SB-474-0.0/1.0-XXX (360-31167-1). Sample is being reported from the 1x run for all target analytes except bis(2-ethylhexyl)phthalate which was over calibration. Perylene-d12 was low, possibly due to the presence of a non-target analyte at that retention time. The low recovery means results for Benzo(ghi)perylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(123-CD)pyrene, Benzo(a)pyrene, Di-n-octyl phthalate, and Dibenz(ah)anthracene will be biased high. The results for these compounds are 'ND' and are considered acceptable.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS
Samples OC-SB-474-0.0/1.0-XXX (360-31167-1), OC-SB-474-10.5/12.5-XXX (360-31167-2), OC-SB-474-8.0/10-XXX (360-31167-3), OC-SB-475-0.0/1.0-XXX (360-31167-4), OC-SB-475-16/18-XXX (360-31167-5), OC-SB-475-8.0/10-DUP (360-31167-6), OC-SB-475-8.0/10-XXX (360-31167-7), OC-SB-476-0.0/1.0-XXX (360-31167-8), OC-SB-476-13/15-XXX (360-31167-9), OC-SB-476-8.0/10-XXX (360-31167-10), OC-SB-477-0.0/1.0-XXX (360-31167-11), OC-SB-477-10/12-XXX (360-31167-12), OC-SB-477-8.0/10-XXX (360-31167-13), OC-SB-478-0.0/1.0-XXX (360-31167-14), OC-SB-478-10/12-XXX (360-31167-15), OC-SB-478-8.0/10-XXX (360-31167-16), OC-SB-497-0.0/1.0-XXX (360-31167-17), OC-SB-497-11/13-XXX (360-31167-18), OC-SB-497-6.0/8.0-XXX (360-31167-19) and OC-TBK-058 (360-31167-20) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/19/2010, 11/22/2010 and 11/24/2010 and analyzed on 11/24/2010 and 11/25/2010.

General method information:
Samples OC-SB-475-8.0/10-DUP (360-31167-6)[2X], OC-SB-475-8.0/10-XXX (360-31167-7)[2X], OC-SB-476-13/15-XXX (360-31167-9) [5X], OC-SB-476-8.0/10-XXX (360-31167-10)[10X], OC-SB-477-10/12-XXX (360-31167-12)[10X], OC-SB-477-8.0/10-XXX (360-31167-13)

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31167-1	OC-SB-474-0.0/1.0-XXX	Solid	11/18/2010 1245	11/18/2010 1800
360-31167-2	OC-SB-474-10.5/12.5-XXX	Solid	11/18/2010 1315	11/18/2010 1800
360-31167-3	OC-SB-474-8.0/10-XXX	Solid	11/18/2010 1300	11/18/2010 1800
360-31167-4	OC-SB-475-0.0/1.0-XXX	Solid	11/18/2010 1125	11/18/2010 1800
360-31167-5	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-5MS	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-5MSD	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-6	OC-SB-475-8.0/10-DUP	Solid	11/18/2010 1145	11/18/2010 1800
360-31167-7	OC-SB-475-8.0/10-XXX	Solid	11/18/2010 1145	11/18/2010 1800
360-31167-8	OC-SB-476-0.0/1.0-XXX	Solid	11/18/2010 1035	11/18/2010 1800
360-31167-9	OC-SB-476-13/15-XXX	Solid	11/18/2010 1155	11/18/2010 1800
360-31167-10	OC-SB-476-8.0/10-XXX	Solid	11/18/2010 1055	11/18/2010 1800
360-31167-11	OC-SB-477-0.0/1.0-XXX	Solid	11/18/2010 0955	11/18/2010 1800
360-31167-12	OC-SB-477-10/12-XXX	Solid	11/18/2010 1025	11/18/2010 1800
360-31167-13	OC-SB-477-8.0/10-XXX	Solid	11/18/2010 1010	11/18/2010 1800
360-31167-14	OC-SB-478-0.0/1.0-XXX	Solid	11/18/2010 0910	11/18/2010 1800
360-31167-15	OC-SB-478-10/12-XXX	Solid	11/18/2010 0945	11/18/2010 1800
360-31167-16	OC-SB-478-8.0/10-XXX	Solid	11/18/2010 0925	11/18/2010 1800
360-31167-17	OC-SB-497-0.0/1.0-XXX	Solid	11/17/2010 1450	11/18/2010 1800
360-31167-18	OC-SB-497-11/13-XXX	Solid	11/17/2010 1525	11/18/2010 1800
360-31167-19	OC-SB-497-6.0/8.0-XXX	Solid	11/17/2010 1510	11/18/2010 1800
360-31167-20	OC-TBK-058	Solid	11/17/2010 1450	11/18/2010 1800

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1835.D
Dilution:	1.0			Initial Weight/Volume:	30.58 g
Date Analyzed:	11/24/2010 2058			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		21	38
1,2,4,5-Tetrachlorobenzene		ND		21	38
1,2,4-Trichlorobenzene		ND		21	38
1,2-Dichlorobenzene		ND		21	38
1,3-Dichlorobenzene		ND		21	38
1,4-Dichlorobenzene		ND		21	38
1-Methylnaphthalene		ND		21	38
2,2'-oxybis[1-chloropropane]		ND		21	38
2,3,4,6-Tetrachlorophenol		ND		21	38
2,4,5-Trichlorophenol		ND		21	38
2,4,6-Trichlorophenol		ND		21	38
2,4-Dichlorophenol		ND		21	38
2,4-Dimethylphenol		ND		21	38
2,4-Dinitrophenol		ND		21	38
2,4-Dinitrotoluene		ND		21	38
2,6-Dinitrotoluene		ND		21	38
2-Chloronaphthalene		ND		21	38
2-Chlorophenol		ND		21	38
2-Methylnaphthalene		ND		21	38
2-Methylphenol		ND		23	38
2-Nitroaniline		ND		21	190
2-Nitrophenol		ND		21	38
3 & 4 Methylphenol		ND		21	38
3,3'-Dichlorobenzidine		ND		21	76
3-Nitroaniline		ND		21	190
4,6-Dinitro-2-methylphenol		ND		21	190
4-Bromophenyl phenyl ether		ND		21	38
4-Chloro-3-methylphenol		ND		21	76
4-Chloroaniline		ND		21	76
4-Chlorophenyl phenyl ether		ND		21	38
4-Nitroaniline		ND		21	190
4-Nitrophenol		ND		21	190
Acenaphthene		ND		21	38
Acenaphthylene		ND		21	38
Acetophenone		ND		21	38
Aniline		ND J		21	38
Anthracene		ND		21	38
Atrazine		ND		21	38
Azobenzene		ND		21	38
Benzaldehyde		320		21	38
Benzo[a]anthracene		ND		21	38
Benzo[a]pyrene		ND		21	38
Benzo[b]fluoranthene		ND		21	38
Benzo[g,h,i]perylene		ND		21	38
Benzo[k]fluoranthene		ND		21	38
Benzoic acid		ND J		21	190

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1835.D
Dilution:	1.0			Initial Weight/Volume:	30.58 g
Date Analyzed:	11/24/2010 2058			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		21	38
Benzyl alcohol		340		33	76
Bis(2-chloroethoxy)methane		ND		21	38
Bis(2-chloroethyl)ether		ND		21	38
Butyl benzyl phthalate		ND		21	38
Caprolactam		ND		21	38
Carbazole		ND		21	38
Chrysene		ND		21	38
Dibenz(a,h)anthracene		ND		21	38
Dibenzofuran		ND		21	38
Diethyl phthalate		ND		21	38
Dimethyl phthalate		ND		21	38
Di-n-butyl phthalate		ND		34	38
Di-n-octyl phthalate		ND		21	38
Fluoranthene		ND		21	38
Fluorene		ND		21	38
Hexachlorobenzene		ND		21	38
Hexachlorobutadiene		ND		21	38
Hexachlorocyclopentadiene		ND		21	76
Hexachloroethane		ND		21	38
Indeno[1,2,3-cd]pyrene		ND		21	38
Isophorone		ND		21	38
Naphthalene		ND		21	92
Nitrobenzene		ND		21	38
N-Nitrosodi-n-propylamine		ND		21	38
N-Nitrosodiphenylamine		26	J	21	38
Pentachlorophenol		ND		21	38
Phenanthrene		ND		21	46
Phenol		ND		21	38
Diphenyl oxide		25	J	21	38
Pyrene		ND		21	38
N-Nitrosodimethylamine		ND		21	38

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	92		30 - 130
2-Fluorobiphenyl	64		30 - 130
2-Fluorophenol	56		30 - 130
Nitrobenzene-d5	52		30 - 130
Phenol-d5	58		30 - 130
Terphenyl-d14	94		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1835.D
Dilution:	1.0			Initial Weight/Volume:	30.58 g
Date Analyzed:	11/24/2010 2058			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
77899-3-7	1-Heneicosyl formate	14.93	260	J N
1599-67-3	1-Docosene	15.55	750	J N
1599-67-3	1-Docosene	16.07	1100	J N
1560-88-9	Octadecane, 2-methyl-	16.73	310	J N
629-96-9	1-Eicosanol	16.77	990	J N
629-99-2	Pentacosane	17.66	320	J N
	Unknown	17.74	330	J
	Unknown	19.56	390	J
1000214-20-7	Stigmasterol, 22,23-dihydro-	19.82	340	J N
559-74-0	Friedelin	22.61	810	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1879.D
Dilution:	10			Initial Weight/Volume:	30.58 g
Date Analyzed:	12/01/2010 1325	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		2000		210	380

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	49		30 - 130
2-Fluorobiphenyl	63		30 - 130
2-Fluorophenol	33		30 - 130
Nitrobenzene-d5	55		30 - 130
Phenol-d5	51		30 - 130
Terphenyl-d14	64		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1836.D
Dilution:	1.0			Initial Weight/Volume:	30.19 g
Date Analyzed:	11/24/2010 2130			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		21	40
1,2,4,5-Tetrachlorobenzene		ND		21	40
1,2,4-Trichlorobenzene		ND		21	40
1,2-Dichlorobenzene		ND		21	40
1,3-Dichlorobenzene		ND		21	40
1,4-Dichlorobenzene		ND		21	40
1-Methylnaphthalene		ND		21	40
2,2'-oxybis[1-chloropropane]		ND		21	40
2,3,4,6-Tetrachlorophenol		ND		21	40
2,4,5-Trichlorophenol		ND		21	40
2,4,6-Trichlorophenol		ND		21	40
2,4-Dichlorophenol		ND		21	40
2,4-Dimethylphenol		ND		21	40
2,4-Dinitrophenol		ND		21	40
2,4-Dinitrotoluene		ND		21	40
2,6-Dinitrotoluene		ND		21	40
2-Chloronaphthalene		ND		21	40
2-Chlorophenol		ND		21	40
2-Methylnaphthalene		ND		21	40
2-Methylphenol		ND		24	40
2-Nitroaniline		ND		21	200
2-Nitrophenol		ND		21	40
3 & 4 Methylphenol		ND		21	40
3,3'-Dichlorobenzidine		ND		21	79
3-Nitroaniline		ND		21	200
4,6-Dinitro-2-methylphenol		ND		21	200
4-Bromophenyl phenyl ether		ND		21	40
4-Chloro-3-methylphenol		ND		21	79
4-Chloroaniline		ND		21	79
4-Chlorophenyl phenyl ether		ND		21	40
4-Nitroaniline		ND		21	200
4-Nitrophenol		ND		21	200
Acenaphthene		ND		21	40
Acenaphthylene		ND		21	40
Acetophenone		ND		21	40
Aniline		ND J		21	40
Anthracene		ND		21	40
Atrazine		ND		21	40
Azobenzene		ND		21	40
Benzaldehyde		ND		21	40
Benzo[a]anthracene		ND		21	40
Benzo[a]pyrene		ND		21	40
Benzo[b]fluoranthene		ND		21	40
Benzo[g,h,i]perylene		ND		21	40
Benzo[k]fluoranthene		ND		21	40
Benzoic acid		120	J	21	200

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1836.D
Dilution:	1.0			Initial Weight/Volume:	30.19 g
Date Analyzed:	11/24/2010 2130			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		21	40
Benzyl alcohol		ND		34	79
Bis(2-chloroethoxy)methane		ND		21	40
Bis(2-chloroethyl)ether		ND		21	40
Bis(2-ethylhexyl) phthalate		50		21	40
Butyl benzyl phthalate		ND		21	40
Caprolactam		ND		21	40
Carbazole		ND		21	40
Chrysene		ND		21	40
Dibenz(a,h)anthracene		ND		21	40
Dibenzofuran		ND		21	40
Diethyl phthalate		ND		21	40
Dimethyl phthalate		ND		21	40
Di-n-butyl phthalate		ND		35	40
Di-n-octyl phthalate		ND		21	40
Fluoranthene		ND		21	40
Fluorene		ND		21	40
Hexachlorobenzene		ND		21	40
Hexachlorobutadiene		ND		21	40
Hexachlorocyclopentadiene		ND		21	79
Hexachloroethane		ND		21	40
Indeno[1,2,3-cd]pyrene		ND		21	40
Isophorone		ND		21	40
Naphthalene		ND		21	95
Nitrobenzene		ND		21	40
N-Nitrosodi-n-propylamine		ND		21	40
N-Nitrosodiphenylamine		ND		21	40
Pentachlorophenol		ND		21	40
Phenanthrene		ND		21	48
Phenol		ND		21	40
Diphenyl oxide		ND		21	40
Pyrene		ND		21	40
N-Nitrosodimethylamine		ND		21	40

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	97		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	63		30 - 130
Nitrobenzene-d5	57		30 - 130
Phenol-d5	64		30 - 130
Terphenyl-d14	73		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1836.D
Dilution:	1.0			Initial Weight/Volume:	30.19 g
Date Analyzed:	11/24/2010 2130			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	6.63	28	J
	Unknown	7.58	130	J
	Unknown	7.70	42	J
	Unknown	7.84	63	J
	Unknown	9.88	46	J
57-10-3	n-Hexadecanoic acid	13.71	34	J N
149-30-4	2-Mercaptobenzothiazole	13.99	61	J N
1599-67-3	1-Docosene	15.55	130	J N
301-2-0	9-Octadecenamide, (Z)-	16.38	36	J N
111-2-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.47	320	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1837.D
Dilution:	1.0			Initial Weight/Volume:	30.10 g
Date Analyzed:	11/24/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		21	40
1,2,4,5-Tetrachlorobenzene		ND		21	40
1,2,4-Trichlorobenzene		ND		21	40
1,2-Dichlorobenzene		ND		21	40
1,3-Dichlorobenzene		ND		21	40
1,4-Dichlorobenzene		ND		21	40
1-Methylnaphthalene		ND		21	40
2,2'-oxybis[1-chloropropane]		ND		21	40
2,3,4,6-Tetrachlorophenol		ND		21	40
2,4,5-Trichlorophenol		ND		21	40
2,4,6-Trichlorophenol		ND		21	40
2,4-Dichlorophenol		ND		21	40
2,4-Dimethylphenol		ND		21	40
2,4-Dinitrophenol		ND		21	40
2,4-Dinitrotoluene		ND		21	40
2,6-Dinitrotoluene		ND		21	40
2-Chloronaphthalene		ND		21	40
2-Chlorophenol		ND		21	40
2-Methylnaphthalene		ND		21	40
2-Methylphenol		ND		24	40
2-Nitroaniline		ND		21	200
2-Nitrophenol		ND		21	40
3 & 4 Methylphenol		ND		21	40
3,3'-Dichlorobenzidine		ND		21	79
3-Nitroaniline		ND		21	200
4,6-Dinitro-2-methylphenol		ND		21	200
4-Bromophenyl phenyl ether		ND		21	40
4-Chloro-3-methylphenol		ND		21	79
4-Chloroaniline		ND		21	79
4-Chlorophenyl phenyl ether		ND		21	40
4-Nitroaniline		ND		21	200
4-Nitrophenol		ND		21	200
Acenaphthene		ND		21	40
Acenaphthylene		ND		21	40
Acetophenone		ND		21	40
Aniline		ND 5	✓	21	40
Anthracene		ND		21	40
Atrazine		ND		21	40
Azobenzene		ND		21	40
Benzaldehyde		ND		21	40
Benzo[a]anthracene		ND		21	40
Benzo[a]pyrene		ND		21	40
Benzo[b]fluoranthene		ND		21	40
Benzo[g,h,i]perylene		ND		21	40
Benzo[k]fluoranthene		ND		21	40
Benzoic acid		110	J	21	200

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1837.D
Dilution:	1.0			Initial Weight/Volume:	30.10 g
Date Analyzed:	11/24/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		21	40
Benzyl alcohol		ND		34	79
Bis(2-chloroethoxy)methane		ND		21	40
Bis(2-chloroethyl)ether		ND		21	40
Bis(2-ethylhexyl) phthalate		34	J	21	40
Butyl benzyl phthalate		ND		21	40
Caprolactam		ND		21	40
Carbazole		ND		21	40
Chrysene		ND		21	40
Dibenz(a,h)anthracene		ND		21	40
Dibenzofuran		ND		21	40
Diethyl phthalate		ND		21	40
Dimethyl phthalate		ND		21	40
Di-n-butyl phthalate		ND		35	40
Di-n-octyl phthalate		ND		21	40
Fluoranthene		ND		21	40
Fluorene		ND		21	40
Hexachlorobenzene		ND		21	40
Hexachlorobutadiene		ND		21	40
Hexachlorocyclopentadiene		ND		21	79
Hexachloroethane		ND		21	40
Indeno[1,2,3-cd]pyrene		ND		21	40
Isophorone		ND		21	40
Naphthalene		ND		21	95
Nitrobenzene		ND		21	40
N-Nitrosodi-n-propylamine		ND		21	40
N-Nitrosodiphenylamine		ND		21	40
Pentachlorophenol		ND		21	40
Phenanthrene		ND		21	47
Phenol		ND		21	40
Diphenyl oxide		ND		21	40
Pyrene		ND		21	40
N-Nitrosodimethylamine		ND		21	40

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	95		30 - 130
2-Fluorobiphenyl	67		30 - 130
2-Fluorophenol	60		30 - 130
Nitrobenzene-d5	55		30 - 130
Phenol-d5	64		30 - 130
Terphenyl-d14	73		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1837.D
Dilution:	1.0			Initial Weight/Volume:	30.10 g
Date Analyzed:	11/24/2010 2203			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	6.62	29	J
	Unknown	7.58	120	J
	Unknown	7.70	40	J
	Unknown	7.84	60	J
	Unknown	9.88	49	J
57-10-3	n-Hexadecanoic acid	13.71	74	J N
149-30-4	2-Mercaptobenzothiazole	13.99	25	J N
1599-67-3	1-Docosene	15.55	140	J N
7683-64-9	Squalene	16.47	230	J N
822-23-1	Acetic acid, octadecyl ester	17.74	33	J N

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1838.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/24/2010 2235			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		19	36
1,2,4,5-Tetrachlorobenzene		ND		19	36
1,2,4-Trichlorobenzene		ND		19	36
1,2-Dichlorobenzene		ND		19	36
1,3-Dichlorobenzene		ND		19	36
1,4-Dichlorobenzene		ND		19	36
1-Methylnaphthalene		ND		19	36
2,2'-oxybis[1-chloropropane]		ND		19	36
2,3,4,6-Tetrachlorophenol		ND		19	36
2,4,5-Trichlorophenol		ND		19	36
2,4,6-Trichlorophenol		ND		19	36
2,4-Dichlorophenol		ND		19	36
2,4-Dimethylphenol		ND		19	36
2,4-Dinitrophenol		ND		19	36
2,4-Dinitrotoluene		ND		19	36
2,6-Dinitrotoluene		ND		19	36
2-Chloronaphthalene		ND		19	36
2-Chlorophenol		ND		19	36
2-Methylnaphthalene		ND		19	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		19	180
2-Nitrophenol		ND		19	36
3 & 4 Methylphenol		ND		19	36
3,3'-Dichlorobenzidine		ND		19	72
3-Nitroaniline		ND		19	180
4,6-Dinitro-2-methylphenol		ND		19	180
4-Bromophenyl phenyl ether		ND		19	36
4-Chloro-3-methylphenol		ND		19	72
4-Chloroaniline		ND		19	72
4-Chlorophenyl phenyl ether		ND		19	36
4-Nitroaniline		ND		19	180
4-Nitrophenol		ND		19	180
Acenaphthene		ND		19	36
Acenaphthylene		ND		19	36
Acetophenone		ND		19	36
Aniline		ND J		19	36
Anthracene		ND		19	36
Atrazine		ND		19	36
Azobenzene		ND		19	36
Benzaldehyde		ND		19	36
Benzo[a]anthracene		ND		19	36
Benzo[a]pyrene		ND		19	36
Benzo[b]fluoranthene		ND		19	36
Benzo[g,h,i]perylene		ND		19	36
Benzo[k]fluoranthene		ND		19	36
Benzoic acid		130	J	19	180

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1838.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/24/2010 2235			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		19	36
Benzyl alcohol		ND		31	72
Bis(2-chloroethoxy)methane		ND		19	36
Bis(2-chloroethyl)ether		ND		19	36
Bis(2-ethylhexyl) phthalate		570		19	36
Butyl benzyl phthalate		ND		19	36
Caprolactam		ND		19	36
Carbazole		ND		19	36
Chrysene		ND		19	36
Dibenz(a,h)anthracene		ND		19	36
Dibenzofuran		ND		19	36
Diethyl phthalate		ND		19	36
Dimethyl phthalate		ND		19	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		ND		19	36
Fluoranthene		22	J	19	36
Fluorene		ND		19	36
Hexachlorobenzene		ND		19	36
Hexachlorobutadiene		ND		19	36
Hexachlorocyclopentadiene		ND		19	72
Hexachloroethane		ND		19	36
Indeno[1,2,3-cd]pyrene		ND		19	36
Isophorone		ND		19	36
Naphthalene		ND		19	86
Nitrobenzene		ND		19	36
N-Nitrosodi-n-propylamine		ND		19	36
N-Nitrosodiphenylamine		32	J	19	36
Pentachlorophenol		ND		19	36
Phenanthrene		ND		19	43
Phenol		ND		19	36
Diphenyl oxide		ND		19	36
Pyrene		ND		19	36
N-Nitrosodimethylamine		ND		19	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	91		30 - 130
2-Fluorobiphenyl	62		30 - 130
2-Fluorophenol	55		30 - 130
Nitrobenzene-d5	53		30 - 130
Phenol-d5	58		30 - 130
Terphenyl-d14	74		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1838.D
Dilution:	1.0			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/24/2010 2235			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
111-76-2	Ethanol, 2-butoxy-	7.57	140	J N
57-10-3	n-Hexadecanoic acid	13.71	140	J N
1599-67-3	1-Docosene	15.56	450	J N
1599-67-3	1-Docosene	16.07	570	J N
7683-64-9	Squalene	16.46	140	J N
26603-23-6	p,p"-Dioctyldiphenylamine	17.28	13000	J N
54833-48-6	Heptadecane, 2,6,10,15-tetramethyl-	17.67	140	J N
297-3-0	Cyclotetracosane	17.74	150	J N
14021-23-9	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	19.35	340	J N
	Unknown	22.62	310	J ~

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1839.D
Dilution:	1.0			Initial Weight/Volume:	30.71 g
Date Analyzed:	11/24/2010 2308			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	36
1,2,4,5-Tetrachlorobenzene		ND		20	36
1,2,4-Trichlorobenzene		ND		20	36
1,2-Dichlorobenzene		ND		20	36
1,3-Dichlorobenzene		ND		20	36
1,4-Dichlorobenzene		ND		20	36
1-Methylnaphthalene		ND		20	36
2,2'-oxybis[1-chloropropane]		ND		20	36
2,3,4,6-Tetrachlorophenol		ND		20	36
2,4,5-Trichlorophenol		ND		20	36
2,4,6-Trichlorophenol		ND		20	36
2,4-Dichlorophenol		ND		20	36
2,4-Dimethylphenol		ND		20	36
2,4-Dinitrophenol		ND		20	36
2,4-Dinitrotoluene		ND		20	36
2,6-Dinitrotoluene		ND		20	36
2-Chloronaphthalene		ND		20	36
2-Chlorophenol		ND		20	36
2-Methylnaphthalene		ND		20	36
2-Methylphenol		ND		22	36
2-Nitroaniline		ND		20	180
2-Nitrophenol		ND		20	36
3 & 4 Methylphenol		ND		20	36
3,3'-Dichlorobenzidine		ND		20	72
3-Nitroaniline		ND		20	180
4,6-Dinitro-2-methylphenol		ND		20	180
4-Bromophenyl phenyl ether		ND		20	36
4-Chloro-3-methylphenol		ND		20	72
4-Chloroaniline		ND		20	72
4-Chlorophenyl phenyl ether		ND		20	36
4-Nitroaniline		ND		20	180
4-Nitrophenol		ND		20	180
Acenaphthene		ND		20	36
Acenaphthylene		ND		20	36
Acetophenone		ND		20	36
Aniline		ND J		20	36
Anthracene		ND		20	36
Atrazine		ND		20	36
Azobenzene		ND		20	36
Benzaldehyde		ND		20	36
Benzo[a]anthracene		ND		20	36
Benzo[a]pyrene		ND		20	36
Benzo[b]fluoranthene		ND		20	36
Benzo[g,h,i]perylene		ND		20	36
Benzo[k]fluoranthene		ND		20	36
Benzoic acid		100	J	20	180

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1839.D
Dilution:	1.0			Initial Weight/Volume:	30.71 g
Date Analyzed:	11/24/2010 2308			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20	36
Benzyl alcohol		ND		31	72
Bis(2-chloroethoxy)methane		ND		20	36
Bis(2-chloroethyl)ether		ND		20	36
Bis(2-ethylhexyl) phthalate		480		20	36
Butyl benzyl phthalate		ND		20	36
Caprolactam		ND		20	36
Carbazole		ND		20	36
Chrysene		ND		20	36
Dibenz(a,h)anthracene		ND		20	36
Dibenzofuran		ND		20	36
Diethyl phthalate		ND		20	36
Dimethyl phthalate		ND		20	36
Di-n-butyl phthalate		ND		32	36
Di-n-octyl phthalate		36		20	36
Fluoranthene		ND		20	36
Fluorene		ND		20	36
Hexachlorobenzene		ND		20	36
Hexachlorobutadiene		ND		20	36
Hexachlorocyclopentadiene		ND J		20	72
Hexachloroethane		ND		20	36
Indeno[1,2,3-cd]pyrene		ND		20	36
Isophorone		ND		20	36
Naphthalene		ND		20	87
Nitrobenzene		ND		20	36
N-Nitrosodi-n-propylamine		ND		20	36
N-Nitrosodiphenylamine		ND		20	36
Pentachlorophenol		ND		20	36
Phenanthrene		ND		20	43
Phenol		ND		20	36
Diphenyl oxide		ND		20	36
Pyrene		ND		20	36
N-Nitrosodimethylamine		ND		20	36

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	102		30 - 130
2-Fluorobiphenyl	71		30 - 130
2-Fluorophenol	65		30 - 130
Nitrobenzene-d5	58		30 - 130
Phenol-d5	64		30 - 130
Terphenyl-d14	84		30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1839.D
Dilution:	1.0			Initial Weight/Volume:	30.71 g
Date Analyzed:	11/24/2010 2308			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.57	160	TJ
	Unknown	7.69	39	TJ
	Unknown	7.83	72	TJ
	Unknown	9.88	42	TJ
57-10-3	n-Hexadecanoic acid	13.71	40	TJN
1599-67-3	1-Docosene	15.55	150	TJN
7683-64-9	Squalene	16.47	210	TJN
	Unknown	16.76	34	TJ
26603-23-6	p,p''-Dioctyldiphenylamine	17.24	37	TJN
	Unknown	17.74	30	TJ

