DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
OU1 SOIL PROGRAM

OLIN CHEMICAL SUPERFUND SITE

51 EAMES STREET
WILMINGTON, MASSACHUSETTS

Submitted to:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, Tennessee 37312

Prepared by:

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Wakefield, Massachusetts 01880

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Project No. 6107-11-0016.12

June 2011

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LIST OF ACRONYMS

APHA	American Public Health Association
DMF	N, N-Dimethylformamide
DPA	Diphenylamine
EB	Equipment Blank
EDD	Electronic Evaluation Verification
EPH	Extractable Petroleum Hydrocarbons
FID	Flame Ionization Detector
-H	High bias
ICVRRF	Initial Calibration Verification Relative Response Factor
ICVRSD	Initial Calibration Verification Relative Standard Deviation
-L	Low bias
LCS/LCSD	Laboratory Control Samples/Laboratory Control Sample Duplicate
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MDL	Method Detection Limit
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MMH	Monomethylhydrazine
MS/MSD	Matrix Spikes/Matrix Spike Duplicate
NDMA	N-nitrosodimethylamine
NDPA	N-nitrosodiphenylamine
PCB	Polychlorinated Biphenyl
PES	Performance Evaluation Samples
PID	Photoionization Detector
QAPP	Quality Assurance Project Plan
QA	Quality Assurance
QC	Quality Control
QLS	Quantitation Limit Standards
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SVOC	Semivolatile Organic Compound

TAL	Target Analyte List
TIC	Tentatively Identified Compound
TOC	Total Organic Carbon
UDMH	Unsymmetrical Dimethylhydrazine
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbon

1.0 INTRODUCTION

Surface soil and subsurface soil samples were collected at the Olin Chemical Superfund Site from August 18, 2009 through September 18, 2009 as specified in the Remedial Investigation/Feasibility Study Work Plan (MACTEC, 2009). Samples were analyzed by one or more of the following laboratories for the following the United States Environmental Protection Agency (USEPA) SW-846 (USEPA, 1996), USEPA wastewater (USEPA, 1993), Standard Methods (American Public Health Association [APHA], 1995), Massachusetts Department of Environmental Protection ([MassDEP], 2004a) or laboratory developed methods:

Laboratory	Parameter	Analytical Method	Validation Level
TestAmerica - Westfield, MA	Volatile Organic Compounds (VOCs)	SW-846 8260B	10% Tier III/90% Tier II
TestAmerica - Westfield, MA	Semivolatile Organic Compounds (SVOCs)	SW-846 8270C – Low Level	10% Tier III/90% Tier II
TestAmerica - Westfield, MA	Diphenylamine (DPA)	SW-846 8270C – Low Level	10% Tier III/90% Tier II
TestAmerica - Westfield, MA	N-nitrosodimethylamine (NDMA)	SW-846 8270C – Low Level	10% Tier III/90% Tier II
TestAmerica - Westfield, MA	Polychlorinated Biphenyls (PCBs)	SW-846 8082	10% Tier III/90% Tier II
TestAmerica - Westfield, MA	Extractable Petroleum Hydrocarbons (EPH)	MADEP EPH-98-1	Olin Level 1
TestAmerica - Westfield, MA	Volatile Petroleum Hydrocarbons (VPH)	MADEP VPH-98-1	Olin Level 1
TestAmerica - Westfield, MA	Target Analyte List (TAL) Metals	SW-846 6010B (ICP)/Hg by 7471	10% Tier III/90% Tier II
TestAmerica - Edison, NJ	Cr+6	SW-846 7199 (soil prep method 3060A)	Olin Level 1
TestAmerica - Westfield, MA	Ammonia	QuikChem: LACHAT 10-107-06-1-A	Olin Level 1
TestAmerica - Westfield, MA	Anions (chloride, sulfate)	EPA 300	Olin Level 1
TestAmerica - Tallahassee, FL	Formaldehyde/Acetaldehyde	SW-846 8315	Chemist Review
TestAmerica - Tallahassee, FL	Phthalic Anhydride	Modified Method 8000 - LC	Chemist Review
TestAmerica - Westfield, MA	Total Organic Carbon (TOC)	Lloyd Kahn	Chemist Review
Lancaster Laboratory - Lancaster, PA	Hydrazine	Modified 8315 LC/MS/MS	Chemist Review
Katahdin Analytical Services - Scarborough, ME	N,N-dimethylformamide (DMF)	Modified 8033 - GC/NPD	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 USEPA-New England Data Validation Functional Guidelines (USEPA, 1996) 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 Massachusetts Contingency Plan (MCP) (MassDEP, 2004b). 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/III, Olin Level 1, chemist review) are summarized above.