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13555.D
Dilution:	20			Initial Weight/Volume:	30.55 g
Date Analyzed:	11/30/2010 1710			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		400	750
1,2,4,5-Tetrachlorobenzene		ND		400	750
1,2,4-Trichlorobenzene		ND		400	750
1,2-Dichlorobenzene		ND		400	750
1,3-Dichlorobenzene		ND		400	750
1,4-Dichlorobenzene		ND		400	750
1-Methylnaphthalene		ND		400	750
2,2'-oxybis[1-chloropropane]		ND		400	750
2,3,4,6-Tetrachlorophenol		ND		400	750
2,4,5-Trichlorophenol		ND		400	750
2,4,6-Trichlorophenol		ND		400	750
2,4-Dichlorophenol		ND		400	750
2,4-Dimethylphenol		ND		400	750
2,4-Dinitrophenol		ND	J	400	750
2,4-Dinitrotoluene		ND		400	750
2,6-Dinitrotoluene		ND		400	750
2-Chloronaphthalene		ND		400	750
2-Chlorophenol		ND		400	750
2-Methylnaphthalene		ND		400	750
2-Methylphenol		ND		450	750
2-Nitroaniline		ND	J	400	3700
2-Nitrophenol		ND		400	750
3 & 4 Methylphenol		ND		400	750
3,3'-Dichlorobenzidine		ND		400	1500
3-Nitroaniline		ND		400	3700
4,6-Dinitro-2-methylphenol		ND	J	400	3700
4-Bromophenyl phenyl ether		ND		400	750
4-Chloro-3-methylphenol		ND		400	1500
4-Chloroaniline		ND		400	1500
4-Chlorophenyl phenyl ether		ND		400	750
4-Nitroaniline		ND	J	400	3700
4-Nitrophenol		ND	J	400	3700
Acenaphthene		ND		400	750
Acenaphthylene		ND		400	750
Acetophenone		ND		400	750
Aniline		ND	J	400	750
Anthracene		ND		400	750
Atrazine		ND		400	750
Azobenzene		ND		400	750
Benzaldehyde		ND		400	750
Benzo[a]anthracene		ND		400	750
Benzo[a]pyrene		ND		400	750
Benzo[b]fluoranthene		ND		400	750
Benzo[g,h,i]perylene		ND		400	750
Benzo[k]fluoranthene		ND		400	750
Benzoic acid		ND	J	400	3700

12/6/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13555.D
Dilution:	20			Initial Weight/Volume:	30.55 g
Date Analyzed:	11/30/2010 1710			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		400	750
Benzyl alcohol		ND		640	1500
Bis(2-chloroethoxy)methane		ND		400	750
Bis(2-chloroethyl)ether		ND		400	750
Butyl benzyl phthalate		ND		400	750
Caprolactam		ND		400	750
Carbazole		ND		400	750
Chrysene		ND		400	750
Dibenz(a,h)anthracene		ND		400	750
Dibenzofuran		ND		400	750
Diethyl phthalate		ND		400	750
Dimethyl phthalate		ND		400	750
Di-n-butyl phthalate		ND		660	750
Di-n-octyl phthalate		9900		400	750
Fluoranthene		ND		400	750
Fluorene		ND		400	750
Hexachlorobenzene		ND		400	750
Hexachlorobutadiene		ND		400	750
Hexachlorocyclopentadiene		ND J		400	1500
Hexachloroethane		ND		400	750
Indeno[1,2,3-cd]pyrene		ND		400	750
Isophorone		ND		400	750
Naphthalene		ND		400	1800
Nitrobenzene		ND		400	750
N-Nitrosodi-n-propylamine		ND		400	750
N-Nitrosodiphenylamine		ND		400	750
Pentachlorophenol		ND		400	750
Phenanthrene		ND		400	900
Phenol		ND		400	750
Diphenyl oxide		ND		400	750
Pyrene		ND		400	750
N-Nitrosodimethylamine		ND		400	750

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453	Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249	Lab File ID:	B13555.D
Dilution:	20		Initial Weight/Volume:	30.55 g
Date Analyzed:	11/30/2010 1710		Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1880.D
Dilution:	1000			Initial Weight/Volume:	30.55 g
Date Analyzed:	12/01/2010 1357	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		440000		20000	37000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13557.D
Dilution:	20			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/30/2010 1821			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		410	750
1,2,4,5-Tetrachlorobenzene		ND		410	750
1,2,4-Trichlorobenzene		ND		410	750
1,2-Dichlorobenzene		ND		410	750
1,3-Dichlorobenzene		ND		410	750
1,4-Dichlorobenzene		ND		410	750
1-Methylnaphthalene		ND		410	750
2,2'-oxybis[1-chloropropane]		ND		410	750
2,3,4,6-Tetrachlorophenol		ND		410	750
2,4,5-Trichlorophenol		ND		410	750
2,4,6-Trichlorophenol		ND		410	750
2,4-Dichlorophenol		ND		410	750
2,4-Dimethylphenol		ND		410	750
2,4-Dinitrophenol		ND	J	410	750
2,4-Dinitrotoluene		ND		410	750
2,6-Dinitrotoluene		ND		410	750
2-Chloronaphthalene		ND		410	750
2-Chlorophenol		ND		410	750
2-Methylnaphthalene		ND		410	750
2-Methylphenol		ND		450	750
2-Nitroaniline		ND	J	410	3800
2-Nitrophenol		ND		410	750
3 & 4 Methylphenol		ND		410	750
3,3'-Dichlorobenzidine		ND		410	1500
3-Nitroaniline		ND		410	3800
4,6-Dinitro-2-methylphenol		ND	J	410	3800
4-Bromophenyl phenyl ether		ND		410	750
4-Chloro-3-methylphenol		ND		410	1500
4-Chloroaniline		ND		410	1500
4-Chlorophenyl phenyl ether		ND		410	750
4-Nitroaniline		ND	J	410	3800
4-Nitrophenol		ND	J	410	3800
Acenaphthene		ND		410	750
Acenaphthylene		ND		410	750
Acetophenone		ND		410	750
Aniline		ND	J	410	750
Anthracene		ND		410	750
Atrazine		ND		410	750
Azobenzene		ND		410	750
Benzaldehyde		ND		410	750
Benzo[a]anthracene		ND		410	750
Benzo[a]pyrene		ND		410	750
Benzo[b]fluoranthene		ND		410	750
Benzo[g,h,i]perylene		ND		410	750
Benzo[k]fluoranthene		ND		410	750
Benzoic acid		ND	J	410	3800

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13557.D
Dilution:	20			Initial Weight/Volume:	30.81 g
Date Analyzed:	11/30/2010 1821			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		410	750
Benzyl alcohol	ND		640	1500
Bis(2-chloroethoxy)methane	ND		410	750
Bis(2-chloroethyl)ether	ND		410	750
Butyl benzyl phthalate	ND		410	750
Caprolactam	ND		410	750
Carbazole	ND		410	750
Chrysene	ND		410	750
Dibenz(a,h)anthracene	ND		410	750
Dibenzofuran	ND		410	750
Diethyl phthalate	ND		410	750
Dimethyl phthalate	ND		410	750
Di-n-butyl phthalate	ND		660	750
Di-n-octyl phthalate	12000		410	750
Fluoranthene	ND		410	750
Fluorene	ND		410	750
Hexachlorobenzene	ND		410	750
Hexachlorobutadiene	ND		410	750
Hexachlorocyclopentadiene	ND		410	1500
Hexachloroethane	ND		410	750
Indeno[1,2,3-cd]pyrene	ND		410	750
Isophorone	ND		410	750
Naphthalene	ND		410	1800
Nitrobenzene	ND		410	750
N-Nitrosodi-n-propylamine	ND		410	750
N-Nitrosodiphenylamine	ND		410	750
Pentachlorophenol	ND		410	750
Phenanthrene	ND		410	910
Phenol	ND		410	750
Diphenyl oxide	ND		410	750
Pyrene	ND		410	750
N-Nitrosodimethylamine	ND		410	750

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453	Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249	Lab File ID:	B13557.D
Dilution:	20		Initial Weight/Volume:	30.81 g
Date Analyzed:	11/30/2010 1821		Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1881.D
Dilution:	1000			Initial Weight/Volume:	30.81 g
Date Analyzed:	12/01/2010 1430	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		430000		20000	38000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1844.D
Dilution:	1.0			Initial Weight/Volume:	30.68 g
Date Analyzed:	11/25/2010 0150			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20	37
1,2,4,5-Tetrachlorobenzene		ND		20	37
1,2,4-Trichlorobenzene		ND		20	37
1,2-Dichlorobenzene		ND		20	37
1,3-Dichlorobenzene		ND		20	37
1,4-Dichlorobenzene		ND		20	37
1-Methylnaphthalene		ND		20	37
2,2'-oxybis[1-chloropropane]		ND		20	37
2,3,4,6-Tetrachlorophenol		ND		20	37
2,4,5-Trichlorophenol		ND		20	37
2,4,6-Trichlorophenol		ND		20	37
2,4-Dichlorophenol		ND		20	37
2,4-Dimethylphenol		ND		20	37
2,4-Dinitrophenol		ND		20	37
2,4-Dinitrotoluene		ND		20	37
2,6-Dinitrotoluene		ND		20	37
2-Chloronaphthalene		ND		20	37
2-Chlorophenol		ND		20	37
2-Methylnaphthalene		ND		20	37
2-Methylphenol		ND		22	37
2-Nitroaniline		ND		20	180
2-Nitrophenol		ND		20	37
3 & 4 Methylphenol		ND		20	37
3,3'-Dichlorobenzidine		ND		20	74
3-Nitroaniline		ND		20	180
4,6-Dinitro-2-methylphenol		ND		20	180
4-Bromophenyl phenyl ether		ND		20	37
4-Chloro-3-methylphenol		ND		20	74
4-Chloroaniline		ND		20	74
4-Chlorophenyl phenyl ether		ND		20	37
4-Nitroaniline		ND		20	180
4-Nitrophenol		ND		20	180
Acenaphthene		ND		20	37
Acenaphthylene		ND		20	37
Acetophenone		ND		20	37
Aniline		ND J		20	37
Anthracene		ND		20	37
Atrazine		ND		20	37
Azobenzene		ND		20	37
Benzaldehyde		230		20	37
Benzo[a]anthracene		110		20	37
Benzo[a]pyrene		77		20	37
Benzo[b]fluoranthene		170		20	37
Benzo[g,h,i]perylene		58		20	37
Benzo[k]fluoranthene		75		20	37
Benzophenone		ND		20	37

12/07/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1844.D
Dilution:	1.0			Initial Weight/Volume:	30.68 g
Date Analyzed:	11/25/2010 0150			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzyl alcohol		ND		31	74
Bis(2-chloroethoxy)methane		ND		20	37
Bis(2-chloroethyl)ether		ND		20	37
Bis(2-ethylhexyl) phthalate		590		20	37
Butyl benzyl phthalate		ND		20	37
Caprolactam		ND		20	37
Carbazole		ND		20	37
Chrysene		150		20	37
Dibenz(a,h)anthracene		ND		20	37
Dibenzofuran		ND		20	37
Diethyl phthalate		ND		20	37
Dimethyl phthalate		ND		20	37
Di-n-butyl phthalate		ND		32	37
Di-n-octyl phthalate		ND		20	37
Fluoranthene		240		20	37
Fluorene		ND		20	37
Hexachlorobenzene		ND		20	37
Hexachlorobutadiene		ND		20	37
Hexachlorocyclopentadiene		ND		20	74
Hexachloroethane		ND		20	37
Indeno[1,2,3-cd]pyrene		63		20	37
Isophorone		ND		20	37
Naphthalene		ND		20	89
Nitrobenzene		ND		20	37
N-Nitrosodi-n-propylamine		ND		20	37
N-Nitrosodiphenylamine		ND		20	37
Pentachlorophenol		ND		20	37
Phenanthrene		29	J	20	44
Phenol		ND		20	37
Diphenyl oxide		ND		20	37
Pyrene		200		20	37
N-Nitrosodimethylamine		ND		20	37

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	88		30 - 130
2-Fluorobiphenyl	63		30 - 130
2-Fluorophenol	49		30 - 130
Nitrobenzene-d5	49		30 - 130
Phenol-d5	52		30 - 130
Terphenyl-d14	81		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1844.D
Dilution:	1.0			Initial Weight/Volume:	30.68 g
Date Analyzed:	11/25/2010 0150			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.57	130	J
	Unknown	10.67	120	J
	Unknown	11.77	69	J
4410-31-5	Mandelamide	11.88	64	J N
57-10-3	n-Hexadecanoic acid	13.72	190	J N
1000131-9-4	Z-12-Pentacosene	14.94	160	J N
	Unknown	15.17	61	J
1599-67-3	1-Docosene	15.55	400	J N
822-23-1	Acetic acid, octadecyl ester	16.08	430	J N
7683-64-9	Squalene	16.47	230	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13559.D
Dilution:	5.0			Initial Weight/Volume:	30.68 g
Date Analyzed:	11/30/2010 1934	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzoic acid		1900 J		100	920

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	58		30 - 130
2-Fluorobiphenyl	59		30 - 130
2-Fluorophenol	48		30 - 130
Nitrobenzene-d5	55		30 - 130
Phenol-d5	56		30 - 130
Terphenyl-d14	78		30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13560.D
Dilution:	200			Initial Weight/Volume:	30.65 g
Date Analyzed:	11/30/2010 2010			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		4000	7500
1,2,4,5-Tetrachlorobenzene		ND		4000	7500
1,2,4-Trichlorobenzene		ND		4000	7500
1,2-Dichlorobenzene		ND		4000	7500
1,3-Dichlorobenzene		ND		4000	7500
1,4-Dichlorobenzene		ND		4000	7500
1-Methylnaphthalene		ND		4000	7500
2,2'-oxybis[1-chloropropane]		ND		4000	7500
2,3,4,6-Tetrachlorophenol		ND		4000	7500
2,4,5-Trichlorophenol		ND		4000	7500
2,4,6-Trichlorophenol		ND		4000	7500
2,4-Dichlorophenol		ND		4000	7500
2,4-Dimethylphenol		ND		4000	7500
2,4-Dinitrophenol		ND	J	4000	7500
2,4-Dinitrotoluene		ND		4000	7500
2,6-Dinitrotoluene		ND		4000	7500
2-Chloronaphthalene		ND		4000	7500
2-Chlorophenol		ND		4000	7500
2-Methylnaphthalene		ND		4000	7500
2-Methylphenol		ND		4500	7500
2-Nitroaniline		ND	J	4000	37000
2-Nitrophenol		ND		4000	7500
3 & 4 Methylphenol		ND		4000	7500
3,3'-Dichlorobenzidine		ND		4000	15000
3-Nitroaniline		ND		4000	37000
4,6-Dinitro-2-methylphenol		ND	J	4000	37000
4-Bromophenyl phenyl ether		ND		4000	7500
4-Chloro-3-methylphenol		ND		4000	15000
4-Chloroaniline		ND		4000	15000
4-Chlorophenyl phenyl ether		ND		4000	7500
4-Nitroaniline		ND	J	4000	37000
4-Nitrophenol		ND	J	4000	37000
Acenaphthene		ND		4000	7500
Acenaphthylene		ND		4000	7500
Acetophenone		ND		4000	7500
Aniline		ND	J	4000	7500
Anthracene		ND		4000	7500
Atrazine		ND		4000	7500
Azobenzene		ND		4000	7500
Benzaldehyde		ND		4000	7500
Benzo[a]anthracene		ND		4000	7500
Benzo[a]pyrene		ND		4000	7500
Benzo[b]fluoranthene		ND		4000	7500
Benzo[g,h,i]perylene		ND		4000	7500
Benzo[k]fluoranthene		ND		4000	7500
Benzoic acid		ND	J	4000	37000

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13560.D
Dilution:	200			Initial Weight/Volume:	30.65 g
Date Analyzed:	11/30/2010 2010			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		4000	7500
Benzyl alcohol		ND		6400	15000
Bis(2-chloroethoxy)methane		ND		4000	7500
Bis(2-chloroethyl)ether		ND		4000	7500
Butyl benzyl phthalate		ND		4000	7500
Caprolactam		ND		4000	7500
Carbazole		ND		4000	7500
Chrysene		ND		4000	7500
Dibenz(a,h)anthracene		ND		4000	7500
Dibenzofuran		ND		4000	7500
Diethyl phthalate		ND		4000	7500
Dimethyl phthalate		ND		4000	7500
Di-n-butyl phthalate		ND		6600	7500
Di-n-octyl phthalate		ND		4000	7500
Fluoranthene		ND		4000	7500
Fluorene		ND		4000	7500
Hexachlorobenzene		ND		4000	7500
Hexachlorobutadiene		ND		4000	7500
Hexachlorocyclopentadiene		ND		4000	15000
Hexachloroethane		ND		4000	7500
Indeno[1,2,3-cd]pyrene		ND		4000	7500
Isophorone		ND		4000	7500
Naphthalene		ND		4000	18000
Nitrobenzene		ND		4000	7500
N-Nitrosodi-n-propylamine		ND		4000	7500
N-Nitrosodiphenylamine		ND		4000	7500
Pentachlorophenol		ND		4000	7500
Phenanthrene		ND		4000	9000
Phenol		ND		4000	7500
Diphenyl oxide		ND		4000	7500
Pyrene		ND		4000	7500
N-Nitrosodimethylamine		ND		4000	7500

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/05/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13560.D
Dilution:	200			Initial Weight/Volume:	30.65 g
Date Analyzed:	11/30/2010 2010			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 7

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.42	45000	J N
	Unknown	12.14	11000	J N
	Unknown	12.23	6100	J N
	Unknown	12.30	4600	J N
	Unknown	16.60	15000	J N
~~117-81-7~~	~~Bis(2-ethylhexyl) phthalate~~	~~17.18~~	~~7700~~	~~J N~~
26603-23-6	p,p''-Dioctyldiphenylamine	20.04	58000	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1882.D
Dilution:	5000			Initial Weight/Volume:	30.65 g
Date Analyzed:	12/01/2010 1502	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		1900000		100000	190000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13561.D
Dilution:	500			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 2046			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		10000	19000
1,2,4,5-Tetrachlorobenzene		ND		10000	19000
1,2,4-Trichlorobenzene		ND		10000	19000
1,2-Dichlorobenzene		ND		10000	19000
1,3-Dichlorobenzene		ND		10000	19000
1,4-Dichlorobenzene		ND		10000	19000
1-Methylnaphthalene		ND		10000	19000
2,2'-oxybis[1-chloropropane]		ND		10000	19000
2,3,4,6-Tetrachlorophenol		ND		10000	19000
2,4,5-Trichlorophenol		ND		10000	19000
2,4,6-Trichlorophenol		ND		10000	19000
2,4-Dichlorophenol		ND		10000	19000
2,4-Dimethylphenol		ND		10000	19000
2,4-Dinitrophenol		ND J		10000	19000
2,4-Dinitrotoluene		ND		10000	19000
2,6-Dinitrotoluene		ND		10000	19000
2-Chloronaphthalene		ND		10000	19000
2-Chlorophenol		ND		10000	19000
2-Methylnaphthalene		ND		10000	19000
2-Methylphenol		ND		11000	19000
2-Nitroaniline		ND J		10000	93000
2-Nitrophenol		ND		10000	19000
3 & 4 Methylphenol		ND		10000	19000
3,3'-Dichlorobenzidine		ND		10000	37000
3-Nitroaniline		ND		10000	93000
4,6-Dinitro-2-methylphenol		ND J		10000	93000
4-Bromophenyl phenyl ether		ND		10000	19000
4-Chloro-3-methylphenol		ND		10000	37000
4-Chloroaniline		ND		10000	37000
4-Chlorophenyl phenyl ether		ND		10000	19000
4-Nitroaniline		ND J		10000	93000
4-Nitrophenol		ND J		10000	93000
Acenaphthene		ND		10000	19000
Acenaphthylene		ND		10000	19000
Acetophenone		ND		10000	19000
Aniline		ND J		10000	19000
Anthracene		ND		10000	19000
Atrazine		ND		10000	19000
Azobenzene		ND		10000	19000
Benzaldehyde		ND		10000	19000
Benzo[a]anthracene		ND		10000	19000
Benzo[a]pyrene		ND		10000	19000
Benzo[b]fluoranthene		ND		10000	19000
Benzo[g,h,i]perylene		ND		10000	19000
Benzo[k]fluoranthene		ND		10000	19000
Benzoic acid		ND J		10000	93000

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13561.D
Dilution:	500			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 2046			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		10000	19000
Benzyl alcohol		ND		16000	37000
Bis(2-chloroethoxy)methane		ND		10000	19000
Bis(2-chloroethyl)ether		ND		10000	19000
Butyl benzyl phthalate		ND		10000	19000
Caprolactam		ND		10000	19000
Carbazole		ND		10000	19000
Chrysene		ND		10000	19000
Dibenz(a,h)anthracene		ND		10000	19000
Dibenzofuran		ND		10000	19000
Diethyl phthalate		ND		10000	19000
Dimethyl phthalate		ND		10000	19000
Di-n-butyl phthalate		ND		16000	19000
Di-n-octyl phthalate		ND		10000	19000
Fluoranthene		ND		10000	19000
Fluorene		ND		10000	19000
Hexachlorobenzene		ND		10000	19000
Hexachlorobutadiene		ND		10000	19000
Hexachlorocyclopentadiene		ND J		10000	37000
Hexachloroethane		ND		10000	19000
Indeno[1,2,3-cd]pyrene		ND		10000	19000
Isophorone		ND		10000	19000
Naphthalene		ND		10000	45000
Nitrobenzene		ND		10000	19000
N-Nitrosodi-n-propylamine		ND		10000	19000
N-Nitrosodiphenylamine		ND		10000	19000
Pentachlorophenol		ND		10000	19000
Phenanthrene		ND		10000	22000
Phenol		ND		10000	19000
Diphenyl oxide		ND		10000	19000
Pyrene		ND		10000	19000
N-Nitrosodimethylamine		ND		10000	19000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13561.D
Dilution:	500			Initial Weight/Volume:	30.80 g
Date Analyzed:	11/30/2010 2046			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 7

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.44	120000	J N
	Unknown	12.13	33000	J
	Unknown	12.23	18000	J
	Unknown	12.30	13000	J
	Unknown	16.60	37000	J
27554-26-3	1,2-Benzenedicarboxylic acid, diisooctyl	17.17	15000	J N
26603-23-6	p,p"-Dioctyldiphenylamine	20.03	130000	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1883.D
Dilution:	10000			Initial Weight/Volume:	30.80 g
Date Analyzed:	12/01/2010 1535	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		3500000		200000	370000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13562.D
Dilution:	5.0			Initial Weight/Volume:	30.42 g
Date Analyzed:	11/30/2010 2122			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		98	180
1,2,4,5-Tetrachlorobenzene		ND		98	180
1,2,4-Trichlorobenzene		ND		98	180
1,2-Dichlorobenzene		ND		98	180
1,3-Dichlorobenzene		ND		98	180
1,4-Dichlorobenzene		ND		98	180
1-Methylnaphthalene		ND		98	180
2,2'-oxybis[1-chloropropane]		ND		98	180
2,3,4,6-Tetrachlorophenol		ND		98	180
2,4,5-Trichlorophenol		ND		98	180
2,4,6-Trichlorophenol		ND		98	180
2,4-Dichlorophenol		ND		98	180
2,4-Dimethylphenol		ND		98	180
2,4-Dinitrophenol		ND		98	180
2,4-Dinitrotoluene		ND		98	180
2,6-Dinitrotoluene		ND		98	180
2-Chloronaphthalene		ND		98	180
2-Chlorophenol		ND		98	180
2-Methylnaphthalene		ND		98	180
2-Methylphenol		ND		110	180
2-Nitroaniline		ND J		98	910
2-Nitrophenol		ND J		98	180
3 & 4 Methylphenol		ND		98	180
3,3'-Dichlorobenzidine		ND		98	360
3-Nitroaniline		ND		98	910
4,6-Dinitro-2-methylphenol		ND J		98	910
4-Bromophenyl phenyl ether		ND		98	180
4-Chloro-3-methylphenol		ND		98	360
4-Chloroaniline		ND		98	360
4-Chlorophenyl phenyl ether		ND		98	180
4-Nitroaniline		ND J		98	910
4-Nitrophenol		ND J		98	910
Acenaphthene		ND		98	180
Acenaphthylene		ND		98	180
Acetophenone		ND		98	180
Aniline		ND J		98	180
Anthracene		ND		98	180
Atrazine		ND		98	180
Azobenzene		ND		98	180
Benzaldehyde		ND		98	180
Benzo[a]anthracene		ND		98	180
Benzo[a]pyrene		ND		98	180
Benzo[b]fluoranthene		ND		98	180
Benzo[g,h,i]perylene		ND		98	180
Benzo[k]fluoranthene		ND		98	180
Benzoic acid		ND J		98	910

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13562.D
Dilution:	5.0			Initial Weight/Volume:	30.42 g
Date Analyzed:	11/30/2010 2122			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		98	180
Benzyl alcohol		ND		150	360
Bis(2-chloroethoxy)methane		ND		98	180
Bis(2-chloroethyl)ether		ND		98	180
Bis(2-ethylhexyl) phthalate		2700		98	180
Butyl benzyl phthalate		ND		98	180
Caprolactam		ND		98	180
Carbazole		ND		98	180
Chrysene		ND		98	180
Dibenz(a,h)anthracene		ND		98	180
Dibenzofuran		ND		98	180
Diethyl phthalate		ND		98	180
Dimethyl phthalate		ND		98	180
Di-n-butyl phthalate		ND		160	180
Di-n-octyl phthalate		ND		98	180
Fluoranthene		ND		98	180
Fluorene		ND		98	180
Hexachlorobenzene		ND		98	180
Hexachlorobutadiene		ND		98	180
Hexachlorocyclopentadiene		ND J		98	360
Hexachloroethane		ND		98	180
Indeno[1,2,3-cd]pyrene		140	J	98	180
Isophorone		ND		98	180
Naphthalene		ND		98	440
Nitrobenzene		ND		98	180
N-Nitrosodi-n-propylamine		ND		98	180
N-Nitrosodiphenylamine		ND		98	180
Pentachlorophenol		ND		98	180
Phenanthrene		ND		98	220
Phenol		ND		98	180
Diphenyl oxide		ND		98	180
Pyrene		ND		98	180
N-Nitrosodimethylamine		ND		98	180

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	63		30 - 130
2-Fluorobiphenyl	62		30 - 130
2-Fluorophenol	55		30 - 130
Nitrobenzene-d5	54		30 - 130
Phenol-d5	60		30 - 130
Terphenyl-d14	77		30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13562.D
Dilution:	5.0			Initial Weight/Volume:	30.42 g
Date Analyzed:	11/30/2010 2122			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.43	1500	J
13360-61-7	1-Pentadecene	16.41	150	
	Unknown	16.61	3400	
1599-67-3	1-Docosene	17.15	490	
	Unknown	18.01	1200	
297-3-0	Cyclotetracosane	18.05	550	
630-3-5	Nonacosane	19.16	310	
26603-23-6	p,p''-Dioctyldiphenylamine	20.08	55000	
	Unknown	20.64	560	
1000194-63-7	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	23.83	760	

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13563.D
Dilution:	25			Initial Weight/Volume:	30.88 g
Date Analyzed:	11/30/2010 2158			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		520	960
1,2,4,5-Tetrachlorobenzene		ND		520	960
1,2,4-Trichlorobenzene		ND		520	960
1,2-Dichlorobenzene		ND		520	960
1,3-Dichlorobenzene		ND		520	960
1,4-Dichlorobenzene		ND		520	960
1-Methylnaphthalene		ND		520	960
2,2'-oxybis[1-chloropropane]		ND		520	960
2,3,4,6-Tetrachlorophenol		ND		520	960
2,4,5-Trichlorophenol		ND		520	960
2,4,6-Trichlorophenol		ND		520	960
2,4-Dichlorophenol		ND		520	960
2,4-Dimethylphenol		ND		520	960
2,4-Dinitrophenol		ND J		520	960
2,4-Dinitrotoluene		ND		520	960
2,6-Dinitrotoluene		ND		520	960
2-Chloronaphthalene		ND		520	960
2-Chlorophenol		ND		520	960
2-Methylnaphthalene		ND		520	960
2-Methylphenol		ND		580	960
2-Nitroaniline		ND J		520	4800
2-Nitrophenol		ND		520	960
3 & 4 Methylphenol		ND		520	960
3,3'-Dichlorobenzidine		ND		520	1900
3-Nitroaniline		ND		520	4800
4,6-Dinitro-2-methylphenol		ND J		520	4800
4-Bromophenyl phenyl ether		ND		520	960
4-Chloro-3-methylphenol		ND		520	1900
4-Chloroaniline		ND		520	1900
4-Chlorophenyl phenyl ether		ND		520	960
4-Nitroaniline		ND J		520	4800
4-Nitrophenol		ND J		520	4800
Acenaphthene		ND		520	960
Acenaphthylene		ND		520	960
Acetophenone		ND		520	960
Aniline		ND J		520	960
Anthracene		ND		520	960
Atrazine		ND		520	960
Azobenzene		ND		520	960
Benzaldehyde		ND		520	960
Benzo[a]anthracene		ND		520	960
Benzo[a]pyrene		ND		520	960
Benzo[b]fluoranthene		ND		520	960
Benzo[g,h,i]perylene		ND		520	960
Benzo[k]fluoranthene		ND		520	960
Benzoic acid		ND J		520	4800

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13563.D
Dilution:	25			Initial Weight/Volume:	30.88 g
Date Analyzed:	11/30/2010 2158			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		520	960
Benzyl alcohol		ND		820	1900
Bis(2-chloroethoxy)methane		ND		520	960
Bis(2-chloroethyl)ether		ND		520	960
Butyl benzyl phthalate		ND		520	960
Caprolactam		ND		520	960
Carbazole		ND		520	960
Chrysene		ND		520	960
Dibenz(a,h)anthracene		ND		520	960
Dibenzofuran		ND		520	960
Diethyl phthalate		ND		520	960
Dimethyl phthalate		ND		520	960
Di-n-butyl phthalate		ND		840	960
Di-n-octyl phthalate		ND		520	960
Fluoranthene		ND		520	960
Fluorene		ND		520	960
Hexachlorobenzene		ND		520	960
Hexachlorobutadiene		ND		520	960
Hexachlorocyclopentadiene		ND		520	1900
Hexachloroethane		ND		520	960
Indeno[1,2,3-cd]pyrene		ND		520	960
Isophorone		ND		520	960
Naphthalene		ND		520	2300
Nitrobenzene		ND		520	960
N-Nitrosodi-n-propylamine		ND		520	960
N-Nitrosodiphenylamine		ND		520	960
Pentachlorophenol		ND		520	960
Phenanthrene		ND		520	1200
Phenol		ND		520	960
Diphenyl oxide		ND		520	960
Pyrene		ND		520	960
N-Nitrosodimethylamine		ND		520	960

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13563.D
Dilution:	25			Initial Weight/Volume:	30.88 g
Date Analyzed:	11/30/2010 2158			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.50	6600	J N
	Unknown	14.33	460	J N
7225-64-1	Heptadecane, 9-octyl-	16.42	1100	J N
	Unknown	16.60	490	J N
593-45-3	Octadecane	16.77	550	J N
629-99-2	Pentacosane	17.14	880	J N
630-1-3	Hexacosane	17.55	940	J N
593-49-7	Heptacosane	18.01	1000	J N
112-95-8	Eicosane	19.15	980	J N
26603-23-6	p,p"-Dioctyldiphenylamine	20.03	1800	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1884.D
Dilution:	100			Initial Weight/Volume:	30.88 g
Date Analyzed:	12/01/2010 1608	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		28000		2100	3800

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13564.D
Dilution:	1000			Initial Weight/Volume:	30.59 g
Date Analyzed:	11/30/2010 2234			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		20000	37000
1,2,4,5-Tetrachlorobenzene		ND		20000	37000
1,2,4-Trichlorobenzene		ND		20000	37000
1,2-Dichlorobenzene		ND		20000	37000
1,3-Dichlorobenzene		ND		20000	37000
1,4-Dichlorobenzene		ND		20000	37000
1-Methylnaphthalene		ND		20000	37000
2,2'-oxybis[1-chloropropane]		ND		20000	37000
2,3,4,6-Tetrachlorophenol		ND		20000	37000
2,4,5-Trichlorophenol		ND		20000	37000
2,4,6-Trichlorophenol		ND		20000	37000
2,4-Dichlorophenol		ND		20000	37000
2,4-Dimethylphenol		ND		20000	37000
2,4-Dinitrophenol		ND J		20000	37000
2,4-Dinitrotoluene		ND		20000	37000
2,6-Dinitrotoluene		ND		20000	37000
2-Chloronaphthalene		ND		20000	37000
2-Chlorophenol		ND		20000	37000
2-Methylnaphthalene		ND		20000	37000
2-Methylphenol		ND		22000	37000
2-Nitroaniline		ND J		20000	190000
2-Nitrophenol		ND		20000	37000
3 & 4 Methylphenol		ND		20000	37000
3,3'-Dichlorobenzidine		ND		20000	74000
3-Nitroaniline		ND		20000	190000
4,6-Dinitro-2-methylphenol		ND J		20000	190000
4-Bromophenyl phenyl ether		ND		20000	37000
4-Chloro-3-methylphenol		ND		20000	74000
4-Chloroaniline		ND		20000	74000
4-Chlorophenyl phenyl ether		ND		20000	37000
4-Nitroaniline		ND J		20000	190000
4-Nitrophenol		ND J		20000	190000
Acenaphthene		ND		20000	37000
Acenaphthylene		ND		20000	37000
Acetophenone		ND		20000	37000
Aniline		ND J		20000	37000
Anthracene		ND		20000	37000
Atrazine		ND		20000	37000
Azobenzene		ND		20000	37000
Benzaldehyde		ND		20000	37000
Benzo[a]anthracene		ND		20000	37000
Benzo[a]pyrene		ND		20000	37000
Benzo[b]fluoranthene		ND		20000	37000
Benzo[g,h,i]perylene		ND		20000	37000
Benzo[k]fluoranthene		ND		20000	37000
Benzoic acid		ND J		20000	190000

12/6/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13564.D
Dilution:	1000			Initial Weight/Volume:	30.59 g
Date Analyzed:	11/30/2010 2234			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		20000	37000
Benzyl alcohol		ND		32000	74000
Bis(2-chloroethoxy)methane		ND		20000	37000
Bis(2-chloroethyl)ether		ND		20000	37000
Butyl benzyl phthalate		ND		20000	37000
Caprolactam		ND		20000	37000
Carbazole		ND		20000	37000
Chrysene		ND		20000	37000
Dibenz(a,h)anthracene		ND		20000	37000
Dibenzofuran		ND		20000	37000
Diethyl phthalate		ND		20000	37000
Dimethyl phthalate		ND		20000	37000
Di-n-butyl phthalate		ND		33000	37000
Di-n-octyl phthalate		ND		20000	37000
Fluoranthene		ND		20000	37000
Fluorene		ND		20000	37000
Hexachlorobenzene		ND		20000	37000
Hexachlorobutadiene		ND		20000	37000
Hexachlorocyclopentadiene		ND J		20000	74000
Hexachloroethane		ND		20000	37000
Indeno[1,2,3-cd]pyrene		ND		20000	37000
Isophorone		ND		20000	37000
Naphthalene		ND		20000	89000
Nitrobenzene		ND		20000	37000
N-Nitrosodi-n-propylamine		ND		20000	37000
N-Nitrosodiphenylamine		ND		20000	37000
Pentachlorophenol		ND		20000	37000
Phenanthrene		ND		20000	44000
Phenol		ND		20000	37000
Diphenyl oxide		ND		20000	37000
Pyrene		ND		20000	37000
N-Nitrosodimethylamine		ND		20000	37000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13564.D
Dilution:	1000			Initial Weight/Volume:	30.59 g
Date Analyzed:	11/30/2010 2234			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 8

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.40	190000	J N
123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	9.49	24000	J N
	Unknown	12.14	110000	J
	Unknown	12.23	60000	J
	Unknown	12.30	47000	J
	Unknown	16.60	200000	J
27554-26-3	1,2-Benzenedicarboxylic acid, diisooctyl	17.17	36000	J N
26603-23-6	p,p"-Dioctyldiphenylamine	20.04	620000	J N

12/13/10

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1885.D
Dilution:	20000			Initial Weight/Volume:	30.59 g
Date Analyzed:	12/01/2010 1640	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		8600000		400000	740000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1850.D
Dilution:	1.0			Initial Weight/Volume:	30.31 g
Date Analyzed:	11/25/2010 0504			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		22	42
1,2,4,5-Tetrachlorobenzene		ND		22	42
1,2,4-Trichlorobenzene		ND		22	42
1,2-Dichlorobenzene		ND		22	42
1,3-Dichlorobenzene		ND		22	42
1,4-Dichlorobenzene		ND		22	42
1-Methylnaphthalene		23	J	22	42
2,2'-oxybis[1-chloropropane]		ND		22	42
2,3,4,6-Tetrachlorophenol		ND		22	42
2,4,5-Trichlorophenol		ND		22	42
2,4,6-Trichlorophenol		ND		22	42
2,4-Dichlorophenol		ND		22	42
2,4-Dimethylphenol		ND		22	42
2,4-Dinitrophenol		ND		22	42
2,4-Dinitrotoluene		ND		22	42
2,6-Dinitrotoluene		ND		22	42
2-Chloronaphthalene		ND		22	42
2-Chlorophenol		ND		22	42
2-Methylnaphthalene		37	J	22	42
2-Methylphenol		ND		25	42
2-Nitroaniline		ND		22	210
2-Nitrophenol		ND		22	42
3 & 4 Methylphenol		ND		22	42
3,3'-Dichlorobenzidine		ND		22	83
3-Nitroaniline		ND		22	210
4,6-Dinitro-2-methylphenol		ND		22	210
4-Bromophenyl phenyl ether		ND		22	42
4-Chloro-3-methylphenol		ND		22	83
4-Chloroaniline		ND		22	83
4-Chlorophenyl phenyl ether		ND		22	42
4-Nitroaniline		ND		22	210
4-Nitrophenol		ND		22	210
Acenaphthene		ND		22	42
Acenaphthylene		ND		22	42
Acetophenone		ND		22	42
Aniline		ND J		22	42
Anthracene		ND		22	42
Atrazine		ND		22	42
Azobenzene		ND		22	42
Benzaldehyde		37	J	22	42
Benzo[a]anthracene		ND		22	42
Benzo[a]pyrene		ND		22	42
Benzo[b]fluoranthene		38	J	22	42
Benzo[g,h,i]perylene		ND		22	42
Benzo[k]fluoranthene		ND		22	42
Benzoic acid		250 J		22	210

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1850.D
Dilution:	1.0			Initial Weight/Volume:	30.31 g
Date Analyzed:	11/25/2010 0504			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		22	42
Benzyl alcohol		ND		35	83
Bis(2-chloroethoxy)methane		ND		22	42
Bis(2-chloroethyl)ether		ND		22	42
Butyl benzyl phthalate		ND		22	42
Caprolactam		ND		22	42
Carbazole		ND		22	42
Chrysene		37	J	22	42
Dibenz(a,h)anthracene		ND		22	42
Dibenzofuran		26	J	22	42
Diethyl phthalate		ND		22	42
Dimethyl phthalate		ND		22	42
Di-n-butyl phthalate		ND		37	42
Di-n-octyl phthalate		ND		22	42
Fluoranthene		50		22	42
Fluorene		ND		22	42
Hexachlorobenzene		ND		22	42
Hexachlorobutadiene		ND		22	42
Hexachlorocyclopentadiene		ND		22	83
Hexachloroethane		ND		22	42
Indeno[1,2,3-cd]pyrene		ND		22	42
Isophorone		ND		22	42
Naphthalene		57	J	22	100
Nitrobenzene		ND		22	42
N-Nitrosodi-n-propylamine		ND		22	42
N-Nitrosodiphenylamine		ND		22	42
Pentachlorophenol		ND		22	42
Phenanthrene		66		22	50
Phenol		ND		22	42
Diphenyl oxide		ND		22	42
Pyrene		48		22	42
N-Nitrosodimethylamine		ND		22	42

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	78		30 - 130
2-Fluorobiphenyl	62		30 - 130
2-Fluorophenol	43		30 - 130
Nitrobenzene-d5	46		30 - 130
Phenol-d5	47		30 - 130
Terphenyl-d14	85		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66299		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1850.D
Dilution:	1.0			Initial Weight/Volume:	30.31 g
Date Analyzed:	11/25/2010 0504			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	7.32	120	J
661-19-8	1-Docosanol	14.94	470	J N
	Unknown	15.18	140	J
1000149-68-9	Phenanthrene-1-carboxylic acid, 1,2,3,4,	15.32	100	J N
112-92-5	1-Octadecanol	15.56	1200	J N
1599-67-3	1-Docosene	16.08	1500	J N
1000163-47-7	1-Triacontanol	16.39	120	J N
56882-9-8	4,9,13,17-Tetramethyl-4,8,12,16-octadeca	16.47	170	J N
629-96-9	1-Eicosanol	16.77	120	J N
559-74-0	Friedelin	22.66	140	J N

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1886.D
Dilution:	10			Initial Weight/Volume:	30.31 g
Date Analyzed:	12/01/2010 1713	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		3200		220	420

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	33		30 - 130
2-Fluorobiphenyl	57		30 - 130
2-Fluorophenol	43		30 - 130
Nitrobenzene-d5	46		30 - 130
Phenol-d5	44		30 - 130
Terphenyl-d14	66		30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13566.D
Dilution:	50			Initial Weight/Volume:	30.11 g
Date Analyzed:	11/30/2010 2346			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl	ND		1100	1900
1,2,4,5-Tetrachlorobenzene	ND		1100	1900
1,2,4-Trichlorobenzene	ND		1100	1900
1,2-Dichlorobenzene	ND		1100	1900
1,3-Dichlorobenzene	ND		1100	1900
1,4-Dichlorobenzene	ND		1100	1900
1-Methylnaphthalene	ND		1100	1900
2,2'-oxybis[1-chloropropane]	ND		1100	1900
2,3,4,6-Tetrachlorophenol	ND		1100	1900
2,4,5-Trichlorophenol	ND		1100	1900
2,4,6-Trichlorophenol	ND		1100	1900
2,4-Dichlorophenol	ND		1100	1900
2,4-Dimethylphenol	ND		1100	1900
2,4-Dinitrophenol	ND J		1100	1900
2,4-Dinitrotoluene	ND		1100	1900
2,6-Dinitrotoluene	ND		1100	1900
2-Chloronaphthalene	ND		1100	1900
2-Chlorophenol	ND		1100	1900
2-Methylnaphthalene	ND		1100	1900
2-Methylphenol	ND		1200	1900
2-Nitroaniline	ND J		1100	9700
2-Nitrophenol	ND		1100	1900
3 & 4 Methylphenol	ND		1100	1900
3,3'-Dichlorobenzidine	ND		1100	3900
3-Nitroaniline	ND		1100	9700
4,6-Dinitro-2-methylphenol	ND J		1100	9700
4-Bromophenyl phenyl ether	ND		1100	1900
4-Chloro-3-methylphenol	ND		1100	3900
4-Chloroaniline	ND		1100	3900
4-Chlorophenyl phenyl ether	ND		1100	1900
4-Nitroaniline	ND J		1100	9700
4-Nitrophenol	ND J		1100	9700
Acenaphthene	ND		1100	1900
Acenaphthylene	ND		1100	1900
Acetophenone	ND		1100	1900
Aniline	ND J		1100	1900
Anthracene	ND		1100	1900
Atrazine	ND		1100	1900
Azobenzene	ND		1100	1900
Benzaldehyde	ND		1100	1900
Benzo[a]anthracene	ND		1100	1900
Benzo[a]pyrene	ND		1100	1900
Benzo[b]fluoranthene	ND		1100	1900
Benzo[g,h,i]perylene	ND		1100	1900
Benzo[k]fluoranthene	ND		1100	1900
Benzoic acid	ND J		1100	9700

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13566.D
Dilution:	50			Initial Weight/Volume:	30.11 g
Date Analyzed:	11/30/2010 2346			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		1100	1900
Benzyl alcohol		ND		1700	3900
Bis(2-chloroethoxy)methane		ND		1100	1900
Bis(2-chloroethyl)ether		ND		1100	1900
Butyl benzyl phthalate		ND		1100	1900
Caprolactam		ND		1100	1900
Carbazole		ND		1100	1900
Chrysene		ND		1100	1900
Dibenz(a,h)anthracene		ND		1100	1900
Dibenzofuran		ND		1100	1900
Diethyl phthalate		ND		1100	1900
Dimethyl phthalate		ND		1100	1900
Di-n-butyl phthalate		ND		1700	1900
Di-n-octyl phthalate		ND		1100	1900
Fluoranthene		ND		1100	1900
Fluorene		ND		1100	1900
Hexachlorobenzene		ND		1100	1900
Hexachlorobutadiene		ND		1100	1900
Hexachlorocyclopentadiene		ND J		1100	3900
Hexachloroethane		ND		1100	1900
Indeno[1,2,3-cd]pyrene		ND		1100	1900
Isophorone		ND		1100	1900
Naphthalene		ND		1100	4700
Nitrobenzene		ND		1100	1900
N-Nitrosodi-n-propylamine		ND		1100	1900
N-Nitrosodiphenylamine		ND		1100	1900
Pentachlorophenol		ND		1100	1900
Phenanthrene		ND		1100	2300
Phenol		ND		1100	1900
Diphenyl oxide		ND		1100	1900
Pyrene		ND		1100	1900
N-Nitrosodimethylamine		ND		1100	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13566.D
Dilution:	50			Initial Weight/Volume:	30.11 g
Date Analyzed:	11/30/2010 2346			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.42	10000	T J N
123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	9.49	6600	T J N
	Unknown	12.14	42000	T J
	Unknown	12.23	23000	T J
	Unknown	12.30	18000	T J
	Unknown	16.61	42000	T J
	Unknown	18.01	9100	T J
26603-23-6	p,p''-Dioctyldiphenylamine	20.06	270000	T J N
	Unknown	22.68	9600	T J
	Unknown	23.60	16000	T J

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66541		Instrument ID:	Inst. J
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	J1887.D
Dilution:	5000			Initial Weight/Volume:	30.11 g
Date Analyzed:	12/01/2010 1745	Run Type:	DL	Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Bis(2-ethylhexyl) phthalate		1600000		110000	190000

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	0	X D	30 - 130
2-Fluorobiphenyl	0	X D	30 - 130
2-Fluorophenol	0	X D	30 - 130
Nitrobenzene-d5	0	X D	30 - 130
Phenol-d5	0	X D	30 - 130
Terphenyl-d14	0	X D	30 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13550.D
Dilution:	4.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1412			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		74	140
1,2,4,5-Tetrachlorobenzene		ND		74	140
1,2,4-Trichlorobenzene		ND		74	140
1,2-Dichlorobenzene		ND		74	140
1,3-Dichlorobenzene		ND		74	140
1,4-Dichlorobenzene		ND		74	140
1-Methylnaphthalene		ND		74	140
2,2'-oxybis[1-chloropropane]		ND		74	140
2,3,4,6-Tetrachlorophenol		ND		74	140
2,4,5-Trichlorophenol		ND		74	140
2,4,6-Trichlorophenol		ND		74	140
2,4-Dichlorophenol		ND		74	140
2,4-Dimethylphenol		ND		74	140
2,4-Dinitrophenol		ND	J	74	140
2,4-Dinitrotoluene		ND		74	140
2,6-Dinitrotoluene		ND		74	140
2-Chloronaphthalene		ND		74	140
2-Chlorophenol		ND		74	140
2-Methylnaphthalene		ND		74	140
2-Methylphenol		ND		82	140
2-Nitroaniline		ND	J	74	680
2-Nitrophenol		ND		74	140
3 & 4 Methylphenol		ND		74	140
3,3'-Dichlorobenzidine		ND		74	270
3-Nitroaniline		ND		74	680
4,6-Dinitro-2-methylphenol		ND	J	74	680
4-Bromophenyl phenyl ether		ND		74	140
4-Chloro-3-methylphenol		ND		74	270
4-Chloroaniline		ND		74	270
4-Chlorophenyl phenyl ether		ND		74	140
4-Nitroaniline		ND	J	74	680
4-Nitrophenol		ND	J	74	680
Acenaphthene		ND		74	140
Acenaphthylene		ND		74	140
Acetophenone		ND		74	140
Aniline		ND	J	74	140
Anthracene		ND		74	140
Atrazine		ND		74	140
Azobenzene		ND		74	140
Benzaldehyde		ND		74	140
Benzo[a]anthracene		ND		74	140
Benzo[a]pyrene		ND		74	140
Benzo[b]fluoranthene		ND		74	140
Benzo[g,h,i]perylene		ND		74	140
Benzo[k]fluoranthene		ND		74	140
Benzoic acid		ND	J	74	680

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13550.D
Dilution:	4.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1412			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone	ND		74	140
Benzyl alcohol	ND		120	270
Bis(2-chloroethoxy)methane	ND		74	140
Bis(2-chloroethyl)ether	ND		74	140
Bis(2-ethylhexyl) phthalate	83	J	74	140
Butyl benzyl phthalate	ND		74	140
Caprolactam	ND		74	140
Carbazole	ND		74	140
Chrysene	ND		74	140
Dibenz(a,h)anthracene	ND		74	140
Dibenzofuran	ND		74	140
Diethyl phthalate	ND		74	140
Dimethyl phthalate	ND		74	140
Di-n-butyl phthalate	ND		120	140
Di-n-octyl phthalate	ND		74	140
Fluoranthene	ND		74	140
Fluorene	ND		74	140
Hexachlorobenzene	ND		74	140
Hexachlorobutadiene	ND		74	140
Hexachlorocyclopentadiene	ND		74	270
Hexachloroethane	ND		74	140
Indeno[1,2,3-cd]pyrene	ND		74	140
Isophorone	ND		74	140
Naphthalene	ND		74	330
Nitrobenzene	ND		74	140
N-Nitrosodi-n-propylamine	ND		74	140
N-Nitrosodiphenylamine	ND		74	140
Pentachlorophenol	ND		74	140
Phenanthrene	ND		74	160
Phenol	ND		74	140
Diphenyl oxide	ND		74	140
Pyrene	ND		74	140
N-Nitrosodimethylamine	ND		74	140

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	43		30 - 130
2-Fluorobiphenyl	59		30 - 130
2-Fluorophenol	49		30 - 130
Nitrobenzene-d5	51		30 - 130
Phenol-d5	55		30 - 130
Terphenyl-d14	73		30 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13550.D
Dilution:	4.0			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1412			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.56	1700	J N
	Unknown	12.14	4800	J N
	Unknown	12.19	340	J
	Unknown	12.23	3000	J
	Unknown	12.26	470	J
	Unknown	12.30	2000	J
	Unknown	16.61	1900	J
	Unknown	18.01	1500	J
26603-23-6	p,p"-Dioctyldiphenylamine	20.12	76000	J N
	Unknown	20.65	1000	J N

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13553.D
Dilution:	2.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/30/2010 1559			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		38	71
1,2,4,5-Tetrachlorobenzene		ND		38	71
1,2,4-Trichlorobenzene		ND		38	71
1,2-Dichlorobenzene		ND		38	71
1,3-Dichlorobenzene		ND		38	71
1,4-Dichlorobenzene		ND		38	71
1-Methylnaphthalene		ND		38	71
2,2'-oxybis[1-chloropropane]		ND		38	71
2,3,4,6-Tetrachlorophenol		ND		38	71
2,4,5-Trichlorophenol		ND		38	71
2,4,6-Trichlorophenol		ND		38	71
2,4-Dichlorophenol		ND		38	71
2,4-Dimethylphenol		ND		38	71
2,4-Dinitrophenol		ND	J	38	71
2,4-Dinitrotoluene		ND		38	71
2,6-Dinitrotoluene		ND		38	71
2-Chloronaphthalene		ND		38	71
2-Chlorophenol		ND		38	71
2-Methylnaphthalene		ND		38	71
2-Methylphenol		ND		43	71
2-Nitroaniline		ND	J	38	350
2-Nitrophenol		ND		38	71
3 & 4 Methylphenol		ND		38	71
3,3'-Dichlorobenzidine		ND		38	140
3-Nitroaniline		ND		38	350
4,6-Dinitro-2-methylphenol		ND	J	38	350
4-Bromophenyl phenyl ether		ND		38	71
4-Chloro-3-methylphenol		ND		38	140
4-Chloroaniline		ND		38	140
4-Chlorophenyl phenyl ether		ND		38	71
4-Nitroaniline		ND	J	38	350
4-Nitrophenol		ND	J	38	350
Acenaphthene		ND		38	71
Acenaphthylene		ND		38	71
Acetophenone		ND		38	71
Aniline		ND	J	38	71
Anthracene		ND		38	71
Atrazine		ND		38	71
Azobenzene		ND		38	71
Benzaldehyde		ND		38	71
Benzo[a]anthracene		ND		38	71
Benzo[a]pyrene		ND		38	71
Benzo[b]fluoranthene		ND		38	71
Benzo[g,h,i]perylene		ND		38	71
Benzo[k]fluoranthene		ND		38	71
Benzoic acid		ND	J	38	350

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13553.D
Dilution:	2.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/30/2010 1559			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		38	71
Benzyl alcohol		ND		60	140
Bis(2-chloroethoxy)methane		ND		38	71
Bis(2-chloroethyl)ether		ND		38	71
Bis(2-ethylhexyl) phthalate		670		38	71
Butyl benzyl phthalate		ND		38	71
Caprolactam		ND		38	71
Carbazole		ND		38	71
Chrysene		ND		38	71
Dibenz(a,h)anthracene		ND		38	71
Dibenzofuran		ND		38	71
Diethyl phthalate		ND		38	71
Dimethyl phthalate		ND		38	71
Di-n-butyl phthalate		ND		62	71
Di-n-octyl phthalate		ND		38	71
Fluoranthene		ND		38	71
Fluorene		ND		38	71
Hexachlorobenzene		ND		38	71
Hexachlorobutadiene		ND		38	71
Hexachlorocyclopentadiene		ND J		38	140
Hexachloroethane		ND		38	71
Indeno[1,2,3-cd]pyrene		ND		38	71
Isophorone		ND		38	71
Naphthalene		ND		38	170
Nitrobenzene		ND		38	71
N-Nitrosodi-n-propylamine		ND		38	71
N-Nitrosodiphenylamine		ND		38	71
Pentachlorophenol		ND		38	71
Phenanthrene		ND		38	85
Phenol		ND		38	71
Diphenyl oxide		ND		38	71
Pyrene		ND		38	71
N-Nitrosodimethylamine		ND		38	71

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	67		30 - 130
2-Fluorobiphenyl	63		30 - 130
2-Fluorophenol	63		30 - 130
Nitrobenzene-d5	59		30 - 130
Phenol-d5	68		30 - 130
Terphenyl-d14	77		30 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13553.D
Dilution:	2.0			Initial Weight/Volume:	30.38 g
Date Analyzed:	11/30/2010 1559			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.66	1200	J N
	Unknown	12.14	3400	J
	Unknown	12.19	240	J
	Unknown	12.23	2000	J
	Unknown	12.30	1300	J
	Unknown	16.60	2000	J
	Unknown	18.01	390	J
18435-45-5	1-Nonadecene	18.06	240	J N
26603-23-6	p,p''-Dioctyldiphenylamine	20.12	30000	J N
	Unknown	20.64	300	J

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13552.D
Dilution:	2.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/30/2010 1523			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		39	73
1,2,4,5-Tetrachlorobenzene		ND		39	73
1,2,4-Trichlorobenzene		ND		39	73
1,2-Dichlorobenzene		ND		39	73
1,3-Dichlorobenzene		ND		39	73
1,4-Dichlorobenzene		ND		39	73
1-Methylnaphthalene		ND		39	73
2,2'-oxybis[1-chloropropane]		ND		39	73
2,3,4,6-Tetrachlorophenol		ND		39	73
2,4,5-Trichlorophenol		ND		39	73
2,4,6-Trichlorophenol		ND		39	73
2,4-Dichlorophenol		ND		39	73
2,4-Dimethylphenol		ND		39	73
2,4-Dinitrophenol		ND	J	39	73
2,4-Dinitrotoluene		ND		39	73
2,6-Dinitrotoluene		ND		39	73
2-Chloronaphthalene		ND		39	73
2-Chlorophenol		ND		39	73
2-Methylnaphthalene		ND		39	73
2-Methylphenol		ND		44	73
2-Nitroaniline		ND	J	39	360
2-Nitrophenol		ND		39	73
3 & 4 Methylphenol		ND		39	73
3,3'-Dichlorobenzidine		ND		39	150
3-Nitroaniline		ND		39	360
4,6-Dinitro-2-methylphenol		ND	J	39	360
4-Bromophenyl phenyl ether		ND		39	73
4-Chloro-3-methylphenol		ND		39	150
4-Chloroaniline		ND		39	150
4-Chlorophenyl phenyl ether		ND		39	73
4-Nitroaniline		ND	J	39	360
4-Nitrophenol		ND	J	39	360
Acenaphthene		ND		39	73
Acenaphthylene		ND		39	73
Acetophenone		ND		39	73
Aniline		ND	J	39	73
Anthracene		ND		39	73
Atrazine		ND		39	73
Azobenzene		ND		39	73
Benzaldehyde		ND		39	73
Benzo[a]anthracene		ND		39	73
Benzo[a]pyrene		ND		39	73
Benzo[b]fluoranthene		ND		39	73
Benzo[g,h,i]perylene		ND		39	73
Benzo[k]fluoranthene		ND		39	73
Benzoic acid		ND	J	39	360