Final sample results are presented on data summaries in a series of tables listed as Table 2 (followed by the section number) for each analysis method and corresponding section in this report (i.e., volatile organic compound [VOCs] presented in Table 2.2, semivolatile organic compound [SVOCs] presented in Table 2.3).

To document validation qualification actions, validation reason codes were associated with final results that have been qualified. Validation action summaries are presented in a series of tables listed as Table 3 (followed by the section number) by the analysis method and corresponding section in this report (i.e., VOCs presented in Table 3.2, SVOCs presented in Table 3.3). Analytical results that were qualified and the associated reason codes are included. An index of the reason codes is presented on the last page of each table.

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.

Soil performance evaluation samples (PES) were obtained from USEPA Region 1 New England for the following analyses: VOCs, SVOC, polychlorinated biphenyl (PCBs), and Target Analyte List (TAL) Metals. PESs were submitted with field samples on September 1, 2009 to

TestAmerica-Westfield laboratory. Analysis results were reported by the laboratory in SDG 360-24365-1 (OCRI-09). Results (Form 1s) were sent to USEPA Region 1 to be scored. USEPA score sheets are presented in Attachment A. Interpretations of PES results are presented in applicable sections for each method.

2.0 VOLATILE ORGANIC COMPOUNDS (VOCS)

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

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

*** = 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. A summary of final results is presented on Table 2.2. A summary of data validation actions is presented on Table 3.2.

2.1 HOLDING TIMES

A subset of samples was run beyond holding times. A summary of holding time qualification actions is presented in Table 3.2 for VOCs with results being assigned a validation qualifier reason code of HT.

SDG 360-24251-1 (OCRI-05)

Sample OC-SB-440-23/25-XXX was analyzed one day past the 14-day hold time. All results were qualified estimated (UJ) in the final data set.

SDG 360-24444-1 (OCRI-11)

Sample OC-SB-467-30/32-XXX was analyzed one day past the 14-day hold time. All results were qualified estimated (UJ) in the final data set.

2.2 BLANKS

A subset of VOC target compounds were detected in soil method blanks. These compounds include tetrahydrofuran, methylene chloride, and 2-butanone. Sample results were qualified in accordance with the USEPA Region I guidelines. A summary of method blank qualification actions is presented in Table 3.2 for VOCs with results being assigned a validation qualifier reason code of BL. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDGs 360-24173-1 (OCRI-01), 360-24194-1 (OCRI-02), 360-24223-1 (OCRI-03), 360-24244-1 (OCRI-04)

Chloroform was detected at 0.7 micrograms per liter (µg/L) in aqueous rinse blank OC-EBK-001. There were no positive detections in associated samples and no qualification was necessary.

Tetrahydrofuran was detected in the soil trip blank OC-TBK-001 at 6.6 micrograms per kilogram (µg/kg). There were no positive detections in associated samples and no qualification was necessary.

Methylene chloride was detected in method blank MB360-48150/3-A at 9.2 µg/kg. An action level was established at 92 µg/kg. Positive detections of methylene chloride were reported in associated samples in SDGs 360-24173-1 (OCRI-01) and 360-24223-1 (OCRI-03) below the action level and reporting limit. These detections were qualified non-detect (U) at the reporting limit.