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13552.D
Dilution:	2.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/30/2010 1523			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		39	73
Benzyl alcohol		ND		62	150
Bis(2-chloroethoxy)methane		ND		39	73
Bis(2-chloroethyl)ether		ND		39	73
Bis(2-ethylhexyl) phthalate		920		39	73
Butyl benzyl phthalate		ND		39	73
Caprolactam		ND		39	73
Carbazole		ND		39	73
Chrysene		ND		39	73
Dibenz(a,h)anthracene		ND		39	73
Dibenzofuran		ND		39	73
Diethyl phthalate		ND		39	73
Dimethyl phthalate		ND		39	73
Di-n-butyl phthalate		ND		64	73
Di-n-octyl phthalate		ND		39	73
Fluoranthene		ND		39	73
Fluorene		ND		39	73
Hexachlorobenzene		ND		39	73
Hexachlorobutadiene		ND		39	73
Hexachlorocyclopentadiene		ND J		39	150
Hexachloroethane		ND		39	73
Indeno[1,2,3-cd]pyrene		ND		39	73
Isophorone		ND		39	73
Naphthalene		ND		39	170
Nitrobenzene		ND		39	73
N-Nitrosodi-n-propylamine		ND		39	73
N-Nitrosodiphenylamine		ND		39	73
Pentachlorophenol		ND		39	73
Phenanthrene		ND		39	87
Phenol		ND		39	73
Diphenyl oxide		ND		39	73
Pyrene		ND		39	73
N-Nitrosodimethylamine		ND		39	73

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	68		30 - 130
2-Fluorobiphenyl	66		30 - 130
2-Fluorophenol	66		30 - 130
Nitrobenzene-d5	59		30 - 130
Phenol-d5	69		30 - 130
Terphenyl-d14	83		30 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid % Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13552.D
Dilution:	2.0			Initial Weight/Volume:	30.24 g
Date Analyzed:	11/30/2010 1523			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** 7

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.68	1400	J N
	Unknown	8.39	130	J N
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	8.69	65	J N
	Unknown	11.11	33	J N
	Unknown	17.16	40	J N
111-2-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	18.72	160	J N
26603-23-6	p,p''-Dioctyldiphenylamine	20.03	120	J N

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13551.D
Dilution:	10			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1448			Final Weight/Volume:	1 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		ND		210	380
1,2,4,5-Tetrachlorobenzene		ND		210	380
1,2,4-Trichlorobenzene		ND		210	380
1,2-Dichlorobenzene		ND		210	380
1,3-Dichlorobenzene		ND		210	380
1,4-Dichlorobenzene		ND		210	380
1-Methylnaphthalene		ND		210	380
2,2'-oxybis[1-chloropropane]		ND		210	380
2,3,4,6-Tetrachlorophenol		ND		210	380
2,4,5-Trichlorophenol		ND		210	380
2,4,6-Trichlorophenol		ND		210	380
2,4-Dichlorophenol		ND		210	380
2,4-Dimethylphenol		ND		210	380
2,4-Dinitrophenol		ND	J	210	380
2,4-Dinitrotoluene		ND		210	380
2,6-Dinitrotoluene		ND		210	380
2-Chloronaphthalene		ND		210	380
2-Chlorophenol		ND		210	380
2-Methylnaphthalene		ND		210	380
2-Methylphenol		ND		230	380
2-Nitroaniline		ND	J	210	1900
2-Nitrophenol		ND		210	380
3 & 4 Methylphenol		ND		210	380
3,3'-Dichlorobenzidine		ND		210	760
3-Nitroaniline		ND		210	1900
4,6-Dinitro-2-methylphenol		ND	J	210	1900
4-Bromophenyl phenyl ether		ND		210	380
4-Chloro-3-methylphenol		ND		210	760
4-Chloroaniline		ND		210	760
4-Chlorophenyl phenyl ether		ND		210	380
4-Nitroaniline		ND	J	210	1900
4-Nitrophenol		ND	J	210	1900
Acenaphthene		ND		210	380
Acenaphthylene		ND		210	380
Acetophenone		ND		210	380
Aniline		ND	J	210	380
Anthracene		ND		210	380
Atrazine		ND		210	380
Azobenzene		ND		210	380
Benzaldehyde		ND		210	380
Benzo[a]anthracene		ND		210	380
Benzo[a]pyrene		970		210	380
Benzo[b]fluoranthene		ND		210	380
Benzo[g,h,i]perylene		ND		210	380
Benzo[k]fluoranthene		ND		210	380
Benzoic acid		ND	J	210	1900

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13551.D
Dilution:	10			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1448			Final Weight/Volume:	1 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Benzophenone		ND		210	380
Benzyl alcohol		ND		320	760
Bis(2-chloroethoxy)methane		ND		210	380
Bis(2-chloroethyl)ether		ND		210	380
Bis(2-ethylhexyl) phthalate		6400		210	380
Butyl benzyl phthalate		ND		210	380
Caprolactam		ND		210	380
Carbazole		ND		210	380
Chrysene		ND		210	380
Dibenz(a,h)anthracene		ND		210	380
Dibenzofuran		ND		210	380
Diethyl phthalate		ND		210	380
Dimethyl phthalate		ND		210	380
Di-n-butyl phthalate		ND		340	380
Di-n-octyl phthalate		ND		210	380
Fluoranthene		ND		210	380
Fluorene		ND		210	380
Hexachlorobenzene		ND		210	380
Hexachlorobutadiene		ND		210	380
Hexachlorocyclopentadiene		ND J		210	760
Hexachloroethane		ND		210	380
Indeno[1,2,3-cd]pyrene		ND		210	380
Isophorone		ND		210	380
Naphthalene		ND		210	920
Nitrobenzene		ND		210	380
N-Nitrosodi-n-propylamine		ND		210	380
N-Nitrosodiphenylamine		ND		210	380
Pentachlorophenol		ND		210	380
Phenanthrene		ND		210	460
Phenol		ND		210	380
Diphenyl oxide		ND		210	380
Pyrene		ND		210	380
N-Nitrosodimethylamine		ND		210	380

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	58		30 - 130
2-Fluorobiphenyl	71		30 - 130
2-Fluorophenol	69		30 - 130
Nitrobenzene-d5	60		30 - 130
Phenol-d5	67		30 - 130
Terphenyl-d14	81		30 - 130

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

8270D Semivolatile Organic Compounds (GC/MS) Low Level

Method:	8270D	Analysis Batch: 360-66453		Instrument ID:	Inst. B
Preparation:	3546	Prep Batch: 360-66249		Lab File ID:	B13551.D
Dilution:	10			Initial Weight/Volume:	30.33 g
Date Analyzed:	11/30/2010 1448			Final Weight/Volume:	1 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

Tentatively Identified Compounds **Number TIC's Found:** **8**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
67-66-3	Chloroform	4.52	3300	J N
	Unknown	12.14	2200	J
	Unknown	12.22	1200	J
	Unknown	12.26	260	J
	Unknown	12.30	900	J
	Unknown	16.60	1300	J
	Unknown	18.73	300	J
	Unknown	20.63	650	J

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Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-66249

Method: 8270D
Preparation: 3546

LCS Lab Sample ID:	LCS 360-66249/2-A	Analysis Batch:	360-66299	Instrument ID:	Inst. J
Client Matrix:	Solid	Prep Batch:	360-66249	Lab File ID:	J1833.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	30.00 g
Date Analyzed:	11/24/2010 1953			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

LCSD Lab Sample ID:	LCSD 360-66249/3-A	Analysis Batch:	360-66299	Instrument ID:	Inst. J
Client Matrix:	Solid	Prep Batch:	360-66249	Lab File ID:	J1834.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	30.00 g
Date Analyzed:	11/24/2010 2025			Final Weight/Volume:	1.0 mL
Date Prepared:	11/23/2010 1358			Injection Volume:	2 uL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acenaphthylene	74	78	40 - 140	5	30		
Acetophenone	71	72	40 - 140	2	30		
Aniline	38	38	40 - 140	0	30	*	*
Anthracene	90	93	40 - 140	3	30		
Atrazine	90	87	40 - 140	3	30		
Azobenzene	67	68	40 - 140	1	30		
Benzaldehyde	65	64	40 - 140	1	30		
Benzo[a]anthracene	94	94	40 - 140	0	30		
Benzo[a]pyrene	95	98	40 - 140	3	30		
Benzo[b]fluoranthene	82	81	40 - 140	1	30		
Benzo[g,h,i]perylene	108	98	40 - 140	10	30		
Benzo[k]fluoranthene	86	93	40 - 140	8	30		
Benzoic acid	58	63	30 - 130	8	30		
Benzophenone	73	71	40 - 140	2	30		
Benzyl alcohol	74	77	30 - 130	4	30		
Bis(2-chloroethoxy)methane	60	61	40 - 140	0	30		
Bis(2-chloroethyl)ether	68	69	40 - 140	2	30		
Bis(2-ethylhexyl) phthalate	89	86	40 - 140	4	30		
Butyl benzyl phthalate	85	84	40 - 140	1	30		
Caprolactam	72	68	40 - 140	6	30		
Carbazole	94	99	40 - 140	5	30		
Chrysene	96	93	40 - 140	3	30		
Dibenz(a,h)anthracene	110	98	40 - 140	12	30		
Dibenzofuran	80	83	40 - 140	4	30		
Diethyl phthalate	89	92	40 - 140	3	30		
Dimethyl phthalate	87	90	40 - 140	4	30		
Di-n-butyl phthalate	86	88	40 - 140	2	30		
Di-n-octyl phthalate	69	64	40 - 140	8	30		
Fluoranthene	95	99	40 - 140	4	30		
Fluorene	92	95	40 - 140	3	30		
Hexachlorobenzene	86	90	40 - 140	5	30		
Hexachlorobutadiene	67	68	40 - 140	2	30		
Hexachlorocyclopentadiene	58	72	40 - 140	21	30		

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-66249

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	360-31167-5	Analysis Batch: 360-66299	Instrument ID: Inst. J
Client Matrix:	Solid	Prep Batch: 360-66249	Lab File ID: J1840.D
Dilution:	1.0		Initial Weight/Volume: 30.86 g
Date Analyzed:	11/24/2010 2340		Final Weight/Volume: 1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume: 2 uL

MSD Lab Sample ID:	360-31167-5	Analysis Batch: 360-66299	Instrument ID: Inst. J
Client Matrix:	Solid	Prep Batch: 360-66249	Lab File ID: J1841.D
Dilution:	1.0		Initial Weight/Volume: 30.53 g
Date Analyzed:	11/25/2010 0013		Final Weight/Volume: 1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume: 2 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4-Nitroaniline	100	109	40 - 140	10	30		
4-Nitrophenol	95	104	30 - 130	10	30		
Acenaphthene	83	92	40 - 140	11	30		
Acenaphthylene	74	80	40 - 140	9	30		
Acetophenone	66	71	40 - 140	9	30		
Aniline	36	38	40 - 140	6	30	F	F
Anthracene	89	97	40 - 140	9	30		
Atrazine	79	82	40 - 140	5	30		
Azobenzene	65	69	40 - 140	7	30		
Benzaldehyde	60	61	40 - 140	3	30		
Benzo[a]anthracene	89	97	40 - 140	10	30		
Benzo[a]pyrene	97	102	40 - 140	7	30		
Benzo[b]fluoranthene	86	87	40 - 140	2	30		
Benzo[g,h,i]perylene	88	93	40 - 140	7	30		
Benzo[k]fluoranthene	95	100	40 - 140	6	30		
Benzoic acid	90	7	30 - 130	107	30		J F
Benzophenone	71	72	40 - 140	3	30		
Benzyl alcohol	71	75	30 - 130	7	30		
Bis(2-chloroethoxy)methane	57	61	40 - 140	8	30		
Bis(2-chloroethyl)ether	62	67	40 - 140	9	30		
Bis(2-ethylhexyl) phthalate	85	78	40 - 140	3	30	E	E
Butyl benzyl phthalate	90	95	40 - 140	6	30		
Caprolactam	69	66	40 - 140	4	30		
Carbazole	91	101	40 - 140	12	30		
Chrysene	89	97	40 - 140	10	30		
Dibenz(a,h)anthracene	100	105	40 - 140	6	30		
Dibenzofuran	80	86	40 - 140	8	30		
Diethyl phthalate	87	90	40 - 140	4	30		
Dimethyl phthalate	86	89	40 - 140	4	30		
Di-n-butyl phthalate	83	88	40 - 140	7	30		

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-66249

Method: 8270D
Preparation: 3546

MS Lab Sample ID:	360-31167-5	Analysis Batch: 360-66299	Instrument ID: Inst. J
Client Matrix:	Solid	Prep Batch: 360-66249	Lab File ID: J1840.D
Dilution:	1.0		Initial Weight/Volume: 30.86 g
Date Analyzed:	11/24/2010 2340		Final Weight/Volume: 1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume: 2 uL

MSD Lab Sample ID:	360-31167-5	Analysis Batch: 360-66299	Instrument ID: Inst. J
Client Matrix:	Solid	Prep Batch: 360-66249	Lab File ID: J1841.D
Dilution:	1.0		Initial Weight/Volume: 30.53 g
Date Analyzed:	11/25/2010 0013		Final Weight/Volume: 1.0 mL
Date Prepared:	11/23/2010 1358		Injection Volume: 2 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Di-n-octyl phthalate	88	86	40 - 140	2	30		
Fluoranthene	93	102	40 - 140	10	30		
Fluorene	92	99	40 - 140	7	30		
Hexachlorobenzene	87	95	40 - 140	9	30		
Hexachlorobutadiene	65	68	40 - 140	6	30		
Hexachlorocyclopentadiene	35	41	40 - 140	17	30	F	
Hexachloroethane	58	62	40 - 140	8	30		
Indeno[1,2,3-cd]pyrene	97	101	40 - 140	5	30		
Isophorone	47	50	40 - 140	6	30		
Naphthalene	58	63	40 - 140	9	30		
Nitrobenzene	53	56	40 - 140	6	30		
N-Nitrosodi-n-propylamine	69	75	40 - 140	9	30		
N-Nitrosodiphenylamine	81	86	40 - 140	7	30		
Pentachlorophenol	125	131	30 - 130	6	30		F
Phenanthrene	84	92	40 - 140	11	30		
Phenol	70	74	30 - 130	7	30		
Diphenyl oxide	70	72	40 - 140	4	30		
Pyrene	90	92	40 - 140	3	30		
N-Nitrosodimethylamine	54	60	40 - 140	12	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	99	103	30 - 130
2-Fluorobiphenyl	67	69	30 - 130
2-Fluorophenol	60	60	30 - 130
Nitrobenzene-d5	47	47	30 - 130
Phenol-d5	61	63	30 - 130
Terphenyl-d14	76	77	30 - 130

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: B13548.D DFTPP Injection Date: 11/30/2010

Instrument ID: Inst. B DFTPP Injection Time: 12:49

Analysis Batch No.: 66453

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	33.1	
68	Less than 2.0 % of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	34.0	
70	Less than 2.0 % of mass 69	0.2	(0.5)1
127	40.0 - 60.0 % of mass 198	54.9	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.8	
275	10.0 - 30.0 % of mass 198	23.7	
365	Greater than 1.0 % of mass 198	2.5	
441	Present but less than mass 443	7.9	
442	Greater than 40.0 % of mass 198	48.9	
443	17.0 - 23.0 % of mass 442	9.7	(19.9)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66453/2	B13549.D	11/30/2010	13:24
OC-SB-478-8.0/10-XXX	360-31167-16	B13550.D	11/30/2010	14:12
OC-SB-497-6.0/8.0-XXX	360-31167-19	B13551.D	11/30/2010	14:48
OC-SB-497-11/13-XXX	360-31167-18	B13552.D	11/30/2010	15:23
OC-SB-497-0.0/1.0-XXX	360-31167-17	B13553.D	11/30/2010	15:59
OC-SB-475-8.0/10-DUP	360-31167-6	B13555.D	11/30/2010	17:10
OC-SB-475-8.0/10-XXX	360-31167-7	B13557.D	11/30/2010	18:21
OC-SB-476-0.0/1.0-XXX DL	360-31167-8 DL	B13559.D	11/30/2010	19:34
OC-SB-476-13/15-XXX	360-31167-9	B13560.D	11/30/2010	20:10
OC-SB-476-8.0/10-XXX	360-31167-10	B13561.D	11/30/2010	20:46
OC-SB-477-0.0/1.0-XXX	360-31167-11	B13562.D	11/30/2010	21:22
OC-SB-477-10/12-XXX	360-31167-12	B13563.D	11/30/2010	21:58
OC-SB-477-8.0/10-XXX	360-31167-13	B13564.D	11/30/2010	22:34
OC-SB-478-10/12-XXX	360-31167-15	B13566.D	11/30/2010	23:46

CCV out see Attached.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66453/2 Calibration Date: 11/30/2010 13:24

Instrument ID: Inst. B Calib Start Date: 11/29/2010 14:18

GC Column: Rtx-5ms ID: 0.25(um) Calib End Date: 11/29/2010 17:15

Lab File ID: B13549.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4381	0.4052		7400	8000	-7.5	20.0
N-Nitrosodimethylamine	Ave	0.4663	0.4703		8070	8000	0.9	20.0
Pyridine	LinF		0.6871		8500	8000	6.2	20.0
Benzaldehyde	Ave	0.8253	0.7104		6890	8000	-13.9	20.0
Phenol	Ave	1.157	1.259	0.8000	8710	8000	8.9	20.0
Aniline	Ave	1.268	1.486		9380	8000	17.2	20.0
Bis(2-chloroethyl)ether	Ave	1.111	1.034	0.7000	7450	8000	-6.9	20.0
2-Chlorophenol	Ave	1.248	1.311	0.8000	8410	8000	5.1	20.0
1,3-Dichlorobenzene	Ave	1.490	1.463		7850	8000	-1.8	20.0
1,4-Dichlorobenzene	Ave	1.510	1.486		7870	8000	-1.6	20.0
Benzyl alcohol	Ave	0.6569	0.7191		8760	8000	9.5	20.0
1,2-Dichlorobenzene	Ave	1.425	1.380		7750	8000	-3.2	20.0
2-Methylphenol	Ave	0.9604	0.9896	0.7000	8240	8000	3.0	20.0
2,2'-oxybis[1-chloropropane]	Ave	1.476	1.403	0.0100	7610	8000	-4.9	20.0
3 & 4 Methylphenol	Ave	1.057	1.147	0.6000	8690	8000	8.6	20.0
N-Nitrosodi-n-propylamine	Ave	0.4191	0.4149		7920	8000	-1.0	20.0
Acetophenone	Ave	1.415	1.453	0.0100	8220	8000	2.7	20.0
Hexachloroethane	Ave	0.5135	0.5080	0.3000	7920	8000	-1.1	20.0
Nitrobenzene	Ave	0.2165	0.2394	0.2000	8850	8000	10.6	20.0
Isophorone	Ave	0.4414	0.4378	0.4000	7930	8000	-0.8	20.0
2,4-Dimethylphenol	Ave	0.1989	0.2018	0.2000	8120	8000	1.5	20.0
2-Nitrophenol	Ave	0.1429	0.1741	0.1000	9750	8000	21.9*	20.0
Benzoic acid	QuaF		0.4476		10900	8000	36.4*	20.0
Bis(2-chloroethoxy)methane	Ave	0.3032	0.3025	0.3000	7980	8000	-0.2	20.0
2,4-Dichlorophenol	Ave	0.2243	0.2498	0.2000	8910	8000	11.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2991	0.2929		7830	8000	-2.1	20.0
Naphthalene	Ave	0.9769	0.9551	0.7000	7820	8000	-2.2	20.0
4-Chloroaniline	Ave	0.2802	0.3224	0.0100	9210	8000	15.1	20.0
Hexachlorobutadiene	Ave	0.1396	0.1327	0.0100	7600	8000	-5.0	20.0
Caprolactam	Ave	0.0835	0.0954		9130	8000	14.2	20.0
4-Chloro-3-methylphenol	Ave	0.2042	0.2244		8790	8000	9.9	20.0
2-Methylnaphthalene	Ave	0.5997	0.5979	0.4000	7980	8000	-0.3	20.0
1-Methylnaphthalene	Ave	0.6177	0.6038		7820	8000	-2.2	20.0
Hexachlorocyclopentadiene	Ave	0.1581	0.2457		12400	8000	55.4*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2444	0.2359		7720	8000	-3.5	20.0
2,4,6-Trichlorophenol	Ave	0.2726	0.3142	0.2000	9220	8000	15.2	20.0
2,4,5-Trichlorophenol	Ave	0.2766	0.3309	0.2000	9570	8000	19.7	20.0
1,1'-Biphenyl	Ave	1.419	1.438		8110	8000	1.4	20.0
2-Chloronaphthalene	Ave	1.253	1.280		8170	8000	2.2	20.0
Diphenyl oxide	Ave	0.3925	0.3833		7810	8000	-2.3	20.0
2-Nitroaniline	Ave	0.2601	0.3622		11100	8000	39.3*	20.0

FORM VII 8270D

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66453/2 Calibration Date: 11/30/2010 13:24

Instrument ID: Inst. B Calib Start Date: 11/29/2010 14:18

GC Column: Rtx-5ms ID: 0.25(um) Calib End Date: 11/29/2010 17:15

Lab File ID: B13549.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.223	1.224	0.0100	8010	8000	0.0	20.0
2,6-Dinitrotoluene	Ave	0.2476	0.2866	0.2000	9260	8000	15.7	20.0
Acenaphthylene	Ave	1.656	1.754	0.9000	8470	8000	5.9	20.0
3-Nitroaniline	Ave	0.1813	0.2182		9630	8000	20.4*	20.0
2,4-Dinitrophenol	QuaF		0.1173	0.0100	12200	8000	52.6*	20.0
Acenaphthene	Ave	1.155	1.158	0.9000	8020	8000	0.3	20.0
4-Nitrophenol	QuaF		0.2377	0.0100	10400	8000	30.4*	20.0
2,4-Dinitrotoluene	Lin1F		0.3601	0.2000	9030	8000	12.8	20.0
Dibenzofuran	Ave	1.362	1.460	0.8000	8580	8000	7.2	20.0
2,3,4,6-Tetrachlorophenol	QuaF		0.2342		9210	8000	15.2	20.0
Diethyl phthalate	Ave	1.218	1.210	0.0100	7950	8000	-0.7	20.0
4-Chlorophenyl phenyl ether	Ave	0.5157	0.5273		8180	8000	2.3	20.0
4-Nitroaniline	Ave	0.1781	0.2522		11300	8000	41.6*	20.0
Fluorene	Ave	1.172	1.272	0.9000	8680	8000	8.5	20.0
4,6-Dinitro-2-methylphenol	Qua		0.1119		10800	8000	35.3*	20.0
Diphenylamine	Ave	0.6611	0.6534		7910	8000	-1.2	20.0
N-Nitrosodiphenylamine	Ave	0.5650	0.5584		9250	9360	-1.2	20.0
1,2-Diphenylhydrazine	Ave	0.9423	0.9016		7650	8000	-4.3	20.0
Azobenzene	Ave	0.9423	0.9016		7650	8000	-4.3	20.0
Benzophenone	Ave	0.7798	0.7379		7570	8000	-5.4	20.0
4-Bromophenyl phenyl ether	Ave	0.2003	0.1868	0.1000	7460	8000	-6.7	20.0
Atrazine	Ave	0.1899	0.1910		8050	8000	0.6	20.0
Hexachlorobenzene	Ave	0.2239	0.1952	0.1000	6970	8000	-12.8	20.0
Pentachlorophenol	Qua		0.1166	0.0500	9440	8000	18.0	20.0
Pentachloronitrobenzene	Ave	0.0745	0.0752		8070	8000	0.9	20.0
Phenanthrene	Ave	1.067	1.051	0.7000	7880	8000	-1.5	20.0
Anthracene	Ave	1.033	1.074	0.7000	8310	8000	3.9	20.0
Carbazole	Ave	0.7913	0.6760		6830	8000	-14.6	20.0
Di-n-butyl phthalate	Ave	1.362	1.281	0.0100	7520	8000	-6.0	20.0
Fluoranthene	Ave	0.9592	1.012	0.6000	8440	8000	5.5	20.0
Benzidine	Qua		0.1843		8360	8000	4.5	20.0
Pyrene	Ave	1.484	1.349	0.6000	7270	8000	-9.1	20.0
Butyl benzyl phthalate	Ave	0.6739	0.7094	0.0100	8420	8000	5.3	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8266	0.9129	0.0100	8840	8000	10.4	20.0
3,3'-Dichlorobenzidine	Ave	0.1997	0.1880	0.0100	7530	8000	-5.9	20.0
Benzo[a]anthracene	Ave	0.9553	1.022	0.8000	8560	8000	7.0	20.0
Chrysene	Ave	1.053	1.006	0.7000	7640	8000	-4.5	20.0
Di-n-octyl phthalate	LinF		2.269	0.0100	7840	8000	-2.0	20.0
Benzo[b]fluoranthene	Lin1F		1.299	0.7000	8290	8000	3.7	20.0
Benzo[k]fluoranthene	Ave	1.195	1.255	0.7000	8400	8000	5.0	20.0
Benzo[a]pyrene	Lin1		1.010	0.7000	7880	8000	-1.6	20.0

FORM VII 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab File ID: J1830.D DFTPP Injection Date: 11/24/2010

Instrument ID: Inst. J DFTPP Injection Time: 18:16

Analysis Batch No.: 66299

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	55.5	
68	Less than 2.0 % of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	37.8	
70	Less than 2.0 % of mass 69	0.2	(0.6)1
127	40.0 - 60.0 % of mass 198	54.6	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.7	
275	10.0 - 30.0 % of mass 198	25.2	
365	Greater than 1.0 % of mass 198	3.6	
441	Present but less than mass 443	13.6	
442	Greater than 40.0 % of mass 198	94.3	
443	17.0 - 23.0 % of mass 442	18.2	(19.2)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 360-66299/2	J1831.D	11/24/2010	18:48
	MB 360-66249/1-A	J1832.D	11/24/2010	19:21
	LCS 360-66249/2-A	J1833.D	11/24/2010	19:53
	LCSD 360-66249/3-A	J1834.D	11/24/2010	20:25
OC-SB-474-0.0/1.0-XXX	360-31167-1	J1835.D	11/24/2010	20:58
OC-SB-474-10.5/12.5-XXX	360-31167-2	J1836.D	11/24/2010	21:30
OC-SB-474-8.0/10-XXX	360-31167-3	J1837.D	11/24/2010	22:03
OC-SB-475-0.0/1.0-XXX	360-31167-4	J1838.D	11/24/2010	22:35
OC-SB-475-16/18-XXX	360-31167-5	J1839.D	11/24/2010	23:08
OC-SB-475-16/18-XXX MS	360-31167-5 MS	J1840.D	11/24/2010	23:40
OC-SB-475-16/18-XXX MSD	360-31167-5 MSD	J1841.D	11/25/2010	00:13
OC-SB-476-0.0/1.0-XXX	360-31167-8	J1844.D	11/25/2010	01:50
OC-SB-478-0.0/1.0-XXX	360-31167-14	J1850.D	11/25/2010	05:04

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Westfield Job No.: 360-31167-1

SDG No.: 360-31167

Lab Sample ID: CCVIS 360-66299/2 Calibration Date: 11/24/2010 18:48

Instrument ID: Inst. J Calib Start Date: 11/19/2010 15:43

GC Column: Rtx-5ms ID: 0.25(um) Calib End Date: 11/19/2010 20:08

Lab File ID: J1831.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodimethylamine	Ave	0.9103	0.8336		4580	5000	-8.4	20.0
Pyridine	Ave	1.135	1.148		5060	5000	1.2	20.0
Benzaldehyde	Ave	0.9169	0.9714		5300	5000	5.9	20.0
Phenol	Ave	1.519	1.434	0.8000	4720	5000	-5.6	20.0
Aniline	Ave	1.838	1.697		4620	5000	-7.7	20.0
Bis(2-chloroethyl)ether	Ave	1.316	1.249	0.7000	4740	5000	-5.1	20.0
2-Chlorophenol	Ave	1.360	1.387	0.8000	5100	5000	2.0	20.0
1,3-Dichlorobenzene	Ave	1.491	1.506		5050	5000	1.0	20.0
1,4-Dichlorobenzene	Ave	1.511	1.531		5060	5000	1.3	20.0
Benzyl alcohol	Ave	0.9075	0.8546		4710	5000	-5.8	20.0
1,2-Dichlorobenzene	Ave	1.414	1.441		5090	5000	1.9	20.0
2-Methylphenol	Ave	1.136	1.091	0.7000	4800	5000	-3.9	20.0
2,2'-oxybis[1-chloropropane]	Ave	2.539	2.461	0.0100	4850	5000	-3.1	20.0
3 & 4 Methylphenol	Ave	1.269	1.238	0.6000	4880	5000	-2.5	20.0
N-Nitrosodi-n-propylamine	Ave	0.7852	0.7545		4800	5000	-3.9	20.0
Acetophenone	Ave	1.691	1.627	0.0100	4810	5000	-3.8	20.0
Hexachloroethane	Ave	0.5656	0.5410	0.3000	4780	5000	-4.3	20.0
Nitrobenzene	Ave	0.2739	0.2566	0.2000	4680	5000	-6.3	20.0
Isophorone	Ave	0.5176	0.4905	0.4000	4740	5000	-5.2	20.0
2,4-Dimethylphenol	Ave	0.2619	0.2260	0.2000	4320	5000	-13.7	20.0
2-Nitrophenol	Ave	0.1604	0.1918	0.1000	5980	5000	19.6	20.0
Benzoic acid	Qua		0.0723		3550	5000	-29.0*	20.0
Bis(2-chloroethoxy)methane	Ave	0.3379	0.3227	0.3000	4770	5000	-4.5	20.0
2,4-Dichlorophenol	Ave	0.2341	0.2450	0.2000	5230	5000	4.6	20.0
1,2,4-Trichlorobenzene	Ave	0.2608	0.2748		5270	5000	5.4	20.0
Naphthalene	Ave	0.9773	0.9590	0.7000	4910	5000	-1.9	20.0
4-Chloroaniline	Ave	0.3705	0.3178	0.0100	4290	5000	-14.2	20.0
Hexachlorobutadiene	Ave	0.1325	0.1452	0.0100	5480	5000	9.6	20.0
Caprolactam	Ave	0.1395	0.1373		4920	5000	-1.6	20.0
4-Chloro-3-methylphenol	Ave	0.2406	0.2406		5000	5000	-0.0	20.0
2-Methylnaphthalene	Ave	0.5900	0.6120	0.4000	5190	5000	3.7	20.0
1-Methylnaphthalene	Ave	0.5985	0.6225		5200	5000	4.0	20.0
Hexachlorocyclopentadiene	Ave	0.2276	0.2389		5250	5000	5.0	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2085	0.2341		5610	5000	12.3	20.0
2,4,6-Trichlorophenol	Ave	0.2799	0.3066	0.2000	5480	5000	9.5	20.0
2,4,5-Trichlorophenol	Ave	0.2858	0.3067	0.2000	5370	5000	7.3	20.0
1,1'-Biphenyl	Ave	1.360	1.362		5000	5000	0.0	20.0
2-Chloronaphthalene	Ave	1.292	1.256		4860	5000	-2.8	20.0
Diphenyl oxide	Ave	0.3667	0.3941		5370	5000	7.5	20.0
2-Nitroaniline	Ave	0.3294	0.3507		5320	5000	6.5	20.0
Dimethyl phthalate	Ave	1.222	1.225	0.0100	5010	5000	0.2	20.0

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
EXTRACTABLE PETROLEUM HYDROCARBONS BY METHOD MADEP-EPH-98-1

Reviewer/Date [signature] 12/16/10
Sr. Review/Date
Lab Report # 360-31096-1
LAW Project # 61C71OCC16.12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

[✓] *Name of Laboratory* [✓] *Certification ID #* [✓] *Address* [✓] *Project ID* [✓] *Phone #* [✓] *Sample identification – Field and Laboratory (IDs must be cross-referenced)*

Client Information: [✓] *Name* [✓] *Address* [✓] *Phone #* [✓] *Client Contact*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement ***Yes*** [✓] *No* [ ] *N/A* [ ] *Comments:*

Does the laboratory report include a completed Analytical Report Certification in the required format?

ACTION: *If no, contact lab for submission of missing certification or certification with correct format.*

1.3 Laboratory Case Narrative: *Are both of the following statements true?* ***Yes*** [✓] *No* [ ] *N/A* [ ] *Comments:*

[✓] *Narrative serves as an exception report for the project and method QA/QC performance.* [ ] *Narrative includes an explanation of each discrepancy on the Certification Statement.*

ACTION: *If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include the *original* Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of missing original COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Custody seals checked ☑ Condition observed ☑ pH verified (where applicable) ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 1 Liter amber bottle / 5 ml 1:1 HCl, cool to 4°C
Soil - 4 oz amber soil jar w/ Teflon lined cap / cool to 4°C

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable), qualify positive and non-detect data (J) data if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☐ % moisture or solids ☑ *Reporting limits*
☑ *Clean-up method* ☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☑
Matrix ☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Method blank results ☑ LCS recoveries ☑ MS/MSD recoveries and RPDs ☑ Laboratory duplicate results (where applicable) ☑ Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Yes [ ] No [✓] N/A [ ] Comments:

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? For water samples, the holding time is 14 days from sampling to extraction and 40 days from extraction to analysis. For soil samples, the holding time is 7 days from sampling to extraction and 40 days from extraction to analysis.

NOTE: List samples that exceeded hold time with number of days exceeded on checklist.

ACTION: If technical holding times are exceeded, qualify all positive results (J) and reject (R) all non-detect results.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Extractable Petroleum Hydrocarbons MADEP-EPH-98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, check Request for Analysis to verify if method was ordered and COC to verify that it was sent, and contact lab for resubmission of the missing data

3.4 If *dilutions were required, were dilution factors reported?* **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Is the Method Blank Summary present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analysis batch of EPH field samples of 20 or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs) Yes [ ] **No** [✓] N/A [ ] Comments:

4.4 Do any method blanks have positive results for EPHs? Qualify data according to the following: Yes [ ] **No** [✓] N/A [ ] Comments:

If the sample concentration is < 5 × blank value, flag sample result "JB"

If the sample concentration is > 5 × blank value, no qualification is needed.

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard run with each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A second source LCS containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. Yes [✓] No [ ] N/A [ ] Comments: OC-SB-496-0.0/1.0-xxx

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If any matrix spike data is missing, call lab for resubmission.

6.4 Are any EPH spike recoveries outside of the QC limits? Yes [ ] No [✓] N/A [ ] Comments:

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result
SR = Sample result
SA = Spike added

NOTE: *A second source MS/MSD containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control-limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: $RPD = \frac{S-D}{(S+D)/2} \times 100\%$ Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for water and soil as ≤ 50. See the attached table for a listing of MADEP MS/MSD RPD limits vs. the control limits listed in the QAPP.*

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

ACTION: If the RPD exceeds the control limit, qualify positive and non-detects results (J).

7.0 Surrogate Recoveries

Were one or more EPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines require at least two extraction and two fractionation surrogates, and lists recovery limits as 40-140% for all surrogates. See the attached table for a listing of MADEP surrogate limits vs. the control limits listed in the QAPP*

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

8.0 Sampling Accuracy

8.1 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the project chemist. Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.2 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against other blank results to determine if contaminant may be laboratory-, ambient, or shipment-derived. If results are not lab-, ambient, or shipment related, qualify according to the table below.

Sample conc. < 5x blank value:	Sample conc. > 5x blank value:
Flag sample result "JB"	No qualification is needed

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of the samples and their associated field duplicates. Yes [ ] **No** [✓] N/A [ ] Comments:

9.2 Were field duplicates collected per the required frequency? **Yes** [ ] No [ ] N/A [✓] Comments:

☐ SOW ☐ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review. **Yes** [ ] No [ ] N/A [✓] Comments:

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified? Yes [ ] **No** [✓] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

LAW, 1999, "Final Quality Assurance Project Plan, Olin Wilmington Property, 51 Eames Street, Wilmington, MA", LAW Engineering and Environmental Services, Kennesaw, GA 30144. August 1999.

STL-Westfield, 2002. "Olin – General Chemistry Control Limits (Soil & Water)," Severn Trent Laboratories, Inc., 53 Southampton Road, Westfield, MA, 01085.

USEPA, 1988. "Laboratory Data Validation Functional Guidelines for Evaluating Organic and Inorganic Analysis," EPA/540/R-94-012 and EPA/540-R-94-013, July 1988.

MADEP, 2001. Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Massachusetts Quality Assurance / Quality Control (QA / QC Requirements," BWSC-CAM, Interim Final Draft, Revision No. 2, 5 October 2001.

MADEP, 2001. Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Quality Assurance / Quality Control Guidelines for Sampling, Data Evaluation and reporting Activities, " BWSC-CAM, Section VII, Public Comment Draft, Revision No. 0, 21 December 2001.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:
12/16/10

ANALYTICAL REPORT

Job Number: 360-31096-1

SDG Number: 360-31096-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
11/23/2010 2:46 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
11/23/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/18/2010 and analyzed on 11/20/2010.

Aniline failed the recovery criteria low for the MS/MSD of sample OC-SB-485-11/13-XXXMS (360-31096-2) in batch 360-66135. The associated laboratory control sample (LCS) recovery met acceptance criteria. Refer to the QC report for details.

For samples 360-31096-(1-3,5-15), the continuing calibration verification (CCV) for analytical batch 66135 exceeded control criteria high for 2,4-Dinitrophenol and Benzoic acid.

General method information:
The 11/19/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid, 2-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 2,3,4,6-Tetrachlorophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, and Di-n-octyl phthalate. Benzoic Acid (r value 0.989), 2,4-Dinitrophenol (0.981), 4,6-Dinitro-2-methylphenol (0.988), did not meet 0.990 curve criteria.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-TBK-055 (360-31096-4), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14), OC-SB-496-5.0/6.5-XXX (360-31096-15) and OC-TBK-056 (360-31096-16) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/17/2010 and analyzed on 11/20/2010.

General method information:
At the request of the client, only the carbon ranges are reported for this job.

The 09/20/10 calibration curve has a quadratic curve fit for the following compounds: m & p-Xylene, o-Xylene, and Naphthalene.

Sample 360-31096- (2) in batch 66164 had a ratio of methanol to soil above the method standard.

No other difficulties were encountered during the VPH analyses.

All quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/18/2010 and analyzed on 11/19/2010.

General method information:
According to EPH method reference 11.2.6.2, using GC/MS, the laboratory has identified a single component contaminant that appears at the same retention time in all laboratory and field samples. This contaminant is derived from the method's SPE cartridge and is not included in the calculation of the C11-C22 Aromatics range.

The 11/16/10 calibration curve has a quadratic curve fit for the following compounds: Phenanthrene.

At the request of the client, only the carbon ranges are reported for this job.

No difficulties were encountered during the EPH analyses.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for percent solids in accordance with EPA Moisture. The samples were analyzed on 11/17/2010.

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-486-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid
% Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.40 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1512			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		6.6		3.6	3.6
C11-C22 Aromatics (Adjusted)		6.6		3.6	3.6
C19-C36 Aliphatics		10		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		17		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	76		40 - 140
2-Fluorobiphenyl	99		40 - 140
2-Bromonaphthalene	99		40 - 140
1-Chlorooctadecane	76		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.21 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1547			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		ND		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	100		40 - 140
2-Fluorobiphenyl	99		40 - 140
2-Bromonaphthalene	99		40 - 140
1-Chlorooctadecane	89		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.41 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1621			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.5	3.5
C11-C22 Aromatics (Adjusted)		ND		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		ND		3.5	3.5
Total EPH		ND		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	71		40 - 140
2-Fluorobiphenyl	76		40 - 140
2-Bromonaphthalene	76		40 - 140
1-Chlorooctadecane	88		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.17 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1655			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)	ND		3.4	3.4
C11-C22 Aromatics (Adjusted)	ND		3.4	3.4
C19-C36 Aliphatics	ND		3.4	3.4
C9-C18 Aliphatics	ND		3.4	3.4
Total EPH	ND		3.4	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		40 - 140
2-Fluorobiphenyl	87		40 - 140
2-Bromonaphthalene	87		40 - 140
1-Chlorooctadecane	73		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.53 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1729			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.5	3.5
C11-C22 Aromatics (Adjusted)		ND		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		ND		3.5	3.5
Total EPH		ND		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	101		40 - 140
2-Fluorobiphenyl	122		40 - 140
2-Bromonaphthalene	120		40 - 140
1-Chlorooctadecane	89		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid % Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.24 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1803			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)	ND		3.5	3.5
C11-C22 Aromatics (Adjusted)	ND		3.5	3.5
C19-C36 Aliphatics	ND		3.5	3.5
C9-C18 Aliphatics	ND		3.5	3.5
Total EPH	ND		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	94		40 - 140
2-Fluorobiphenyl	102		40 - 140
2-Bromonaphthalene	102		40 - 140
1-Chlorooctadecane	73		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.89 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1838			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.3	3.3
C11-C22 Aromatics (Adjusted)		ND		3.3	3.3
C19-C36 Aliphatics		ND		3.3	3.3
C9-C18 Aliphatics		ND		3.3	3.3
Total EPH		ND		3.3	3.3

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	90		40 - 140
2-Fluorobiphenyl	88		40 - 140
2-Bromonaphthalene	87		40 - 140
1-Chlorooctadecane	98		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.81 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1912			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.4	3.4
C11-C22 Aromatics (Adjusted)		ND		3.4	3.4
C19-C36 Aliphatics		ND		3.4	3.4
C9-C18 Aliphatics		ND		3.4	3.4
Total EPH		ND		3.4	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	83		40 - 140
2-Fluorobiphenyl	85		40 - 140
2-Bromonaphthalene	85		40 - 140
1-Chlorooctadecane	93		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid
% Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.38 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 1947			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		ND		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	93		40 - 140
2-Fluorobiphenyl	118		40 - 140
2-Bromonaphthalene	117		40 - 140
1-Chlorooctadecane	94		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.15 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 2021			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.7	3.7
C11-C22 Aromatics (Adjusted)		ND		3.7	3.7
C19-C36 Aliphatics		ND		3.7	3.7
C9-C18 Aliphatics		ND		3.7	3.7
Total EPH		ND		3.7	3.7

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		40 - 140
2-Fluorobiphenyl	88		40 - 140
2-Bromonaphthalene	88		40 - 140
1-Chlorooctadecane	81		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.16 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 2056			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		8.4		4.1	4.1
C11-C22 Aromatics (Adjusted)		8.4		4.1	4.1
C19-C36 Aliphatics		4.9		4.1	4.1
C9-C18 Aliphatics		ND		4.1	4.1
Total EPH		13		4.1	4.1

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	69		40 - 140
2-Fluorobiphenyl	87		40 - 140
2-Bromonaphthalene	87		40 - 140
1-Chlorooctadecane	70		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.40 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 2130			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.5	3.5
C11-C22 Aromatics (Adjusted)		ND		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		ND		3.5	3.5
Total EPH		ND		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	79		40 - 140
2-Fluorobiphenyl	80		40 - 140
2-Bromonaphthalene	82		40 - 140
1-Chlorooctadecane	84		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid
% Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.11 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 2205			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		4.7		3.8	3.8
C11-C22 Aromatics (Adjusted)		4.7		3.8	3.8
C19-C36 Aliphatics		ND		3.8	3.8
C9-C18 Aliphatics		ND		3.8	3.8
Total EPH		4.7		3.8	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	74		40 - 140
2-Fluorobiphenyl	107		40 - 140
2-Bromonaphthalene	107		40 - 140
1-Chlorooctadecane	68		40 - 140

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66098		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66026		Initial Weight/Volume:	30.51 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/19/2010 2348			Injection Volume:	1 uL
Date Prepared:	11/18/2010 1303			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		3.7		3.4	3.4
C11-C22 Aromatics (Adjusted)		3.7		3.4	3.4
C19-C36 Aliphatics		ND		3.4	3.4
C9-C18 Aliphatics		ND		3.4	3.4
Total EPH		3.7		3.4	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	91		40 - 140
2-Fluorobiphenyl	92		40 - 140
2-Bromonaphthalene	92		40 - 140
1-Chlorooctadecane	84		40 - 140

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
EXTRACTABLE PETROLEUM HYDROCARBONS BY METHOD MADEP-EPH-98-1

Reviewer/Date 12/16/10
Sr. Review/Date
Lab Report # 360-31147-1
LAW Project # 6107 1000/6,12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

[✓] *Name of Laboratory* [✓] *Certification ID #* [✓] *Address* [✓] *Project ID* [✓] *Phone #* [✓] *Sample identification – Field and Laboratory*
Client Information: [✓] *Name* [✓] *Address* [✓] *Phone #* [✓] *Client Contact* *(IDs must be cross-referenced)*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement **Yes** [✓] *No* [ ] *N/A* [ ] *Comments:*

Does the laboratory report include a completed Analytical Report Certification in the required format?

ACTION: *If no, contact lab for submission of missing certification or certification with correct format.*

1.3 Laboratory Case Narrative: *Are both of the following statements true?* **Yes** [✓] *No* [ ] *N/A* [ ] *Comments:*

[✓] *Narrative serves as an exception report for the project and method QA/QC performance.* [ ] *Narrative includes an explanation of each discrepancy on the Certification Statement.*

ACTION: *If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include the *original* Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of missing original COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Custody seals checked ☑ Condition observed ☑ pH verified (where applicable) ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 1 Liter amber bottle / 5 ml 1:1 HCl, cool to 4°C
Soil - 4 oz amber soil jar w/ Teflon lined cap / cool to 4°C

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable), qualify positive and non-detect data (J) data if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☑ % moisture or solids ☑ *Reporting limits*
☑ *Clean-up method* ☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☐ Matrix
☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Method blank results ☑ LCS recoveries ☑ MS/MSD recoveries and RPDs ☑ Laboratory duplicate results (where applicable) ☑ Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Yes [ ] No [✓] N/A [ ] Comments:

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? For water samples, the holding time is 14 days from sampling to extraction and 40 days from extraction to analysis. For soil samples, the holding time is 7 days from sampling to extraction and 40 days from extraction to analysis.

NOTE: List samples that exceeded hold time with number of days exceeded on checklist.

ACTION: If technical holding times are exceeded, qualify all positive results (J) and reject (R) all non-detect results.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Extractable Petroleum Hydrocarbons MADEP-EPH-98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, check Request for Analysis to verify if method was ordered and COC to verify that it was sent, and contact lab for resubmission of the missing data

3.4 If *dilutions were required, were dilution factors reported?* **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Is the Method Blank Summary present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analysis batch of EPH field samples of 20 or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs) Yes [ ] **No** [✓] N/A [ ] Comments:

4.4 Do any method blanks have positive results for EPHs? Qualify data according to the following: Yes [ ] **No** [✓] N/A [ ] Comments:

If the sample concentration is < 5 × blank value, flag sample result "JB"

If the sample concentration is > 5 × blank value, no qualification is needed.

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard run with each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A second source LCS containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. Yes [✓] No [ ] N/A [ ] Comments: OC-SB-479-00/1.0-XXX

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If any matrix spike data is missing, call lab for resubmission.

6.4 Are any EPH spike recoveries outside of the QC limits? Yes [✓] No [ ] N/A [ ] Comments:

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result, SR = Sample result, SA = Spike added

C-11 - C12 Aromatics (unadjusted) MS %R = 4
C9-C18 Aliphatics MS %R = -36 RPD = 51
Results for C11-C12 Aromatic and C9-C18 Aliphatics were non-detect. MSD percent recoveries were within QC limits. Based upon professional judgement, non-detect results for C11-C12 Aromatics (unadj) and C9-C18 Aliphatics, T-EPH were qualified estimated (UJ) at the reporting limits in sample OC-SB-479-00/1.0-XXX.

NOTE: *A second source MS/MSD containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [✓] **No** [ ] N/A [ ] Comments:

See above.

NOTE: $RPD = \frac{S-D}{(S+D)/2} \times 100\%$ Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for water and soil as ≤ 50. See the attached table for a listing of MADEP MS/MSD RPD limits vs. the control limits listed in the QAPP.*

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

ACTION: If the RPD exceeds the control limit, qualify positive and non-detects results (J).

7.0 Surrogate Recoveries

Were one or more EPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines require at least two extraction and two fractionation surrogates, and lists recovery limits as 40-140% for all surrogates. See the attached table for a listing of MADEP surrogate limits vs. the control limits listed in the QAPP*

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

8.0 Sampling Accuracy

8.1 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the project chemist. Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.2 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against other blank results to determine if contaminant may be laboratory-, ambient, or shipment-derived. If results are not lab-, ambient, or shipment related, qualify according to the table below.

Sample conc. < 5x blank value:	Sample conc. > 5x blank value:
Flag sample result "JB"	No qualification is needed

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of the samples and their associated field duplicates. Yes [✓] **No** [ ] N/A [ ] Comments: OC-SB-480-6.0/8.0-xxx

9.2 Were field duplicates collected per the required frequency? **Yes** [✓] No [ ] N/A [ ] Comments:

☐ SOW ☑ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review. **Yes** [✓] No [ ] N/A [ ] Comments: See attached.

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified? Yes [✓] **No** [ ] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

LAW, 1999, "Final Quality Assurance Project Plan, Olin Wilmington Property, 51 Eames Street, Wilmington, MA", LAW Engineering and Environmental Services, Kennesaw, GA 30144. August 1999.

STL-Westfield, 2002. "Olin – General Chemistry Control Limits (Soil & Water)," Severn Trent Laboratories, Inc., 53 Southampton Road, Westfield, MA, 01085.

USEPA, 1988. "Laboratory Data Validation Functional Guidelines for Evaluating Organic and Inorganic Analysis," EPA/540/R-94-012 and EPA/540-R-94-013, July 1988.

MADEP, 2001. Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Massachusetts Quality Assurance / Quality Control (QA / QC Requirements," BWSC-CAM, Interim Final Draft, Revision No. 2, 5 October 2001.

MADEP, 2001. Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Quality Assurance / Quality Control Guidelines for Sampling, Data Evaluation and reporting Activities, " BWSC-CAM, Section VII, Public Comment Draft, Revision No. 0, 21 December 2001.

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: S7004.D

Lab ID: 360-31147-7 MS Client ID: OC-SB-481-7.0/9.0-XXX MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
C11-C22 Aromatics (unadjusted)	60.1	140	138	4	40-140	F
C19-C36 Aliphatics	28.3	ND	19.4	69	40-140	
C9-C18 Aliphatics	21.2	36	28.0	-36	40-140	F

Column to be used to flag recovery and RPD values

FORM III MA-EPH

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: S7006.D

Lab ID: 360-31147-7 MSD Client ID: OC-SB-481-7.0/9.0-XXX MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
C11-C22 Aromatics (unadjusted)	61.2	182	75	27	50	40-140	
C19-C36 Aliphatics	28.8	29.1	101	40	50	40-140	
C9-C18 Aliphatics	21.6	47.1	53	51	50	40-140	F

Column to be used to flag recovery and RPD values

FORM III MA-EPH

Sample ID	Analyte	Orig Conc	Q	Dup Conc.	Q	RPD
OC-SB-480-6.0/8.0-XXX	C11-C22 Aromatics	110		120		8.7
OC-SB-480-6.0/8.0-XXX	C11-C22 Aromatics (unadj.)	110		120		8.7
OC-SB-480-6.0/8.0-XXX	C19-C36 Aliphatics	3.6	U	3.6	U	0
OC-SB-480-6.0/8.0-XXX	C9-C18 Aliphatics	14		18		25
OC-SB-480-6.0/8.0-XXX	Extractable Petroleum Hydrocarbons, Total	120		140		15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/16/10

Job Number: 360-31147-1

SDG Number: 360-31147-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/2/2010 4:46 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/02/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/19/2010 and analyzed on 11/29/2010 and 11/30/2010.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66417. 2,4-Dinitrophenol exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria.

For samples 360-31147-(1-10), in batch 66417, the following compounds were outside control limits in the continuing calibration verification (CCV): 2,4-Dintrophenol (high), Dibenz(ah)anthracene (high), 4,6-Dinitro-2-methylphenol (high), Di-n-octylphthalate (low) and 2,4-Dimethylphenol (low).

General method information

Samples OC-SB-480-0.0/1.0-XXX (360-31147-3)[5X], OC-SB-480-6.0/8.0-DUP (360-31147-4)[5X], OC-SB-480-6.0/8.0-XXX (360-31147-5)[5X] and OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

The 11/29/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 2,4-Dinitrophenol; 4,6-Dinitro-2-Methylphenol, 4-Nitrophenol; 2,3,4,6-Tetrachlorophenol; Pentachlorophenol; Dibenz(a,h)anthracene; and Benzo[g,h,i]perylene.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9), OC-SB-502-3.0/5.0-XXX (360-31147-10) and OC-TBK-057 (360-31147-11) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010 and 11/24/2010.

For the MSD of sample OC-SB-481-7.0/9.0-XXXMSD (360-31147-7) in batch 360-66308C5-C8, Aliphatics (unadjusted), C9-C10 Aromatics and C9-C12 Aliphatics (unadjusted) failed the recovery criteria low. C5-C8 Aliphatics (unadjusted) exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:

At the request of the client, only the carbon ranges are reported for this job.

The calibration curve dated 9/20/2010 uses quadratic regressions for m,p-Xylene, o-Xylene, and Naphthalene.

Sample OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VPH analyses.

All other quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010.

C11-C22 Aromatics (unadjusted) and C9-C18 Aliphatics failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66128. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:

At the request of the client, only the carbon ranges are reported for this job.

According to EPH method reference 11.2.6.2, using GC/MS, the laboratory has identified a single component contaminant that appears at the same retention time in all laboratory and field samples. This contaminant is derived from the method's SPE cartridge and is not included in the calculation of the C11-C22 Aromatics range.

The calibration curve dated 11/16/2010 uses quadratic regressions for Phenanthrene.

No other difficulties were encountered during the EPH analyses.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for percent solids in accordance with EPA Moisture. The samples were analyzed on 11/18/2010.

No difficulties were encountered during the % solids analyses.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31147-1	OC-SB-479-0.0/1.0-XXX	Solid	11/16/2010 1525	11/17/2010 1750
360-31147-2	OC-SB-479-8.0/10-XXX	Solid	11/16/2010 1540	11/17/2010 1750
360-31147-3	OC-SB-480-0.0/1.0-XXX	Solid	11/16/2010 1600	11/17/2010 1750
360-31147-4	OC-SB-480-6.0/8.0-DUP	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-5	OC-SB-480-6.0/8.0-XXX	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-6	OC-SB-481-0.0/1.0-XXX	Solid	11/17/2010 1330	11/17/2010 1750
360-31147-7	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MS	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MSD	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-8	OC-SB-500-0.5/3.0-XXX	Solid	11/17/2010 1025	11/17/2010 1750
360-31147-9	OC-SB-501-0.5/3.0-XXX	Solid	11/17/2010 1100	11/17/2010 1750
360-31147-10	OC-SB-502-3.0/5.0-XXX	Solid	11/17/2010 1135	11/17/2010 1750
360-31147-11	OC-TBK-057	Solid	11/16/2010 1525	11/17/2010 1750

Analytical Data

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.09 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1222			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)	ND J		3.7	3.7
C11-C22 Aromatics (Adjusted)	ND		3.7	3.7
C19-C36 Aliphatics	ND		3.7	3.7
C9-C18 Aliphatics	ND J		3.7	3.7
Total EPH	ND J		3.7	3.7

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	70		40 - 140
2-Fluorobiphenyl	95		40 - 140
2-Bromonaphthalene	95		40 - 140
1-Chlorooctadecane	76		40 - 140

12/16/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid
% Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.31 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1257			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		ND		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	93		40 - 140
2-Fluorobiphenyl	101		40 - 140
2-Bromonaphthalene	101		40 - 140
1-Chlorooctadecane	85		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.05 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1331			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		25		3.5	3.5
C11-C22 Aromatics (Adjusted)		25		3.5	3.5
C19-C36 Aliphatics		4.5		3.5	3.5
C9-C18 Aliphatics		ND		3.5	3.5
Total EPH		30		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	72		40 - 140
2-Fluorobiphenyl	79		40 - 140
2-Bromonaphthalene	79		40 - 140
1-Chlorooctadecane	92		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.24 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1405			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		120		3.6	3.6
C11-C22 Aromatics (Adjusted)		120		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		18		3.6	3.6
Total EPH		140		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	87		40 - 140
2-Fluorobiphenyl	86		40 - 140
2-Bromonaphthalene	86		40 - 140
1-Chlorooctadecane	86		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.05 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1439			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		110		3.6	3.6
C11-C22 Aromatics (Adjusted)		110		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		14		3.6	3.6
Total EPH		120		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	79		40 - 140
2-Fluorobiphenyl	104		40 - 140
2-Bromonaphthalene	104		40 - 140
1-Chlorooctadecane	71		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.77 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1514			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.4	3.4
C11-C22 Aromatics (Adjusted)		ND		3.4	3.4
C19-C36 Aliphatics		ND		3.4	3.4
C9-C18 Aliphatics		ND		3.4	3.4
Total EPH		ND		3.4	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	65		40 - 140
2-Fluorobiphenyl	81		40 - 140
2-Bromonaphthalene	81		40 - 140
1-Chlorooctadecane	72		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.38 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1548			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		140		3.5	3.5
C11-C22 Aromatics (Adjusted)		140		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		36		3.5	3.5
Total EPH		180		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	90		40 - 140
2-Fluorobiphenyl	91		40 - 140
2-Bromonaphthalene	90		40 - 140
1-Chlorooctadecane	102		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.05 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1730			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		12		3.6	3.6
C11-C22 Aromatics (Adjusted)		12		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		12		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		40 - 140
2-Fluorobiphenyl	91		40 - 140
2-Bromonaphthalene	90		40 - 140
1-Chlorooctadecane	86		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.35 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1803			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		5.5		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		5.5		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	72		40 - 140
2-Fluorobiphenyl	81		40 - 140
2-Bromonaphthalene	79		40 - 140
1-Chlorooctadecane	80		40 - 140

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66128		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66093		Initial Weight/Volume:	30.49 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/20/2010 1837			Injection Volume:	1 uL
Date Prepared:	11/19/2010 1212			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.5	3.5
C11-C22 Aromatics (Adjusted)		ND		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		ND		3.5	3.5
Total EPH		ND		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	95		40 - 140
2-Fluorobiphenyl	95		40 - 140
2-Bromonaphthalene	95		40 - 140
1-Chlorooctadecane	76		40 - 140

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
EXTRACTABLE PETROLEUM HYDROCARBONS BY METHOD MADEP-EPH-98-1

Reviewer/Date [signature] 12/16/10
Sr. Review/Date
Lab Report # 360-31167-1
LAW Project # 6107100016.12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

☑ *Name of Laboratory* ☑ *Certification ID #* ☑ *Address* ☑ *Project ID* ☑ *Phone #* ☑ *Sample identification – Field and Laboratory (IDs must be cross-referenced)*

Client Information: ☑ *Name* ☑ *Address* ☑ *Phone #* ☑ *Client Contact*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include a completed Analytical Report Certification in the required format?