Methylene chloride was detected in method blank MB360-48229/3-A at 7.3 µg/kg. An action level was established at 73 µg/kg. Positive detections of methylene chloride were reported in associated samples in SDGs 360-24223-1 (OCRI-03) and 360-24244-1 (OCRI-04) below the action level and were qualified non-detect (U).

SDG 360-24251-1 (OCRI-05)

Methylene chloride was detected in the soil trip blank OC-TBK-006 at 9.3 µg/kg. An action level was established at 93 µg/kg. Positive detections of methylene chloride were reported in associated samples in SDG 360-24251-1 below the action level and were qualified non-detect (U) in the final data set.

SDG 360-24343-1 (OCRI-08) and 360-24417-1 (OCRI-10)

Methylene chloride was detected in method blank MB360-48765/3-A at 5.0 µg/kg. An action level was established at 50 µg/kg. Positive detections of methylene chloride were reported in associated samples in SDGs 360-24343-1 and 360-24417-1 below the action level and were qualified non-detect (U).

SDG 360-24444-1 (OCRI-11)

Tetrahydrofuran was detected in the soil trip blank OC-TBK-013 at 9.1 µg/kg. An action level (5X) was established at 45.5 µg/kg. Tetrahydrofuran was reported in soil samples at concentrations ranging from 7.4 µg/kg – 9 µg/kg below the reporting limit and qualified non-detect (U) at the reporting limit.

Methylene chloride was detected in method blanks reported in SDG 360-2444-1. No detections of methylene chloride were reported in associated field samples, and no qualifiers were added.

SDG 360-24563-1 (OCRI-14)

Unknown TICs were reported in method blanks in SDG 360-24563-1. These TICS reported in associated samples were removed from the data set.

Tetrahydrofuran (33 µg/kg) and 2-butanone (10 µg/kg) were detected in the soil trip blank OC-TBK-017. Action levels were established at 165 µg/kg and 100 µg/kg respectively. Samples with positive detections less than the action level were qualified non-detect (U).

SDG 360-24582-1 (OCRI-15)

Unknown TICs were reported in method blanks in SDG 360-24563-1. These TICS reported in associated samples were removed from the data set.

2.3 INITIAL CALIBRATION

In a subset of initial calibrations VOC target compounds 1,4-dioxane, tetrahydrofuran, and 2-butanone did not meet response goals in the USEPA Region I validation guidelines. A summary of initial calibration qualification actions is presented in Table 3.2 for VOCs with results being assigned a validation qualifier reason code of Initial Calibration Verification Relative Response

Factor (ICVRRF). Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDGs 360-24173-1 (OCRI-01), 360-24194-1 (OCRI-02), 360-24223-1 (OCRI-03), 360-24244-1 (OCRI-04), 360-24251-1 (OCRI-05), 360-24309-1 (OCRI-06), 360-24327-1 (OCRI-07), and 360-24343-1 (OCRI-08)

Initial calibrations (analyzed on 5/21/09 and 8/24/09) associated with samples in the SDGs listed above had average response factors for 1,4-dioxane below the Region I limit of 0.05 ranging from (0.021 – 0.023). However, the Relative Response Factor (RRF) were greater than the USEPA Contract Lab Program requirement of 0.005, and percent Relative Standard Deviations (RSDs) were less than 30 and within Region I validation guideline control limits indicating good linearity across the calibration range. There were no detections of 1,4-dioxane in associated samples. Based on professional judgment results were not qualified as rejected and results were qualified estimated (UJ).

SDGs 360-24251-1 (OCRI-05) and 360-24309-1 (OCRI-06)

Initial calibration analyzed on 9/4/09 (instrument: HP#3) had average response factors below the Region I limit of 0.05 for the following compounds: 1,4-dioxane (0.0009), tetrahydrofuran (0.032), 2-butanone (0.042). The percent RSDs were less than 30 and within Region I control limits. There were no detections of tetrahydrofuran or 2-butanone in associated samples and professional judgment was used to not reject results that were non-detect and estimate (UJ) the final result. Results for 1,4-dioxane were rejected (R) due to the extremely low response of this compound in this initial calibration.