***ACTION**: If no, contact lab for submission of missing certification or certification with correct format.*

***1.3 Laboratory Case Narrative:** Are both of the following statements true?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ *Narrative serves as an exception report for the project and method QA/QC performance.* ☐ *Narrative includes an explanation of each discrepancy on the Certification Statement.*

***ACTION**: If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include the *original* Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of missing original COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Custody seals checked ☑ Condition observed ☑ pH verified (where applicable) ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 1 Liter amber bottle / 5 ml 1:1 HCl, cool to 4°C
Soil - 4 oz amber soil jar w/ Teflon lined cap / cool to 4°C

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable), qualify positive and non-detect data (J) data if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☑ % moisture or solids ☑ *Reporting limits*
☑ *Clean-up method* ☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☐ Matrix ☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Method blank results ☑ LCS recoveries ☑ MS/MSD recoveries and RPDs ☑ Laboratory duplicate results (where applicable) ☑ Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Yes [✓] 12/14/10 No [✓] N/A [ ] Comments:

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? For water samples, the holding time is 14 days from sampling to extraction and 40 days from extraction to analysis. For soil samples, the holding time is 7 days from sampling to extraction and 40 days from extraction to analysis.

NOTE: List samples that exceeded hold time with number of days exceeded on checklist.

ACTION: If technical holding times are exceeded, qualify all positive results (J) and reject (R) all non-detect results.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Extractable Petroleum Hydrocarbons MADEP-EPH-98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, check Request for Analysis to verify if method was ordered and COC to verify that it was sent, and contact lab for resubmission of the missing data

3.4 *If dilutions were required, were dilution factors reported?* **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Is the Method Blank Summary present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analysis batch of EPH field samples of 20 or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs) Yes [ ] **No** [✓] N/A [ ] Comments:

4.4 Do any method blanks have positive results for EPHs? Qualify data according to the following: Yes [ ] **No** [✓] N/A [ ] Comments:

If the sample concentration is < 5 × blank value, flag sample result "JB"

If the sample concentration is > 5 × blank value, no qualification is needed.

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard run with each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A second source LCS containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. **Yes** [✓] No [ ] N/A [ ] Comments: OC-SB-475-16/18-XXX

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If any matrix spike data is missing, call lab for resubmission.

6.4 Are any EPH spike recoveries outside of the QC limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result
SR = Sample result
SA = Spike added

NOTE: *A second source MS/MSD containing at least five target analytes from each fraction is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 40-140 for all analytes except C36. The laboratory must identify analytes that routinely exceed these limits. See the attached table for a listing of MADEP LCS control limits vs. the control limits listed in the QAPP*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: $RPD = \frac{S-D}{(S+D)/2} \times 100\%$ Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for water and soil as ≤ 50. See the attached table for a listing of MADEP MS/MSD RPD limits vs. the control limits listed in the QAPP.*

NOTE: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

ACTION: If the RPD exceeds the control limit, qualify positive and non-detects results (J).

7.0 Surrogate Recoveries

Were one or more EPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines require at least two extraction and two fractionation surrogates, and lists recovery limits as 40-140% for all surrogates. See the attached table for a listing of MADEP surrogate limits vs. the control limits listed in the QAPP*

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

8.0 Sampling Accuracy

8.1 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the project chemist. Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.2 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against other blank results to determine if contaminant may be laboratory-, ambient, or shipment-derived. If results are not lab-, ambient, or shipment related, qualify according to the table below.

Sample conc. < 5x blank value:	Sample conc. > 5x blank value:
Flag sample result "JB"	No qualification is needed

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of the samples and their associated field duplicates. Yes [✓] **No** [ ] N/A [ ] Comments:

9.2 Were field duplicates collected per the required frequency? **Yes** [✓] No [ ] N/A [ ] Comments:

☐ SOW ☑ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

OC-SB-475-P.0/10-XXX

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review. **Yes** [✓] No [ ] N/A [ ] Comments:

see attached.

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified? Yes [ ] **No** [✓] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

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STL-Westfield, 2002. "Olin – General Chemistry Control Limits (Soil & Water)," Severn Trent Laboratories, Inc., 53 Southampton Road, Westfield, MA, 01085.

USEPA, 1988. "Laboratory Data Validation Functional Guidelines for Evaluating Organic and Inorganic Analysis," EPA/540/R-94-012 and EPA/540-R-94-013, July 1988.

MADEP, 2001. Massacbusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Massachusetts Quality Assurance / Quality Control (QA / QC Requirements," BWSC-CAM, Interim Final Draft, Revision No. 2, 5 October 2001.

MADEP, 2001. Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, "Quality Assurance / Quality Control Guidelines for Sampling, Data Evaluation and reporting Activities, " BWSC-CAM, Section VII, Public Comment Draft, Revision No. 0, 21 December 2001.

Sample ID	Analyte	Orig Conc	Q	Dup Conc.	Q	RPD
OC-SB-475-8.0/10-XXX	C11-C22 Aromatics	1100		1000		9.5
OC-SB-475-8.0/10-XXX	C11-C22 Aromatics (unadj.)	1100		1000		9.5
OC-SB-475-8.0/10-XXX	C19-C36 Aliphatics	2900		2000		37
OC-SB-475-8.0/10-XXX	C9-C18 Aliphatics	350		260		30
OC-SB-475-8.0/10-XXX	Extractable Petroleum Hydrocarbons, Total	4400		3300		29

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/16/10

Job Number: 360-31167-1

SDG Number: 360-31167

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/6/2010 11:49 AM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/06/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

[5X] and OC-SB-478-10/12-XXX (360-31167-15)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

At the request of the client, only the carbon ranges are reported for this job.

The calibration curve dated 9-20-10 uses quadratic regressions for m,p-Xylene, o-Xylene, and Naphthalene

Sample 360-31167-(16), in batch 66359 had a ratio of methanol to soil above the method standard.

No difficulties were encountered during the VPH analyses.

All quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS

Samples OC-SB-474-0.0/1.0-XXX (360-31167-1), OC-SB-474-10.5/12.5-XXX (360-31167-2), OC-SB-474-8.0/10-XXX (360-31167-3), OC-SB-475-0.0/1.0-XXX (360-31167-4), OC-SB-475-16/18-XXX (360-31167-5), OC-SB-475-8.0/10-DUP (360-31167-6), OC-SB-475-8.0/10-XXX (360-31167-7), OC-SB-476-0.0/1.0-XXX (360-31167-8), OC-SB-476-13/15-XXX (360-31167-9), OC-SB-476-8.0/10-XXX (360-31167-10), OC-SB-477-0.0/1.0-XXX (360-31167-11), OC-SB-477-10/12-XXX (360-31167-12), OC-SB-477-8.0/10-XXX (360-31167-13), OC-SB-478-0.0/1.0-XXX (360-31167-14), OC-SB-478-10/12-XXX (360-31167-15), OC-SB-478-8.0/10-XXX (360-31167-16), OC-SB-497-0.0/1.0-XXX (360-31167-17), OC-SB-497-11/13-XXX (360-31167-18) and OC-SB-497-6.0/8.0-XXX (360-31167-19) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/23/2010 and analyzed on 11/23/2010 and 11/24/2010.

General method information:
Samples OC-SB-475-8.0/10-DUP (360-31167-6)[10X], OC-SB-475-8.0/10-XXX (360-31167-7)[10X], OC-SB-476-13/15-XXX (360-31167-9)[2X], OC-SB-476-8.0/10-XXX (360-31167-10)[10X] and OC-SB-477-8.0/10-XXX (360-31167-13)[10X] required dilution prior to analysis due to the abundance of target analytes. The reporting limits have been adjusted accordingly.

At the request of the client, only the carbon ranges are reported for this job.

According to EPH method reference 11.2.6.2, using GC/MS, the laboratory has identified a single component contaminant that appears at the same retention time in all laboratory and field samples. This contaminant is derived from the method's SPE cartridge and is not included in the calculation of the C11-C22 Aromatics range.

The calibration curve dated 11/16/2010 uses quadratic regressions for Phenanthrene.

No difficulties were encountered during the EPH analyses.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples OC-SB-474-0.0/1.0-XXX (360-31167-1), OC-SB-474-10.5/12.5-XXX (360-31167-2), OC-SB-474-8.0/10-XXX (360-31167-3), OC-SB-475-0.0/1.0-XXX (360-31167-4), OC-SB-475-16/18-XXX (360-31167-5), OC-SB-475-8.0/10-DUP (360-31167-6), OC-SB-475-8.0/10-XXX (360-31167-7), OC-SB-476-0.0/1.0-XXX (360-31167-8), OC-SB-476-13/15-XXX (360-31167-9), OC-SB-476-8.0/10-XXX (360-31167-10), OC-SB-477-0.0/1.0-XXX (360-31167-11), OC-SB-477-10/12-XXX (360-31167-12), OC-SB-477-8.0/10-XXX (360-31167-13), OC-SB-478-0.0/1.0-XXX (360-31167-14), OC-SB-478-10/12-XXX (360-31167-15), OC-SB-478-8.0/10-XXX (360-31167-16), OC-SB-497-0.0/1.0-XXX (360-31167-17), OC-SB-497-11/13-XXX (360-31167-18) and OC-SB-497-6.0/8.0-XXX (360-31167-19) were analyzed for percent solids in accordance with EPA Moisture. The samples were analyzed on 11/22/2010.

No difficulties were encountered during the % solids analyses.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31167-1	OC-SB-474-0.0/1.0-XXX	Solid	11/18/2010 1245	11/18/2010 1800
360-31167-2	OC-SB-474-10.5/12.5-XXX	Solid	11/18/2010 1315	11/18/2010 1800
360-31167-3	OC-SB-474-8.0/10-XXX	Solid	11/18/2010 1300	11/18/2010 1800
360-31167-4	OC-SB-475-0.0/1.0-XXX	Solid	11/18/2010 1125	11/18/2010 1800
360-31167-5	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-5MS	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-5MSD	OC-SB-475-16/18-XXX	Solid	11/18/2010 1225	11/18/2010 1800
360-31167-6	OC-SB-475-8.0/10-DUP	Solid	11/18/2010 1145	11/18/2010 1800
360-31167-7	OC-SB-475-8.0/10-XXX	Solid	11/18/2010 1145	11/18/2010 1800
360-31167-8	OC-SB-476-0.0/1.0-XXX	Solid	11/18/2010 1035	11/18/2010 1800
360-31167-9	OC-SB-476-13/15-XXX	Solid	11/18/2010 1155	11/18/2010 1800
360-31167-10	OC-SB-476-8.0/10-XXX	Solid	11/18/2010 1055	11/18/2010 1800
360-31167-11	OC-SB-477-0.0/1.0-XXX	Solid	11/18/2010 0955	11/18/2010 1800
360-31167-12	OC-SB-477-10/12-XXX	Solid	11/18/2010 1025	11/18/2010 1800
360-31167-13	OC-SB-477-8.0/10-XXX	Solid	11/18/2010 1010	11/18/2010 1800
360-31167-14	OC-SB-478-0.0/1.0-XXX	Solid	11/18/2010 0910	11/18/2010 1800
360-31167-15	OC-SB-478-10/12-XXX	Solid	11/18/2010 0945	11/18/2010 1800
360-31167-16	OC-SB-478-8.0/10-XXX	Solid	11/18/2010 0925	11/18/2010 1800
360-31167-17	OC-SB-497-0.0/1.0-XXX	Solid	11/17/2010 1450	11/18/2010 1800
360-31167-18	OC-SB-497-11/13-XXX	Solid	11/17/2010 1525	11/18/2010 1800
360-31167-19	OC-SB-497-6.0/8.0-XXX	Solid	11/17/2010 1510	11/18/2010 1800
360-31167-20	OC-TBK-058	Solid	11/17/2010 1450	11/18/2010 1800

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.19 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 1806			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		15		3.8	3.8
C11-C22 Aromatics (Adjusted)		15		3.8	3.8
C19-C36 Aliphatics		ND		3.8	3.8
C9-C18 Aliphatics		ND		3.8	3.8
Total EPH		15		3.8	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	81		40 - 140
2-Fluorobiphenyl	108		40 - 140
2-Bromonaphthalene	106		40 - 140
1-Chlorooctadecane	86		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.13 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 1840			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.9	3.9
C11-C22 Aromatics (Adjusted)		ND		3.9	3.9
C19-C36 Aliphatics		ND		3.9	3.9
C9-C18 Aliphatics		ND		3.9	3.9
Total EPH		ND		3.9	3.9

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	80		40 - 140
2-Fluorobiphenyl	93		40 - 140
2-Bromonaphthalene	90		40 - 140
1-Chlorooctadecane	82		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.04 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 1915			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.9	3.9
C11-C22 Aromatics (Adjusted)		ND		3.9	3.9
C19-C36 Aliphatics		ND		3.9	3.9
C9-C18 Aliphatics		ND		3.9	3.9
Total EPH		ND		3.9	3.9

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	78		40 - 140
2-Fluorobiphenyl	91		40 - 140
2-Bromonaphthalene	91		40 - 140
1-Chlorooctadecane	71		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.31 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 1949			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		14		3.6	3.6
C11-C22 Aromatics (Adjusted)		14		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		14		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	63		40 - 140
2-Fluorobiphenyl	73		40 - 140
2-Bromonaphthalene	72		40 - 140
1-Chlorooctadecane	77		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.49 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 2023			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		ND		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		40 - 140
2-Fluorobiphenyl	103		40 - 140
2-Bromonaphthalene	105		40 - 140
1-Chlorooctadecane	72		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.04 g
Dilution:	10			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0935			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		1000		38	38
C11-C22 Aromatics (Adjusted)		1000		38	38
C19-C36 Aliphatics		2000		38	38
C9-C18 Aliphatics		260		38	38
Total EPH		3300		38	38

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	68		40 - 140
2-Fluorobiphenyl	89		40 - 140
2-Bromonaphthalene	89		40 - 140
1-Chlorooctadecane	52		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.50 g
Dilution:	10			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 1009			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		1100		38	38
C11-C22 Aromatics (Adjusted)		1100		38	38
C19-C36 Aliphatics		2900		38	38
C9-C18 Aliphatics		350		38	38
Total EPH		4400		38	38

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	83		40 - 140
2-Fluorobiphenyl	83		40 - 140
2-Bromonaphthalene	80		40 - 140
1-Chlorooctadecane	92		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.84 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/23/2010 2314			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		9.9		3.6	3.6
C11-C22 Aromatics (Adjusted)		9.9		3.6	3.6
C19-C36 Aliphatics		7.9		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		18		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	76		40 - 140
2-Fluorobiphenyl	90		40 - 140
2-Bromonaphthalene	89		40 - 140
1-Chlorooctadecane	76		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.08 g
Dilution:	2.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 1044			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		1000		7.5	7.5
C11-C22 Aromatics (Adjusted)		1000		7.5	7.5
C19-C36 Aliphatics		59		7.5	7.5
C9-C18 Aliphatics		35		7.5	7.5
Total EPH		1100		7.5	7.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	78		40 - 140
2-Fluorobiphenyl	85		40 - 140
2-Bromonaphthalene	85		40 - 140
1-Chlorooctadecane	71		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.31 g
Dilution:	10			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 1118			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		2200		37	37
C11-C22 Aromatics (Adjusted)		2200		37	37
C19-C36 Aliphatics		260		37	37
C9-C18 Aliphatics		130		37	37
Total EPH		2600		37	37

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	86		40 - 140
2-Fluorobiphenyl	94		40 - 140
2-Bromonaphthalene	93		40 - 140
1-Chlorooctadecane	76		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.70 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0056			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		39		3.6	3.6
C11-C22 Aromatics (Adjusted)		39		3.6	3.6
C19-C36 Aliphatics		4.3		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		43		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	80		40 - 140
2-Fluorobiphenyl	96		40 - 140
2-Bromonaphthalene	96		40 - 140
1-Chlorooctadecane	86		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.73 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0131			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)	12		3.8	3.8
C11-C22 Aromatics (Adjusted)	41		3.8	3.8
C19-C36 Aliphatics	ND		3.8	3.8
C9-C18 Aliphatics	ND		3.8	3.8
Total EPH	41		3.8	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	82		40 - 140
2-Fluorobiphenyl	92		40 - 140
2-Bromonaphthalene	92		40 - 140
1-Chlorooctadecane	83		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.16 g
Dilution:	10			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 1152			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		4500		37	37
C11-C22 Aromatics (Adjusted)		4500		37	37
C19-C36 Aliphatics		140		37	37
C9-C18 Aliphatics		260		37	37
Total EPH		4900		37	37

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		40 - 140
2-Fluorobiphenyl	87		40 - 140
2-Bromonaphthalene	86		40 - 140
1-Chlorooctadecane	80		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.33 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0240			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		10		4.1	4.1
C11-C22 Aromatics (Adjusted)		10		4.1	4.1
C19-C36 Aliphatics		7.5		4.1	4.1
C9-C18 Aliphatics		ND		4.1	4.1
Total EPH		18		4.1	4.1

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	73		40 - 140
2-Fluorobiphenyl	84		40 - 140
2-Bromonaphthalene	84		40 - 140
1-Chlorooctadecane	81		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.41 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0424			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		350		3.8	3.8
C11-C22 Aromatics (Adjusted)		350		3.8	3.8
C19-C36 Aliphatics		4.1		3.8	3.8
C9-C18 Aliphatics		120		3.8	3.8
Total EPH		470		3.8	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	81		40 - 140
2-Fluorobiphenyl	103		40 - 140
2-Bromonaphthalene	102		40 - 140
1-Chlorooctadecane	79		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.17 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0459			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		82		3.4	3.4
C11-C22 Aromatics (Adjusted)		82		3.4	3.4
C19-C36 Aliphatics		ND		3.4	3.4
C9-C18 Aliphatics		14		3.4	3.4
Total EPH		96		3.4	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	79		40 - 140
2-Fluorobiphenyl	85		40 - 140
2-Bromonaphthalene	86		40 - 140
1-Chlorooctadecane	90		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.31 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0533			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		33		3.5	3.5
C11-C22 Aromatics (Adjusted)		33		3.5	3.5
C19-C36 Aliphatics		ND		3.5	3.5
C9-C18 Aliphatics		10		3.5	3.5
Total EPH		43		3.5	3.5

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	71		40 - 140
2-Fluorobiphenyl	79		40 - 140
2-Bromonaphthalene	79		40 - 140
1-Chlorooctadecane	77		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.32 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0608			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		ND		3.6	3.6
C11-C22 Aromatics (Adjusted)		ND		3.6	3.6
C19-C36 Aliphatics		ND		3.6	3.6
C9-C18 Aliphatics		ND		3.6	3.6
Total EPH		ND		3.6	3.6

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	93		40 - 140
2-Fluorobiphenyl	94		40 - 140
2-Bromonaphthalene	93		40 - 140
1-Chlorooctadecane	99		40 - 140

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

MA-EPH Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Method:	MA-EPH	Analysis Batch: 360-66271		Instrument ID:	INST S
Preparation:	3546	Prep Batch: 360-66245		Initial Weight/Volume:	30.31 g
Dilution:	1.0			Final Weight/Volume:	2.0 mL
Date Analyzed:	11/24/2010 0643			Injection Volume:	1 uL
Date Prepared:	11/23/2010 1216			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C11-C22 Aromatics (unadjusted)		44		3.8	3.8
C11-C22 Aromatics (Adjusted)		44		3.8	3.8
C19-C36 Aliphatics		ND		3.8	3.8
C9-C18 Aliphatics		6.7		3.8	3.8
Total EPH		51		3.8	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	90		40 - 140
2-Fluorobiphenyl	105		40 - 140
2-Bromonaphthalene	104		40 - 140
1-Chlorooctadecane	84		40 - 140

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
VOLATILE PETROLEUM HYDROCARBONS BY METHOD MADEP

Reviewer/Date [signature] 12/15/16
Sr. Review/Date
Lab Report # 360-31096-1
Project # 6107100016.12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

[✓] *Name of Laboratory* [✓] *Certification ID #* [✓] *Address* [✓] *Project ID* [✓] *Phone #* [✓] *Sample identification – Field and Laboratory*

Client Information: [✓] *Name* [✓] *Address* [✓] *Client Contact* *(IDs must be cross-referenced)*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include a completed Analytical Report Certification in the required format?

***ACTION**: If no, contact lab for submission of missing certification or certification with correct format.*

1.3 Laboratory Case Narrative: **Yes** [ ] No [ ] N/A [ ] Comments:

[✓] *Narrative serves as an exception report for the project and method QA/QC performance.* [ ] *Narrative includes an explanation of each discrepancy on the Certification Statement.*

***ACTION**: If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include a copy of the completed Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of completed COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Condition observed ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 40 mL VOA vial/HCL to pH<2, cool to 4°C
Soil - 5 gram Encore™/cool to 4°C or 40 mL VOA vial with field preservation of sodium bisulfate (low-level) or methanol (high-level) or field preservation in water if soils are reactive to sodium bisulfate (i.e. alkaline conditions, excessive humic acid content, etc.)

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable); qualify both positive data and non-detect data (J) if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☑ % moisture or solids ☑ *Reporting limits*
☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☑ Matrix ☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? **Yes** [✓] No [ ] N/A [ ] Comments:

[✓] Method blank results [✓] LCS recoveries [NA] MS/MSD recoveries and RPDs [✓] Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? Yes [ ] **No** [✓] N/A [ ] Comments:

For water samples, the holding time is 7 days from sampling for unpreserved samples and 14 days for preserved samples.

For soil samples, methanol preservation required with a holding time of 14 days. If an Encore™ sampler was used, the lab must ***preserve*** the sample within 48 hours. Analytical holding time from time of preservation is 14 days.

NOTE: List samples that exceed hold time with # of days exceeded on checklist

ACTION: If technical holding times are exceeded, qualify all positive results (J). Use professional judgment to reject (R) data for grossly exceeded.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Purge and Trap Water: 5030B Soil: 5035
Volatile Petroleum Hydrocarbons MADEP VPH 98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab ☐ MADEP — Yes [✓] No [ ] N/A [ ] Comments:

NOTE: *The MADEP QA/QC Guidelines provides PQLs for volatile petroleum hydrocarbons. See MADEP PQLs vs. the PQLs listed in the QAPP.*

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG? — Yes [✓] No [ ] N/A [ ] Comments:

NOTE: *The MADEP QA/QC Guidelines requires a minimum compound reporting list for volatile organic compounds.*

3.4 If *dilutions were required, were dilution factors reported?* — Yes [✓] No [ ] N/A [ ] Comments:

NOTE: *MADEP guidance states that if a diluted and an undiluted analysis is performed, the laboratory should report results for the lowest dilution within the valid calibration range for each analyte.*

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Are the Method Blank Summaries present? — Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analytical batch of 20 samples or less? — Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs). **Yes** [✓] No [ ] N/A [ ] Comments:

4.4 Do any method blanks have positive results for VPH parameters? Qualify data according to the following: Yes [ ] **No** [✓] N/A [ ] Comments:

For VPH contaminants:

Review blank and sample chromatograms to evaluate the nature of the detection in the blank and associated samples. Use professional judgment. The following actions may be applied:

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed..

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 10x or 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard (LCS) run with each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A full target, second source LCS is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 70-130 except for naphthalene. The laboratory must identify any other analytes that routinely exceed 70-130 percent.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. **Yes** [ ] No [✓] N/A [ ] Comments:

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? **Yes** [ ] No [ ] N/A [✓] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? **Yes** [ ] No [ ] N/A [✓] Comments:

ACTION: If any matrix spike data are missing, call lab for resubmission.

6.4 Are any VPH spike recoveries outside of the QC limits? Yes [ ] **No** [ ] N/A [✓] Comments:

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result
SR = Sample result
SA = Spike added

NOTE: *A full target, second source MS/MSD is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 70-130 except for naphthalene.*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [ ] **No** [ ] N/A [✓] Comments:

NOTE: $RPD = \frac{S-D}{(S+D)/2} \times 100\%$ Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for both water and soils as ≤ 50.*

ACTION: If the RPD exceeds the control limit, qualify positive results and non-detects (J).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

7.0 Surrogate Recoveries

Were VPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list surrogate limits for both water and soils as 70-130% for both detectors.*

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

8.0 Sampling Accuracy

8.1 Were trip blanks shipped with VOC samples and analyzed? **Yes** [✓] No [ ] N/A [ ] Comments:

NOTE: *MADEP requires trip blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*1 per cooler VOAs/VPH*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.2 Do any trip blanks have positive results? Yes [ ] **No** [✓] N/A [ ] Comments:

ACTION: Prepare a list of samples shipped in the same cooler as the contaminated blank.

ACTION: Evaluate trip blank results against method blank results to determine if contaminant may be laboratory-derived. If results are not lab-related, qualify according to the table below.

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed.

8.3 Were ambient blanks shipped with VPH samples and analyzed? **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP requires ambient (field) blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*Not Required*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.4 Do any ambient blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Prepare a list of samples associated with the contaminated blank (all collected from the site on that day).

ACTION: Evaluate ambient blank results against method and trip blank results to determine if contaminant may be laboratory- and/or shipment-derived. If results are not lab- and/or shipment-related, qualify according to the table above (8.2).

8.5 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the senior chemist. **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.6 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against blank results to determine if contaminant may be laboratory-, ambient-, or shipment-derived. If results are not lab-, ambient-, or shipment-related, qualify according to the table above (8.2).

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of samples and their associated field duplicates. Yes [ ] No [✓] N/A [ ] Comments:

9.2 Were field duplicates collected per the required frequency? Yes [ ] No [ ] N/A [✓] Comments:

☐ SOW ☐ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review. Yes [ ] No [ ] N/A [✓] Comments:

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified? Yes [ ] No [✓] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

LAW, 1999, "Final Quality Assurance Project Plan, Olin Wilmington Property, 51 Eames Street, Wilmington, MA", LAW Engineering and Environmental Services, Kennesaw, GA 30144. August 1999.

Massachusetts Department of Environmental Protection (MADEP), 1998. "Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)"; Division of Environmental Analysis; Office of Research and Standards; Bureau of Waste Site Cleanup; January 1998.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/15/10

Job Number: 360-31096-1

SDG Number: 360-31096-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
11/23/2010 3:05 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
11/23/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D **LL**. The samples were prepared on 11/18/2010 and analyzed on 11/20/2010.

Aniline failed the recovery criteria low for the MS/MSD of sample OC-SB-485-11/13-XXXMS (360-31096-2) in batch 360-66135. The associated laboratory control sample (LCS) recovery met acceptance criteria. Refer to the QC report for details.

For samples 360-31096-(1-3,5-15), the continuing calibration verification (CCV) for analytical batch 66135 exceeded control criteria high for 2,4-Dinitrophenol and Benzoic acid.