SDGs 360-24309-1 (OCRI-06), 360-24327-1 (OCRI-07), 360-24343-1 (OCRI-08), 360-24365-1 (OCRI-09), 360-24417-1 (OCRI-10), 360-24444-1 (OCRI-11), 360-24454-1 (OCRI-12), 360-24499-1 (OCRI-13), 360-24563-1 (OCRI-14), 360-24582-1 (OCRI-15), 360-24634-1 (OCRI-16), 360-24665-1 (OCRI-17), and 360-24686-1 (OCRI-18)

Initial calibration analyzed on 9/8/09 (instrument: HP#1) had average response factors below the Region I limit of 0.05 for the following compounds: 1,4-dioxane (0.02). The percent RSDs were less than 30 and within Region I control limits. There were no detections of 1,4-dioxane in associated samples. Based on professional judgment results were not qualified as rejected and results were qualified estimated (UJ).

2.4 INITIAL CALIBRATION VERIFICATION STANDARDS

A secondary source initial calibration standard was analyzed by the laboratory after each initial calibration. In a subset of initial calibration verification standards the following VOC target compounds did not meet the method percent difference goal of 30 percent set by the laboratory: dichlorodifluoromethane, methylene chloride, acetone, and 2,4,4-trimethyl-1-pentene. A summary of initial calibration verification standard qualification actions is presented in Table 3.2 for VOCs with results being assigned a validation qualifier reason code of ICV%D. Detailed discussions of qualification actions for each SDG are presented in the following sections.

All SDGs

Dichlorodifluoromethane (-45) had a percent difference that was greater than 30 in the initial calibration verification standard associated with the initial calibration analyzed on 5/21/09 (instrument HP#1 GC/MS). Positive detections and non-detects of dichlorodifluoromethane were qualified estimated (J/UJ) in associated samples.

The following compounds had a percent difference that was greater than 30 in the initial calibration verification standard associated with the initial calibration analyzed on 8/24/09 (instrument HP#1 GC/MS): methylene chloride (35%), acetone (-46), and 2,4,4-trimethyl-1-pentene (36). Positive detections of methylene chloride and 2,4,4-trimethyl-1-pentene were qualified estimated (J) in associated samples. Positive detections and non-detects of acetone were qualified estimated (J/UJ) in associated samples.

The following compounds had a percent difference that was greater than 30 in the initial calibration verification standard associated with the initial calibration analyzed on 9/04/09 (instrument: HP#3): acetone (-40) and dichlorodifluoromethane (-34). Positive detections and non-detects of dichlorodifluoromethane and acetone were qualified estimated (J/UJ) in associated samples.

The following compounds had a percent difference that was greater than 30% in the initial calibration verification standard associated with the initial calibration analyzed on 9/08/09 (instrument: HP#1 GC/MS): acetone (-30.9) and dichlorodifluoromethane (-41). Positive detections and non-detects of dichlorodifluoromethane and acetone were qualified estimated (J/UJ) in associated samples.

2.5 CONTINUING CALIBRATION STANDARDS

The percent differences between the RRF in the continuing calibration standard and the average RRF in the initial calibration were calculated and reported by the laboratory. If regression (i.e., linear) was used in the initial calibration, then the percent difference was calculated between the known continuing calibration standard concentration and the amount recovered in the continuing calibration. In one or more continuing calibration runs the following VOC target compounds had percent differences that were above the goal of 25 percent in USEPA Region I validation guidelines:

- acetone
- bromobenzene
- chlorodibromomethane
- cyclohexane
- dichlorodifluoromethane
- diethyl ether
- hexachlorobutadiene
- methyl acetate (acetic acid, methyl ester)
- methylcyclohexane
- methyl tert-butyl ether
- trichlorofluoromethane
- 1,1,2,2-tetrachloroethane
- 1,4-dioxane
- 1,1,2-trichloro-1,2,2-trifluoroethane
- 2-butanone
- 2-hexanone
- 2,2-dichloropropane
- 2,4,4-trimethyl-1-pentene
- 2,4,4-trimethyl-2-pentene