General method information:
The 11/19/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid, 2-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 2,3,4,6-Tetrachlorophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, and Di-n-octyl phthalate. Benzoic Acid (r value 0.989), 2,4-Dinitrophenol (0.981), 4,6-Dinitro-2-methylphenol (0.988), did not meet 0.990 curve criteria.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-TBK-055 (360-31096-4), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14), OC-SB-496-5.0/6.5-XXX (360-31096-15) and OC-TBK-056 (360-31096-16) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/17/2010 and analyzed on 11/20/2010.

General method information:
At the request of the client, only the carbon ranges are reported for this job.

The 09/20/10 calibration curve has a quadratic curve fit for the following compounds: m & p-Xylene, o-Xylene, and Naphthalene.

Sample 360-31096- (2) in batch 66164 had a ratio of methanol to soil above the method standard.

No other difficulties were encountered during the VPH analyses.

All quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/18/2010 and analyzed on 11/19/2010.

General method information:
According to EPH method reference 11.2.6.2, using GC/MS, the laboratory has identified a single component contaminant that appears at the same retention time in all laboratory and field samples. This contaminant is derived from the method's SPE cartridge and is not included in the calculation of the C11-C22 Aromatics range.

The 11/16/10 calibration curve has a quadratic curve fit for the following compounds: Phenanthrene.

At the request of the client, only the carbon ranges are reported for this job.

No difficulties were encountered during the EPH analyses.

All quality control parameters were within the acceptance limits.

PERCENT SOLIDS
Samples OC-SB-485-0.0/1.0-XXX (360-31096-1), OC-SB-485-11/13-XXX (360-31096-2), OC-SB-485-6.0/8.0-XXX (360-31096-3), OC-SB-488-0.0/1.0-XXX (360-31096-5), OC-SB-488-7.0/9.0-XXX (360-31096-6), OC-SB-490-0.0/1.0-XXX (360-31096-7), OC-SB-490-7.0/9.0-XXX (360-31096-8), OC-SB-494-0.0/1.0-XXX (360-31096-9), OC-SB-494-12/14-XXX (360-31096-10), OC-SB-494-6.0/8.0-XXX (360-31096-11), OC-SB-495-0.0/1.0-XXX (360-31096-12), OC-SB-495-4.0/6.0-XXX (360-31096-13), OC-SB-496-0.0/1.0-XXX (360-31096-14) and OC-SB-496-5.0/6.5-XXX (360-31096-15) were analyzed for percent solids in accordance with EPA Moisture. The samples were analyzed on 11/17/2010.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31096-1	OC-SB-485-0.0/1.0-XXX	Solid	11/15/2010 1200	11/15/2010 1730
360-31096-2	OC-SB-485-11/13-XXX	Solid	11/15/2010 1210	11/15/2010 1730
360-31096-3	OC-SB-485-6.0/8.0-XXX	Solid	11/15/2010 1205	11/15/2010 1730
360-31096-4	OC-TBK-055	Solid	11/15/2010 1200	11/15/2010 1730
360-31096-5	OC-SB-488-0.0/1.0-XXX	Solid	11/15/2010 1530	11/16/2010 1720
360-31096-6	OC-SB-488-7.0/9.0-XXX	Solid	11/15/2010 1540	11/16/2010 1720
360-31096-7	OC-SB-490-0.0/1.0-XXX	Solid	11/16/2010 1105	11/16/2010 1720
360-31096-8	OC-SB-490-7.0/9.0-XXX	Solid	11/16/2010 1115	11/16/2010 1720
360-31096-9	OC-SB-494-0.0/1.0-XXX	Solid	11/16/2010 1200	11/16/2010 1720
360-31096-10	OC-SB-494-12/14-XXX	Solid	11/16/2010 1210	11/16/2010 1720
360-31096-11	OC-SB-494-6.0/8.0-XXX	Solid	11/16/2010 1205	11/16/2010 1720
360-31096-12	OC-SB-495-0.0/1.0-XXX	Solid	11/16/2010 1315	11/16/2010 1720
360-31096-13	OC-SB-495-4.0/6.0-XXX	Solid	11/16/2010 1320	11/16/2010 1720
360-31096-14	OC-SB-496-0.0/1.0-XXX	Solid	11/16/2010 1355	11/16/2010 1720
360-31096-15	OC-SB-496-5.0/6.5-XXX	Solid	11/16/2010 1405	11/16/2010 1720
360-31096-16	OC-TBK-056	Solid	11/16/2010 1105	11/16/2010 1720

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-0.0/1.0-XXX**

Lab Sample ID: 360-31096-1
Client Matrix: Solid % Moisture: 9.2

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.57 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0349			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		ND		2.5	2.5
C9-C12 Aliphatics (unadjusted)		ND		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		ND		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	91		70 - 130
2,5-Dibromotoluene (pid)	99		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-11/13-XXX**

Lab Sample ID: 360-31096-2
Client Matrix: Solid
% Moisture: 9.0

Date Sampled: 11/15/2010 1210
Date Received: 11/15/2010 1730

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	13.20 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0422			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.0	2.0
C5-C8 Aliphatics (adjusted)		ND		2.0	2.0
C9-C10 Aromatics		ND		2.0	2.0
C9-C12 Aliphatics (unadjusted)		ND		2.0	2.0
C9-C12 Aliphatics (adjusted)		ND		2.0	2.0
Total VPH		ND		2.0	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	97		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-485-6.0/8.0-XXX**

Lab Sample ID: 360-31096-3
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/15/2010 1205
Date Received: 11/15/2010 1730

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	12.22 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0455			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.1	2.1
C5-C8 Aliphatics (adjusted)		ND		2.1	2.1
C9-C10 Aromatics		ND		2.1	2.1
C9-C12 Aliphatics (unadjusted)		ND		2.1	2.1
C9-C12 Aliphatics (adjusted)		ND		2.1	2.1
Total VPH		ND		2.1	2.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	98		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-055**

Lab Sample ID: 360-31096-4
Client Matrix: Solid

Date Sampled: 11/15/2010 1200
Date Received: 11/15/2010 1730

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	5.00 g
Dilution:	1.0			Final Weight/Volume:	5 g
Date Analyzed:	11/20/2010 0529			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-0.0/1.0-XXX**

Lab Sample ID: 360-31096-5
Client Matrix: Solid % Moisture: 2.5

Date Sampled: 11/15/2010 1530
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	9.06 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0602			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.7	2.7
C5-C8 Aliphatics (adjusted)		ND		2.7	2.7
C9-C10 Aromatics		ND		2.7	2.7
C9-C12 Aliphatics (unadjusted)		ND		2.7	2.7
C9-C12 Aliphatics (adjusted)		ND		2.7	2.7
Total VPH		ND		2.7	2.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-488-7.0/9.0-XXX**

Lab Sample ID: 360-31096-6
Client Matrix: Solid
% Moisture: 6.4

Date Sampled: 11/15/2010 1540
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	11.70 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0635			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	91		70 - 130
2,5-Dibromotoluene (pid)	99		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-0.0/1.0-XXX**

Lab Sample ID: 360-31096-7
Client Matrix: Solid
% Moisture: 7.2

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.76 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0708			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	87		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-490-7.0/9.0-XXX**

Lab Sample ID: 360-31096-8
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 11/16/2010 1115
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	11.27 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0741			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	91		70 - 130
2,5-Dibromotoluene (pid)	99		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-0.0/1.0-XXX**

Lab Sample ID: 360-31096-9
Client Matrix: Solid
% Moisture: 5.2

Date Sampled: 11/16/2010 1200
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	12.30 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0814			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)	ND		2.0	2.0
C5-C8 Aliphatics (adjusted)	ND		2.0	2.0
C9-C10 Aromatics	ND		2.0	2.0
C9-C12 Aliphatics (unadjusted)	ND		2.0	2.0
C9-C12 Aliphatics (adjusted)	ND		2.0	2.0
Total VPH	ND		2.0	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	94		70 - 130
2,5-Dibromotoluene (pid)	101		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-12/14-XXX**

Lab Sample ID: 360-31096-10
Client Matrix: Solid % Moisture: 8.2

Date Sampled: 11/16/2010 1210
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.66 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0847			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)	ND		2.4	2.4
C5-C8 Aliphatics (adjusted)	ND		2.4	2.4
C9-C10 Aromatics	ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)	ND		2.4	2.4
C9-C12 Aliphatics (adjusted)	ND		2.4	2.4
Total VPH	ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	88		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-494-6.0/8.0-XXX**

Lab Sample ID: 360-31096-11
Client Matrix: Solid
% Moisture: 12.3

Date Sampled: 11/16/2010 1205
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	11.04 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0920			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		ND		2.5	2.5
C9-C12 Aliphatics (unadjusted)		ND		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		ND		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	91		70 - 130
2,5-Dibromotoluene (pid)	99		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-0.0/1.0-XXX**

Lab Sample ID: 360-31096-12
Client Matrix: Solid
% Moisture: 19.1

Date Sampled: 11/16/2010 1315
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	9.64 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 0953			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		3.1	3.1
C5-C8 Aliphatics (adjusted)		ND		3.1	3.1
C9-C10 Aromatics		ND		3.1	3.1
C9-C12 Aliphatics (unadjusted)		ND		3.1	3.1
C9-C12 Aliphatics (adjusted)		ND		3.1	3.1
Total VPH		ND		3.1	3.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	91		70 - 130
2,5-Dibromotoluene (pid)	100		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-495-4.0/6.0-XXX**

Lab Sample ID: 360-31096-13
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 11/16/2010 1320
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	11.73 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1026			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	88		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-0.0/1.0-XXX**

Lab Sample ID: 360-31096-14
Client Matrix: Solid % Moisture: 12.4

Date Sampled: 11/16/2010 1355
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	9.01 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1059			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		3.0	3.0
C5-C8 Aliphatics (adjusted)		ND		3.0	3.0
C9-C10 Aromatics		ND		3.0	3.0
C9-C12 Aliphatics (unadjusted)		ND		3.0	3.0
C9-C12 Aliphatics (adjusted)		ND		3.0	3.0
Total VPH		ND		3.0	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	97		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-SB-496-5.0/6.5-XXX**

Lab Sample ID: 360-31096-15
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 11/16/2010 1405
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	9.82 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1132			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		ND		2.5	2.5
C9-C12 Aliphatics (unadjusted)		ND		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		ND		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	88		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31096-1
Sdg Number: 360-31096-1

Client Sample ID: **OC-TBK-056**

Lab Sample ID: 360-31096-16
Client Matrix: Solid

Date Sampled: 11/16/2010 1105
Date Received: 11/16/2010 1720

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.00 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1205			Injection Volume:	
Date Prepared:	11/17/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	90		70 - 130
2,5-Dibromotoluene (pid)	98		70 - 130

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
VOLATILE PETROLEUM HYDROCARBONS BY METHOD MADEP

Reviewer/Date [signature] 12/15/10
Sr. Review/Date
Lab Report # 360-31147-1
Project # 61071.00016.12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

[✓] *Name of Laboratory* [✓] *Certification ID #* [✓] *Address* [✓] *Project ID* [✓] *Phone #* [✓] *Sample identification – Field and Laboratory*

Client Information: [✓] *Name* [✓] *Address* [✓] *Client Contact* *(IDs must be cross-referenced)*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement **Yes** [✓] *No* [ ] *N/A* [ ] *Comments:*

Does the laboratory report include a completed Analytical Report Certification in the required format?

***ACTION**: If no, contact lab for submission of missing certification or certification with correct format.*

1.3 Laboratory Case Narrative: **Yes** [✓] *No* [ ] *N/A* [ ] *Comments:*

[✓] *Narrative serves as an exception report for the project and method QA/QC performance.* [ ] *Narrative includes an explanation of each discrepancy on the Certification Statement.*

***ACTION**: If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include a copy of the completed Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of completed COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Condition observed ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 40 mL VOA vial/HCL to pH<2, cool to 4°C
Soil - 5 gram Encore™/cool to 4°C or 40 mL VOA vial with field preservation of sodium bisulfate (low-level) or methanol (high-level) or field preservation in water if soils are reactive to sodium bisulfate (i.e. alkaline conditions, excessive humic acid content, etc.)

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable); qualify both positive data and non-detect data (J) if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☑ % moisture or solids ☑ *Reporting limits*
☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☑ Matrix ☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? **Yes** [✓] No [ ] N/A [ ] Comments:

[✓] Method blank results [✓] LCS recoveries [✓] MS/MSD recoveries and RPDs [✓] Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? Yes [ ] **No** [✓] N/A [ ] Comments:

For water samples, the holding time is 7 days from sampling for unpreserved samples and 14 days for preserved samples.

For soil samples, methanol preservation required with a holding time of 14 days. If an Encore™ sampler was used, the lab must ***preserve*** the sample within 48 hours. Analytical holding time from time of preservation is 14 days.

NOTE: List samples that exceed hold time with # of days exceeded on checklist

ACTION: If technical holding times are exceeded, qualify all positive results (J). Use professional judgment to reject (R) data for grossly exceeded.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Purge and Trap Water: 5030B Soil: 5035
Volatile Petroleum Hydrocarbons MADEP VPH 98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab ☐ MADEP

NOTE: *The MADEP QA/QC Guidelines provides PQLs for volatile petroleum hydrocarbons. See MADEP PQLs vs. the PQLs listed in the QAPP.*

Yes [✓] No [ ] N/A [ ] Comments: Sample OC-SB-481-7.0/9.0-xxx was diluted 5x with elevated RL's.

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG? **Yes** [✓] No [ ] N/A [ ] Comments:

NOTE: *The MADEP QA/QC Guidelines requires a minimum compound reporting list for volatile organic compounds.*

3.4 If *dilutions were required, were dilution factors reported?* **Yes** [✓] No [ ] N/A [ ] Comments:

NOTE: *MADEP guidance states that if a diluted and an undiluted analysis is performed, the laboratory should report results for the lowest dilution within the valid calibration range for each analyte.*

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Are the Method Blank Summaries present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs). **Yes** [✓] No [ ] N/A [ ] Comments:

4.4 Do any method blanks have positive results for VPH parameters? Qualify data according to the following: Yes [ ] **No** [✓] N/A [ ] Comments:

For VPH contaminants:

Review blank and sample chromatograms to evaluate the nature of the detection in the blank and associated samples. Use professional judgment. The following actions may be applied:

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed..

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 10x or 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard (LCS) run with each analytical batch of 20 samples or less? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A full target, second source LCS is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 70-130 except for naphthalene. The laboratory must identify any other analytes that routinely exceed 70-130 percent.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. **Yes** [✓] No [ ] N/A [ ] Comments: Sample OC-SB-481-7.0/9.0-xxx was analyzed for MS/MSD.

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If any matrix spike data are missing, call lab for resubmission.

6.4 Are any VPH spike recoveries outside of the QC limits? Yes [✓] **No** [ ] N/A [ ] Comments:

C5-C8 Aliphatics (unadj) MSD %R = 57 RPD = 53
C9-C10 Aromatic, MSD %R = 61
C9-C12 Aliphatics (unadjusted) MSD %R = 67
VPH results in sample OC-SB-481- 7.0/9.0-++ qualified estimated (J/UJ).

NOTE: %R = $\frac{(SSR-SR)}{SA}$ x 100% Where: SSR = Spiked sample result; SR = Sample result; SA = Spike added

NOTE: *A full target, second source MS/MSD is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 70-130 except for naphthalene.*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [✓] **No** [ ] N/A [ ] Comments:

C5-C8 Aliphatics (unadjusted) RPD = 53.
see action above.

NOTE: RPD = $\frac{S-D}{(S+D)/2}$ x 100% Where: S = MS sample result; D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for both water and soils as ≤ 50.*

ACTION: If the RPD exceeds the control limit, qualify positive results and non-detects (J).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

7.0 Surrogate Recoveries

Were VPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list surrogate limits for both water and soils as 70-130% for both detectors.*

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

8.0 Sampling Accuracy

8.1 Were trip blanks shipped with VOC samples and analyzed? **Yes** [✓] No [✗] N/A [ ] Comments:

(W) 12/15/10

NOTE: *MADEP requires trip blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*1 per cooler VOAs/VPH*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.2 Do any trip blanks have positive results? Yes [ ] **No** [✓] N/A [✗] Comments:

(W) 12/15/10

ACTION: Prepare a list of samples shipped in the same cooler as the contaminated blank.

ACTION: Evaluate trip blank results against method blank results to determine if contaminant may be laboratory-derived. If results are not lab-related, qualify according to the table below.

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed.

8.3 Were ambient blanks shipped with VPH samples and analyzed? **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP requires ambient (field) blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*Not Required*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.4 Do any ambient blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Prepare a list of samples associated with the contaminated blank (all collected from the site on that day).

ACTION: Evaluate ambient blank results against method and trip blank results to determine if contaminant may be laboratory- and/or shipment-derived. If results are not lab- and/or shipment-related, qualify according to the table above (8.2).

8.5 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the senior chemist. **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.6 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against blank results to determine if contaminant may be laboratory-, ambient-, or shipment-derived. If results are not lab-, ambient-, or shipment-related, qualify according to the table above (8.2).

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of samples and their associated field duplicates.

Yes [✓] No [ ] N/A [ ] Comments: OC-SB-480-6.0/8.0-xxx and -DUP.

9.2 Were field duplicates collected per the required frequency?

Yes [✓] No [ ] N/A [ ] Comments:

☐ SOW ☑ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review.

Yes [✓] No [ ] N/A [ ] Comments: see attached.

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified?

Yes [✓] No [ ] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

LAW, 1999, "Final Quality Assurance Project Plan, Olin Wilmington Property, 51 Eames Street, Wilmington, MA", LAW Engineering and Environmental Services, Kennesaw, GA 30144. August 1999.

Massachusetts Department of Environmental Protection (MADEP), 1998. "Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)"; Division of Environmental Analysis; Office of Research and Standards; Bureau of Waste Site Cleanup; January 1998.

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Westfield Job No.: 360-31147-1

SDG No.: 360-31147-1

Matrix: Solid Level: Low Lab File ID: G23721.D

Lab ID: 360-31147-7 MSD Client ID: OC-SB-481-7.0/9.0-XXX MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
C5-C8 Aliphatics (unadjusted)	128	73.3	57	53	50	70-130	F
C9-C10 Aromatics	21.3	25.7	61	35	50	70-130	F
C9-C12 Aliphatics (unadjusted)	171	128	67	40	50	70-130	F

Column to be used to flag recovery and RPD values

FORM III MAVPH

Sample ID	Analyte	Orig Conc	Q	Dup Conc.	Q	RPD
OC-SB-480-6.0/8.0-XXX	C5-C8 Aliphatics	2.5	U	2.5	U	0
OC-SB-480-6.0/8.0-XXX	C5-C8 Aliphatics (unadj.)	2.5	U	2.5	U	0
OC-SB-480-6.0/8.0-XXX	C9-C10 Aromatics	3		2.6		14
OC-SB-480-6.0/8.0-XXX	C9-C12 Aliphatics	2.5	U	2.5	U	0
OC-SB-480-6.0/8.0-XXX	C9-C12 Aliphatics (unadj.)	4.3		3.4		23
OC-SB-480-6.0/8.0-XXX	Volatile Petroleum Hydrocarbons, Total	3		2.6		14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:

12/15/10

Job Number: 360-31147-1

SDG Number: 360-31147-1

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/2/2010 4:48 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/02/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - LOW LEVEL

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for semivolatile organic compounds (GC-MS) - Low Level in accordance with EPA SW-846 Method 8270D LL. The samples were prepared on 11/19/2010 and analyzed on 11/29/2010 and 11/30/2010.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66417. 2,4-Dinitrophenol exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria.

For samples 360-31147-(1-10), in batch 66417, the following compounds were outside control limits in the continuing calibration verification (CCV): 2,4-Dintrophenol (high), Dibenz(ah)anthracene (high), 4,6-Dinitro-2-methylphenol (high), Di-n-octylphthalate (low) and 2,4-Dimethylphenol (low).

General method information

Samples OC-SB-480-0.0/1.0-XXX (360-31147-3)[5X], OC-SB-480-6.0/8.0-DUP (360-31147-4)[5X], OC-SB-480-6.0/8.0-XXX (360-31147-5)[5X] and OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

The 11/29/10 calibration curve has a quadratic curve fit for the following compounds: Benzoic Acid; 2,4-Dinitrophenol; 4,6-Dinitro-2-Methylphenol, 4-Nitrophenol; 2,3,4,6-Tetrachlorophenol; Pentachlorophenol; Dibenz(a,h)anthracene; and Benzo[g,h,i]perylene.

No other difficulties were encountered during the SVOC Low Level analyses.

All other quality control parameters were within the acceptance limits.

VOLATILE PETROLEUM HYDROCARBONS

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9), OC-SB-502-3.0/5.0-XXX (360-31147-10) and OC-TBK-057 (360-31147-11) were analyzed for Volatile Petroleum Hydrocarbons in accordance with MA DEP MAVPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010 and 11/24/2010.

For the MSD of sample OC-SB-481-7.0/9.0-XXXMSD (360-31147-7) in batch 360-66308C5-C8, Aliphatics (unadjusted), C9-C10 Aromatics and C9-C12 Aliphatics (unadjusted) failed the recovery criteria low. C5-C8 Aliphatics (unadjusted) exceeded the rpd limit. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:

At the request of the client, only the carbon ranges are reported for this job.

The calibration curve dated 9/20/2010 uses quadratic regressions for m,p-Xylene, o-Xylene, and Naphthalene.

Sample OC-SB-481-7.0/9.0-XXX (360-31147-7)[5X] required dilution prior to analysis due to the abundance of non-target analytes. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VPH analyses.

All other quality control parameters were within the acceptance limits.

EXTRACTABLE PETROLEUM HYDROCARBONS

Samples OC-SB-479-0.0/1.0-XXX (360-31147-1), OC-SB-479-8.0/10-XXX (360-31147-2), OC-SB-480-0.0/1.0-XXX (360-31147-3), OC-SB-480-6.0/8.0-DUP (360-31147-4), OC-SB-480-6.0/8.0-XXX (360-31147-5), OC-SB-481-0.0/1.0-XXX (360-31147-6), OC-SB-481-7.0/9.0-XXX (360-31147-7), OC-SB-500-0.5/3.0-XXX (360-31147-8), OC-SB-501-0.5/3.0-XXX (360-31147-9) and OC-SB-502-3.0/5.0-XXX (360-31147-10) were analyzed for extractable petroleum hydrocarbons in accordance with MA DEP MA-EPH. The samples were prepared on 11/19/2010 and analyzed on 11/20/2010.

C11-C22 Aromatics (unadjusted) and C9-C18 Aliphatics failed the recovery criteria low for the MS/MSD of sample OC-SB-481-7.0/9.0-XXXMS/MSD (360-31147-7) in batch 360-66128. The associated laboratory control sample and laboratory control duplicate (LCS/LCSD) met acceptance criteria. Refer to the QC report for details.

General method information:

At the request of the client, only the carbon ranges are reported for this job.

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-31147-1	OC-SB-479-0.0/1.0-XXX	Solid	11/16/2010 1525	11/17/2010 1750
360-31147-2	OC-SB-479-8.0/10-XXX	Solid	11/16/2010 1540	11/17/2010 1750
360-31147-3	OC-SB-480-0.0/1.0-XXX	Solid	11/16/2010 1600	11/17/2010 1750
360-31147-4	OC-SB-480-6.0/8.0-DUP	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-5	OC-SB-480-6.0/8.0-XXX	Solid	11/16/2010 1610	11/17/2010 1750
360-31147-6	OC-SB-481-0.0/1.0-XXX	Solid	11/17/2010 1330	11/17/2010 1750
360-31147-7	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MS	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-7MSD	OC-SB-481-7.0/9.0-XXX	Solid	11/17/2010 1410	11/17/2010 1750
360-31147-8	OC-SB-500-0.5/3.0-XXX	Solid	11/17/2010 1025	11/17/2010 1750
360-31147-9	OC-SB-501-0.5/3.0-XXX	Solid	11/17/2010 1100	11/17/2010 1750
360-31147-10	OC-SB-502-3.0/5.0-XXX	Solid	11/17/2010 1135	11/17/2010 1750
360-31147-11	OC-TBK-057	Solid	11/16/2010 1525	11/17/2010 1750

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-0.0/1.0-XXX**

Lab Sample ID: 360-31147-1
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.99 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1238			Injection Volume:	
Date Prepared:	11/19/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	97		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-479-8.0/10-XXX**

Lab Sample ID: 360-31147-2
Client Matrix: Solid % Moisture: 9.5

Date Sampled: 11/16/2010 1540
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	12.23 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1311			Injection Volume:	
Date Prepared:	11/19/2010 0846			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)	ND		2.2	2.2
C5-C8 Aliphatics (adjusted)	ND		2.2	2.2
C9-C10 Aromatics	ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)	ND		2.2	2.2
C9-C12 Aliphatics (adjusted)	ND		2.2	2.2
Total VPH	ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	89		70 - 130
2,5-Dibromotoluene (pid)	97		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-0.0/1.0-XXX**

Lab Sample ID: 360-31147-3
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/16/2010 1600
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.94 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1344			Injection Volume:	
Date Prepared:	11/19/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.3	2.3
C5-C8 Aliphatics (adjusted)		ND		2.3	2.3
C9-C10 Aromatics		ND		2.3	2.3
C9-C12 Aliphatics (unadjusted)		ND		2.3	2.3
C9-C12 Aliphatics (adjusted)		ND		2.3	2.3
Total VPH		ND		2.3	2.3

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	87		70 - 130
2,5-Dibromotoluene (pid)	95		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-DUP**

Lab Sample ID: 360-31147-4
Client Matrix: Solid
% Moisture: 10.2

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66164		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66161		Initial Weight/Volume:	10.60 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/20/2010 1417			Injection Volume:	
Date Prepared:	11/19/2010 0846			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		2.6		2.5	2.5
C9-C12 Aliphatics (unadjusted)		3.4		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		2.6		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	88		70 - 130
2,5-Dibromotoluene (pid)	95		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-480-6.0/8.0-XXX**

Lab Sample ID: 360-31147-5
Client Matrix: Solid
% Moisture: 8.8

Date Sampled: 11/16/2010 1610
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.50 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0549			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)	ND		2.5	2.5
C5-C8 Aliphatics (adjusted)	ND		2.5	2.5
C9-C10 Aromatics	3.0		2.5	2.5
C9-C12 Aliphatics (unadjusted)	4.3		2.5	2.5
C9-C12 Aliphatics (adjusted)	ND		2.5	2.5
Total VPH	3.0		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	98		70 - 130
2,5-Dibromotoluene (pid)	103		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-0.0/1.0-XXX**

Lab Sample ID: 360-31147-6
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/17/2010 1330
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	9.79 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0623			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)	ND		2.6	2.6
C5-C8 Aliphatics (adjusted)	ND		2.6	2.6
C9-C10 Aromatics	ND		2.6	2.6
C9-C12 Aliphatics (unadjusted)	ND		2.6	2.6
C9-C12 Aliphatics (adjusted)	ND		2.6	2.6
Total VPH	ND		2.6	2.6

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	100		70 - 130
2,5-Dibromotoluene (pid)	108		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-481-7.0/9.0-XXX**

Lab Sample ID: 360-31147-7
Client Matrix: Solid
% Moisture: 7.6

Date Sampled: 11/17/2010 1410
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.53 g
Dilution:	5.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1332			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND	J	12	12
C5-C8 Aliphatics (adjusted)		ND	J	12	12
C9-C10 Aromatics		13	J	12	12
C9-C12 Aliphatics (unadjusted)		13	J	12	12
C9-C12 Aliphatics (adjusted)		ND	J	12	12
Total VPH		13	J	12	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	94		70 - 130
2,5-Dibromotoluene (pid)	95		70 - 130

12/15/10

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-500-0.5/3.0-XXX**

Lab Sample ID: 360-31147-8
Client Matrix: Solid
% Moisture: 7.7

Date Sampled: 11/17/2010 1025
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.27 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0656			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		ND		2.5	2.5
C9-C12 Aliphatics (unadjusted)		ND		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		ND		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	100		70 - 130
2,5-Dibromotoluene (pid)	109		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-501-0.5/3.0-XXX**

Lab Sample ID: 360-31147-9
Client Matrix: Solid
% Moisture: 8.6

Date Sampled: 11/17/2010 1100
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	11.82 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0729			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-SB-502-3.0/5.0-XXX**

Lab Sample ID: 360-31147-10
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/17/2010 1135
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	11.97 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0802			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31147-1
Sdg Number: 360-31147-1

Client Sample ID: **OC-TBK-057**

Lab Sample ID: 360-31147-11
Client Matrix: Solid

Date Sampled: 11/16/2010 1525
Date Received: 11/17/2010 1750

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.00 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0516			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	97		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

OLIN CORPORATION
LEVEL I DATA QUALITY EVALUATION
STANDARD OPERATING PROCEDURE AND CHECKLIST
VOLATILE PETROLEUM HYDROCARBONS BY METHOD MADEP

Reviewer/Date 12/15/10
Sr. Review/Date 12/15/10
Lab Report # 360-331167-1
Project # 61071000016.12

1.0 Laboratory Deliverable Requirements

1.1 Laboratory Information: Was all of the following provided in the laboratory report? **Yes** [✓] No [ ] N/A [ ] Comments:
Check items received.

[✓] *Name of Laboratory* [✓] *Certification ID #* [✓] *Address* [✓] *Project ID* [✓] *Phone #* [✓] *Sample identification – Field and Laboratory*

Client Information: [✓] *Name* [✓] *Address* [✓] *Client Contact* *(IDs must be cross-referenced)*

ACTION: If no, contact lab for submission of missing or illegible information.

1.2 Laboratory Report Certification Statement ***Yes*** [✓] *No* [ ] *N/A* [ ] *Comments:*

Does the laboratory report include a completed Analytical Report Certification in the required format?

ACTION: *If no, contact lab for submission of missing certification or certification with correct format.*

1.3 Laboratory Case Narrative: ***Yes*** [✓] *No* [ ] *N/A* [ ] *Comments:*

[✓] *Narrative serves as an exception report for the project and method QA/QC performance.* [ ] *Narrative includes an explanation of each discrepancy on the Certification Statement.*

ACTION: *If no, contact lab for submission of missing or illegible information.*

1.4 Chain of Custody (COC) **Yes** [✓] No [ ] N/A [ ] Comments:

Does the laboratory report include a copy of the completed Chain of Custody forms containing all samples in this SDG?

NOTE: Olin receives and maintains the *original* COC.

ACTION: If no, contact lab for submission of completed COC.

1.5 Sample Receipt Information (*Cooler Receipt Form*): Were each of the following tasks completed and recorded upon receipt of the sample(s) into the laboratory? **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Sample temperature confirmed: must be 1° – 10° C. (If samples were sent by courier and delivered on the same day as collection, temperature requirement does not apply).

☑ Container type noted ☑ Condition observed ☑ Field and lab IDs cross referenced

ACTION: If no, contact lab for submission of missing or incomplete documentation.

1.5.1 Were the correct bottles and preservatives used? **Yes** [✓] No [ ] N/A [ ] Comments:

Water - 40 mL VOA vial/HCL to pH<2, cool to 4°C
Soil - 5 gram Encore™/cool to 4°C or 40 mL VOA vial with field preservation of sodium bisulfate (low-level) or methanol (high-level) or field preservation in water if soils are reactive to sodium bisulfate (i.e. alkaline conditions, excessive humic acid content, etc.)

ACTION: If no, inform senior chemist. Document justification for change in container/volume (if applicable); qualify both positive data and non-detect data (J) if cooler temperature exceeds 10°C. Rejection of data requires professional judgment

ACTION: If each VOA vial for a sample contains air bubbles or the VOA vial analyzed contained air bubbles, flag positives (J) and reject nondetects (R).

1.5.2 Were all samples delivered to the laboratory without breakage? **Yes** [✓] No [ ] N/A [ ] Comments:

1.5.3 Does the *Cooler Receipt Form* or Lab Narrative indicate other problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? Yes [ ] **No** [✓] N/A [ ] Comments:

1.6 Sample Results Section: *Was the following information supplied in the laboratory report for each sample?* **Yes** [✓] No [ ] N/A [ ] Comments:

☑ Field ID and Lab ID ☑ *Date and time collected* ☑ Analyst Initials ☑ *Dilution Factor* ☑ % moisture or solids ☑ *Reporting limits*
☑ Analysis method ☑ *Preparation method* ☑ *Date of preparation/extraction/digestion clean-up and analysis, where applicable* ☑ Matrix ☑ Target analytes and concentrations ☑ Units (soils must be reported in dry weight)

ACTION: If no, contact lab for submission of missing or incomplete information.

1.7 QA/QC Information: Was the following information provided in the laboratory report for each sample batch? Yes [✓] No [ ] N/A [ ] Comments:

[✓] Method blank results [✓] LCS recoveries [✓] MS/MSD recoveries and RPDs [✓] Surrogate recoveries

ACTION: If no, contact lab for submission of missing or incomplete information.

2.0 Holding Times

Have any technical holding times, determined from date of collection to date of analysis, been exceeded? Yes [ ] **No** [✓] N/A [ ] Comments:

For water samples, the holding time is 7 days from sampling for unpreserved samples and 14 days for preserved samples.

For soil samples, methanol preservation required with a holding time of 14 days. If an Encore™ sampler was used, the lab must ***preserve*** the sample within 48 hours. Analytical holding time from time of preservation is 14 days.

NOTE: List samples that exceed hold time with # of days exceeded on checklist

ACTION: If technical holding times are exceeded, qualify all positive results (J). Use professional judgment to reject (R) data for grossly exceeded.

3.0 Laboratory Method

3.1 Was the correct laboratory method used? **Yes** [✓] No [ ] N/A [ ] Comments:

Purge and Trap Water: 5030B Soil: 5035
Volatile Petroleum Hydrocarbons MADEP VPH 98-1

ACTION: If no, contact lab to provide justification for method change compared to the requested method. Contact senior chemist to inform Client of change or to request variance.

3.2 Are the practical quantitation limits the same as those specified by the ☐ SOW ☑ QAPP ☐ Lab ☐ MADEP

Yes [✓] No [ ] N/A [ ] Comments:

Samples OC-SB-474-8.0/10-xxt (10x)
OC-SB-477-10/12-xxt (10x)
OC-SB-475-8.0/10-DUP (2x)
OC-SB-476-13/15-xxt (5x) only 2nd at dilution reported with elevated RL's.

NOTE: *The MADEP QA/QC Guidelines provides PQLs for volatile petroleum hydrocarbons. See MADEP PQLs vs. the PQLs listed in the QAPP.*

ACTION: If no, evaluate change with respect to sample matrix, preparation, dilution, moisture, etc. If sample PQL is indeterminate, contact lab for explanation.

3.3 Are the appropriate parameter results present for each sample in the SDG?

Yes [✓] No [ ] N/A [ ] Comments:

NOTE: *The MADEP QA/QC Guidelines requires a minimum compound reporting list for volatile organic compounds.*

3.4 If *dilutions were required, were dilution factors reported?*

Yes [✓] No [ ] N/A [ ] Comments:

NOTE: *MADEP guidance states that if a diluted and an undiluted analysis is performed, the laboratory should report results for the lowest dilution within the valid calibration range for each analyte.*

ACTION: If no, contact the lab for submission.

4.0 Method Blanks

4.1 Are the Method Blank Summaries present?

Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, call the laboratory for submission of missing data.

4.2 Was a method blank analyzed for each analytical batch of 20 samples or less?

Yes [✓] No [ ] N/A [ ] Comments:

ACTION: If no, document discrepancy in case narrative and contact lab for justification. Consult senior chemist for action needed.

4.3 Is the method blank less than the PQL? (See attached table for PQLs). **Yes** [✓] No [__] N/A [__] Comments:

4.4 Do any method blanks have positive results for VPH parameters? Qualify data according to the following: Yes [__] **No** [✓] N/A [__] Comments:

For VPH contaminants:

Review blank and sample chromatograms to evaluate the nature of the detection in the blank and associated samples. Use professional judgment. The following actions may be applied:

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed..

ACTION: If any blank has positive results, list all the concentrations detected and flagging level (flagging level = 10x or 5 × blank value) on the checklist. List all affected samples and their qualifiers.

5.0 Laboratory Control Standard

5.1 Was a laboratory control standard (LCS) run with each analytical batch of 20 samples or less? **Yes** [✓] No [__] N/A [__] Comments:

ACTION: Call laboratory for LCS form submittal. If data are not available, reject (R) data associated with that batch.

5.2 Is a LCS Summary Form present? **Yes** [✓] No [__] N/A [__] Comments:

ACTION: If no, contact lab for resubmission of missing data.

5.3 Is the recovery of any analyte outside of control limits? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: *A full target, second source LCS is required by MADEP.*

NOTE: *MADEP guidelines list LCS recovery limits as 70-130 except for naphthalene. The laboratory must identify any other analytes that routinely exceed 70-130 percent.*

ACTION: If recovery is above the upper limit, qualify all positive sample results within the batch as (J). If recovery is below the lower limit but > 10%, qualify all positive and no-detect results within the batch as (J). If LCS recovery is <10%, positive and non-detect results are rejected (R) unless the QC limit for that compound is below 10% (flag as above).

5.4 Are 80% of LCS recoveries within laboratory control limits? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If 80% of LCS recoveries are not within limits, use professional judgment and consult Senior Chemist. If more than half of the recoveries are above control limits, qualify all positive results as (J). If more than half of the recoveries are below control limits, batch may require rejection and reanalysis

6.0 Matrix Spikes

6.1 Were project-specific MS/MSDs collected? List project samples that were spiked. **Yes** [✓] No [ ] N/A [ ] Comments: OC-SB-475-16/18- XXX

ACTION: If no, contact senior chemist to see if any were specified.

6.2 Is the MS/MSD Recovery Form present? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If no, contact lab for resubmission of missing data.

6.3 Were matrix spikes analyzed at the required frequency of 1 per 20 samples per matrix? **Yes** [✓] No [ ] N/A [ ] Comments:

ACTION: If any matrix spike data are missing, call lab for resubmission.

6.4 Are any VPH spike recoveries outside of the QC limits? Yes [ ] No [✓] N/A [ ] Comments:

NOTE: $\%R = \frac{(SSR-SR)}{SA} \times 100\%$ Where: SSR = Spiked sample result
SR = Sample result
SA = Spike added

NOTE: *A full target, second source MS/MSD is required by MADEP.*

NOTE: *MADEP guidelines list MS/MSD recovery limits as 70-130 except for naphthalene.*

NOTES: 1) If only one of the recoveries for an MS/MSD pair is outside of the control limits, no qualification is necessary. Use professional judgment for the MS/MSD flags.
2) If the MS/MSD was performed by the laboratory on a non-project sample, no qualification is required.

ACTION: MS/MSD flags only apply to the sample spiked. If the recoveries of the MS and MSD exceed the upper control limit, qualify positive results as estimated (J). If the recoveries of the MS and MSD are lower than the lower control limit but > 30%, qualify both positive results and non-detects (J). If the MS/MSD recovery is < 30% and the sample is non-detect, the results are considered unusable and flagged (R).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data is evaluated, but no flags are applied.

6.5 Are any RPDs for MS/MSD recoveries outside of the QC limits? Yes [ ] No [✓] N/A [ ] Comments:

NOTE: $RPD = \frac{S-D}{(S+D)/2} \times 100\%$ Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list MS/MSD RPD limits for both water and soils as ≤ 50.*

ACTION: If the RPD exceeds the control limit, qualify positive results and non-detects (J).

ACTION: Laboratory control limits apply when spiked sample results fall within the normal calibration range. If dilutions are required due to high sample concentrations, the data are evaluated, but no flags are applied.

7.0 Surrogate Recoveries

Were VPH surrogate recoveries outside of laboratory limits for any sample or method blank? If yes, were samples re-analyzed? Yes [ ] **No** [✓] N/A [ ] Comments:

NOTE: %R = QD x 100% Where: S = MS sample result
D = MSD sample result

NOTE: *MADEP guidelines list surrogate limits for both water and soils as 70-130% for both detectors.*

ACTION: If recoveries are >10%, but fail to meet QC criteria: (1) For recoveries below the QC limit, qualify non-detects and positives (J), and (2) For recoveries above the QC limit, qualify only positives (J). If any surrogate recovery is <10% (unless the QC limits are below 10%, in which case, results are flagged as stated above), flag positives (J) and reject nondetects (R).

NOTE: If surrogate recoveries fail due to dilution, results are not flagged. Document on checklist and in the case narrative.

8.0 Sampling Accuracy

8.1 Were trip blanks shipped with VOC samples and analyzed? **Yes** [✓] No [ ] N/A [ ] Comments:

NOTE: *MADEP requires trip blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*1 per cooler VOAs/VPH*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.2 Do any trip blanks have positive results? Yes [ ] **No** [✓] N/A [ ] Comments:

ACTION: Prepare a list of samples shipped in the same cooler as the contaminated blank.

ACTION: Evaluate trip blank results against method blank results to determine if contaminant may be laboratory-derived. If results are not lab-related, qualify according to the table below.

If the sample concentration is < 5 × blank value, flag sample result non-detect "U" at the PQL or the concentration reported if greater than the PQL.

If the sample concentration is > 5 × blank value, no qualification is needed.

8.3 Were ambient blanks shipped with VPH samples and analyzed? **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP requires ambient (field) blanks per the following frequency:*

	Soil/Sediment	*Aqueous*	*Drinking Water*
Option 1	*Not Required*	*Not Required*	*Not Required*
Option 3	*1 per 10 samples*	*1 per 10 samples*	*1 per 10 samples*

8.4 Do any ambient blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Prepare a list of samples associated with the contaminated blank (all collected from the site on that day).

ACTION: Evaluate ambient blank results against method and trip blank results to determine if contaminant may be laboratory- and/or shipment-derived. If results are not lab- and/or shipment-related, qualify according to the table above (8.2).

8.5 Were rinsate blanks collected? Prior to evaluating rinsate blanks, obtain a list of the associated samples from the senior chemist. **Yes** [ ] No [✓] N/A [ ] Comments:

NOTE: *MADEP does not specify the collection of rinsate blanks.*

8.6 Do any rinsate blanks have positive results? Yes [ ] **No** [ ] N/A [✓] Comments:

ACTION: Evaluate rinsate results against blank results to determine if contaminant may be laboratory-, ambient-, or shipment-derived. If results are not lab-, ambient-, or shipment-related, qualify according to the table above (8.2).

9.0 Field Duplicates

9.1 Were field duplicate samples collected? Obtain a list of samples and their associated field duplicates. Yes [✓] No [ ] N/A [ ] Comments:

9.2 Were field duplicates collected per the required frequency? Yes [✓] No [ ] N/A [ ] Comments:

☐ SOW ☑ QAPP ☐ *MADEP Option 1(1 per 20)* ☐ *MADEP Option 3 (1 per 10)*

9.3 Was the RPD ≤ 50% for soils or waters? Calculate the RPD for all results and attach to this review. Yes [✓] No [ ] N/A [ ] Comments:

ACTION: RPD must be ≤50% for soil and water. Qualify data (J) for both sample results if the RPD exceeds 50%.

10.0 Application of Validation Qualifiers

Was any of the data qualified? Yes [ ] No [✓] N/A [ ] Comments:

If so, apply data qualifiers directly to the DQE copy of laboratory report and **flag pages** for entry in database.

REFERENCES

LAW, 1999, "Final Quality Assurance Project Plan, Olin Wilmington Property, 51 Eames Street, Wilmington, MA", LAW Engineering and Environmental Services, Kennesaw, GA 30144. August 1999.

Massachusetts Department of Environmental Protection (MADEP), 1998. "Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)"; Division of Environmental Analysis; Office of Research and Standards; Bureau of Waste Site Cleanup; January 1998.

Sample ID	Analyte	Orig Conc	Q	Dup Conc.	Q	RPD
OC-SB-475-8.0/10-XXX	C5-C8 Aliphatics	100		41		42
OC-SB-475-8.0/10-XXX	C5-C8 Aliphatics (unadj.)	100		41		42
OC-SB-475-8.0/10-XXX	C9-C10 Aromatics	6		5.1	U	16
OC-SB-475-8.0/10-XXX	C9-C12 Aliphatics	5.1	U	5.1	U	0
OC-SB-475-8.0/10-XXX	C9-C12 Aliphatics (unadj.)	6.7		6.4		23
OC-SB-475-8.0/10-XXX	Volatile Petroleum Hydrocarbons, Total	110		41		42

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY
12/15/10

Job Number: 360-31167-1

SDG Number: 360-31167

Job Description: Olin Chemical Superfund Site

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
12/6/2010 11:49 AM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
12/06/2010

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ACCREDITED IN ACCORDANCE WITH nelac

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-0.0/1.0-XXX**

Lab Sample ID: 360-31167-1
Client Matrix: Solid
% Moisture: 14.4

Date Sampled: 11/18/2010 1245
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.21 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0835			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.7	2.7
C5-C8 Aliphatics (adjusted)		ND		2.7	2.7
C9-C10 Aromatics		ND		2.7	2.7
C9-C12 Aliphatics (unadjusted)		ND		2.7	2.7
C9-C12 Aliphatics (adjusted)		ND		2.7	2.7
Total VPH		ND		2.7	2.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	97		70 - 130
2,5-Dibromotoluene (pid)	107		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-10.5/12.5-XXX**

Lab Sample ID: 360-31167-2
Client Matrix: Solid
% Moisture: 16.6

Date Sampled: 11/18/2010 1315
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.70 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0908			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.7	2.7
C5-C8 Aliphatics (adjusted)		ND		2.7	2.7
C9-C10 Aromatics		ND		2.7	2.7
C9-C12 Aliphatics (unadjusted)		ND		2.7	2.7
C9-C12 Aliphatics (adjusted)		ND		2.7	2.7
Total VPH		ND		2.7	2.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	98		70 - 130
2,5-Dibromotoluene (pid)	107		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-474-8.0/10-XXX**

Lab Sample ID: 360-31167-3
Client Matrix: Solid
% Moisture: 16.0

Date Sampled: 11/18/2010 1300
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.22 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 0941			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.8	2.8
C5-C8 Aliphatics (adjusted)		ND		2.8	2.8
C9-C10 Aromatics		ND		2.8	2.8
C9-C12 Aliphatics (unadjusted)		ND		2.8	2.8
C9-C12 Aliphatics (adjusted)		ND		2.8	2.8
Total VPH		ND		2.8	2.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	98		70 - 130
2,5-Dibromotoluene (pid)	107		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-0.0/1.0-XXX**

Lab Sample ID: 360-31167-4
Client Matrix: Solid
% Moisture: 9.9

Date Sampled: 11/18/2010 1125
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	9.08 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1014			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.9	2.9
C5-C8 Aliphatics (adjusted)		ND		2.9	2.9
C9-C10 Aromatics		ND		2.9	2.9
C9-C12 Aliphatics (unadjusted)		ND		2.9	2.9
C9-C12 Aliphatics (adjusted)		ND		2.9	2.9
Total VPH		ND		2.9	2.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	99		70 - 130
2,5-Dibromotoluene (pid)	109		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-16/18-XXX**

Lab Sample ID: 360-31167-5
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 11/18/2010 1225
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	11.62 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 2222			Injection Volume:	
Date Prepared:	11/22/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.3	2.3
C5-C8 Aliphatics (adjusted)		ND		2.3	2.3
C9-C10 Aromatics		ND		2.3	2.3
C9-C12 Aliphatics (unadjusted)		ND		2.3	2.3
C9-C12 Aliphatics (adjusted)		ND		2.3	2.3
Total VPH		ND		2.3	2.3

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	98		70 - 130
2,5-Dibromotoluene (pid)	107		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-DUP**

Lab Sample ID: 360-31167-6
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.64 g
Dilution:	2.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1227			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		41		5.1	5.1
C5-C8 Aliphatics (adjusted)		41		5.1	5.1
C9-C10 Aromatics		ND		5.1	5.1
C9-C12 Aliphatics (unadjusted)		6.4		5.1	5.1
C9-C12 Aliphatics (adjusted)		ND		5.1	5.1
Total VPH		41		5.1	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	94		70 - 130
2,5-Dibromotoluene (pid)	98		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-475-8.0/10-XXX**

Lab Sample ID: 360-31167-7
Client Matrix: Solid
% Moisture: 13.9

Date Sampled: 11/18/2010 1145
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.80 g
Dilution:	2.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1259			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		100		5.1	5.1
C5-C8 Aliphatics (adjusted)		100		5.1	5.1
C9-C10 Aromatics		6.0		5.1	5.1
C9-C12 Aliphatics (unadjusted)		6.7		5.1	5.1
C9-C12 Aliphatics (adjusted)		ND		5.1	5.1
Total VPH		110		5.1	5.1

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	92		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-0.0/1.0-XXX**

Lab Sample ID: 360-31167-8
Client Matrix: Solid
% Moisture: 11.6

Date Sampled: 11/18/2010 1035
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	8.19 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1047			Injection Volume:	
Date Prepared:	11/19/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		3.3	3.3
C5-C8 Aliphatics (adjusted)		ND		3.3	3.3
C9-C10 Aromatics		ND		3.3	3.3
C9-C12 Aliphatics (unadjusted)		ND		3.3	3.3
C9-C12 Aliphatics (adjusted)		ND		3.3	3.3
Total VPH		ND		3.3	3.3

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	106		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-13/15-XXX**

Lab Sample ID: 360-31167-9
Client Matrix: Solid
% Moisture: 12.5

Date Sampled: 11/18/2010 1155
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	11.54 g
Dilution:	5.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1406			Injection Volume:	
Date Prepared:	11/22/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		230		12	12
C5-C8 Aliphatics (adjusted)		230		12	12
C9-C10 Aromatics		12		12	12
C9-C12 Aliphatics (unadjusted)		14		12	12
C9-C12 Aliphatics (adjusted)		ND		12	12
Total VPH		240		12	12

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	84		70 - 130
2,5-Dibromotoluene (pid)	90		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-476-8.0/10-XXX**

Lab Sample ID: 360-31167-10
Client Matrix: Solid
% Moisture: 12.7

Date Sampled: 11/18/2010 1055
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	10.60 g
Dilution:	10			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1439			Injection Volume:	
Date Prepared:	11/22/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		290		26	26
C5-C8 Aliphatics (adjusted)		290		26	26
C9-C10 Aromatics		ND		26	26
C9-C12 Aliphatics (unadjusted)		28		26	26
C9-C12 Aliphatics (adjusted)		ND		26	26
Total VPH		290		26	26

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	78		70 - 130
2,5-Dibromotoluene (pid)	85		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-0.0/1.0-XXX**

Lab Sample ID: 360-31167-11
Client Matrix: Solid
% Moisture: 9.6

Date Sampled: 11/18/2010 0955
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66308		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66302		Initial Weight/Volume:	8.67 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 1120			Injection Volume:	
Date Prepared:	11/22/2010 1230			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		3.0	3.0
C5-C8 Aliphatics (adjusted)		ND		3.0	3.0
C9-C10 Aromatics		ND		3.0	3.0
C9-C12 Aliphatics (unadjusted)		ND		3.0	3.0
C9-C12 Aliphatics (adjusted)		ND		3.0	3.0
Total VPH		ND		3.0	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	95		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-10/12-XXX**

Lab Sample ID: 360-31167-12
Client Matrix: Solid
% Moisture: 15.6

Date Sampled: 11/18/2010 1025
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	11.54 g
Dilution:	10			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0246			Injection Volume:	
Date Prepared:	11/22/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		91		24	24
C5-C8 Aliphatics (adjusted)		91		24	24
C9-C10 Aromatics		ND		24	24
C9-C12 Aliphatics (unadjusted)		ND		24	24
C9-C12 Aliphatics (adjusted)		ND		24	24
Total VPH		91		24	24

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	88		70 - 130
2,5-Dibromotoluene (pid)	95		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-477-8.0/10-XXX**

Lab Sample ID: 360-31167-13
Client Matrix: Solid
% Moisture: 11.7

Date Sampled: 11/18/2010 1010
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	9.83 g
Dilution:	5.0			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0213			Injection Volume:	
Date Prepared:	11/22/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		400		14	14
C5-C8 Aliphatics (adjusted)		400		14	14
C9-C10 Aromatics		31		14	14
C9-C12 Aliphatics (unadjusted)		58		14	14
C9-C12 Aliphatics (adjusted)		27		14	14
Total VPH		460		14	14

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	77		70 - 130
2,5-Dibromotoluene (pid)	77		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-0.0/1.0-XXX**

Lab Sample ID: 360-31167-14
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 11/18/2010 0910
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	7.52 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 2255			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		4.0	4.0
C5-C8 Aliphatics (adjusted)		ND		4.0	4.0
C9-C10 Aromatics		ND		4.0	4.0
C9-C12 Aliphatics (unadjusted)		ND		4.0	4.0
C9-C12 Aliphatics (adjusted)		ND		4.0	4.0
Total VPH		ND		4.0	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-10/12-XXX**

Lab Sample ID: 360-31167-15
Client Matrix: Solid
% Moisture: 14.7

Date Sampled: 11/18/2010 0945
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	10.63 g
Dilution:	5.0			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0139			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		510		13	13
C5-C8 Aliphatics (adjusted)		510		13	13
C9-C10 Aromatics		37		13	13
C9-C12 Aliphatics (unadjusted)		58		13	13
C9-C12 Aliphatics (adjusted)		21		13	13
Total VPH		570		13	13

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	99		70 - 130
2,5-Dibromotoluene (pid)	93		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-478-8.0/10-XXX**

Lab Sample ID: 360-31167-16
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 11/18/2010 0925
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	13.33 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0033			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		1.9	1.9
C5-C8 Aliphatics (adjusted)		ND		1.9	1.9
C9-C10 Aromatics		ND		1.9	1.9
C9-C12 Aliphatics (unadjusted)		ND		1.9	1.9
C9-C12 Aliphatics (adjusted)		ND		1.9	1.9
Total VPH		ND		1.9	1.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	109		70 - 130
2,5-Dibromotoluene (pid)	96		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-0.0/1.0-XXX**

Lab Sample ID: 360-31167-17
Client Matrix: Solid
% Moisture: 7.1

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	10.07 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0106			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.5	2.5
C5-C8 Aliphatics (adjusted)		ND		2.5	2.5
C9-C10 Aromatics		ND		2.5	2.5
C9-C12 Aliphatics (unadjusted)		ND		2.5	2.5
C9-C12 Aliphatics (adjusted)		ND		2.5	2.5
Total VPH		ND		2.5	2.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	97		70 - 130
2,5-Dibromotoluene (pid)	104		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-11/13-XXX**

Lab Sample ID: 360-31167-18
Client Matrix: Solid
% Moisture: 8.9

Date Sampled: 11/17/2010 1525
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	12.04 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 2328			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.2	2.2
C5-C8 Aliphatics (adjusted)		ND		2.2	2.2
C9-C10 Aromatics		ND		2.2	2.2
C9-C12 Aliphatics (unadjusted)		ND		2.2	2.2
C9-C12 Aliphatics (adjusted)		ND		2.2	2.2
Total VPH		ND		2.2	2.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	105		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-SB-497-6.0/8.0-XXX**

Lab Sample ID: 360-31167-19
Client Matrix: Solid
% Moisture: 13.5

Date Sampled: 11/17/2010 1510
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	11.25 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/25/2010 0000			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	99		70 - 130
2,5-Dibromotoluene (pid)	109		70 - 130

Client: Olin Corporation

Job Number: 360-31167-1
Sdg Number: 360-31167

Client Sample ID: **OC-TBK-058**

Lab Sample ID: 360-31167-20
Client Matrix: Solid

Date Sampled: 11/17/2010 1450
Date Received: 11/18/2010 1800

MAVPH Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Method:	MAVPH	Analysis Batch: 360-66359		Instrument ID:	Inst. G
Preparation:	5035	Prep Batch: 360-66352		Initial Weight/Volume:	10.00 g
Dilution:	1.0			Final Weight/Volume:	10 g
Date Analyzed:	11/24/2010 2149			Injection Volume:	
Date Prepared:	11/24/2010 0908			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL	RL
C5-C8 Aliphatics (unadjusted)		ND		2.4	2.4
C5-C8 Aliphatics (adjusted)		ND		2.4	2.4
C9-C10 Aromatics		ND		2.4	2.4
C9-C12 Aliphatics (unadjusted)		ND		2.4	2.4
C9-C12 Aliphatics (adjusted)		ND		2.4	2.4
Total VPH		ND		2.4	2.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,5-Dibromotoluene (fid)	96		70 - 130
2,5-Dibromotoluene (pid)	104		70 - 130

PROJECT CHEMIST REVIEW RECORD

Method : 160.3 Percent Solids/Moisture (Q) 12/14/10 (W) 12/14/10

Laboratory and Lot : STL 360-31096, 3/1147, 3/1167

Date: 12/16/10

Reviewer: [signature]

1. Case Narrative

Present and complete.

2. Holding time and Sample Collection

All criteria met.

3. QC Blanks

N/A

4. Laboratory Control Sample Results

N/A

5. Surrogate (if applicable)

N/A

6. Field Duplicate Precision

All criteria met.

7. Matrix Spike Results (if applicable)

N/A

8. Reporting Limits and Data Completeness

All criteria met

a. LAB Duplicate

All criteria met.