A summary of continuing calibration qualification actions is presented in Table 3.2 for VOCs with results being assigned a validation qualifier reason code of CCV%D. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24173-1 (OCRI-01) and SDG 360-24194-1 (OCRI-02)

The following compounds had percent differences greater than the Region I goal of 25 percent in continuing calibrations in SDGs 360-24173-1 and 360-24194-1: acetone (-25.7 to -35), chlorodibromomethane (25.6), methyl acetate (-32 to -33), dichlorodifluoromethane (27 to -55), bromobenzene (-28), 2,4,4-trimethyl-1-pentene (25.5 to 29), 1,1,2,2-tetrachloroethane (-27). These compounds were qualified estimated (J/UJ) in associated samples.

SDGs 360-24223-1 (OCRI-03) and 360-24244-1 (OCRI-04)

The following compounds had percent differences greater than 25 in continuing calibrations in SDGs 360-24223-1 and 360-24244-1: acetone (-29 to -35), 2,4,4-trimethyl-1-pentene (27 to 29), methyl acetate (-30 to -32), and dichlorodifluoromethane (-55). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24244-1 (OCRI-04) and 360-24251-1 (OCRI-05)

The following compounds had percent differences greater than 25 in continuing calibrations in SDGs 360-24244-1 and 360-24251-1: acetone (-27 to -35), 2,4,4-trimethyl-1-pentene (26 to 29), dichlorodifluoromethane (27), methyl acetate (-30 to -31), 2,2-dichloropropane (-26), hexachlorobutadiene (36), and 1,4-dioxane (57). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24309-1 (OCRI-06)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24309-1: acetone (-27 to -35), chlorodibromomethane (-25.1), 2-hexanone (-28), 2,4,4-trimethyl-1-pentene (-26 to 29), methyl acetate (-30 to -31), 2,2-dichloropropane (-26). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24327-1 (OCRI-07)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24327-1: acetone (-39), dichlorodifluoromethane (-41), 2-butanone (-26), and 2-hexanone (-27). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24343-1 (OCRI-08)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24343-1: acetone (-31) and 2,4,4-trimethyl-1-pentene (-26). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24365-1 (OCRI-09)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24365-1: acetone (-31), dichlorodifluoromethane (-52), methyl acetate (55), 1,4-dioxane (57), hexachlorobutadiene (36) and 2,4,4-trimethyl-1-pentene (-26). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24444-1 (OCRI-11)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24444-1: acetone (27), dichlorodifluoromethane (-52), methyl acetate (55-61), trichlorofluoromethane (-26), 1,1,2-trichloro-1,2,2-trifluoroethane (-30), cyclohexane (-27), 2,4,4-trimethyl-1-pentene (-32), methylcyclohexane (-27), and 2,4,4-trimethyl-2-pentene (-28). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24454-1 (OCRI-12)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24454-1: acetone (27), dichlorodifluoromethane (-52), methyl acetate (55), and cyclohexane (-27). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24499-1 (OCRI-13)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24499-1: methyl tert-butyl ether (-26), ethyl ether (-25.2), and cyclohexane (-27). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24563-1 (OCRI-14)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24563-1: acetone (26), ethyl ether (-25.2), methyl acetate (45 - 53), methyl tert-butyl ether (-26), and 1,1,2-trichloro-1,2,2-trifluoroethane (-25.1). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-360-24582-1 (OCRI-15)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24582-1: acetone (27). Acetone was qualified estimated (UJ) in associated samples.

SDG 360-24665-1 (OCRI-17)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24665-1: ethyl ether (-25.2), methyl tert-butyl ether (-26), methyl acetate (50.1), 1,1,2-trichloro-1,2,2-trifluoroethane (-25.1), 2,2-dichloropropane (-26), and 2,4,4-trimethyl-1-pentene (-28). These compounds were qualified estimated (J/UJ) in associated samples.

SDG 360-24686-1 (OCRI-18)

The following compounds had percent differences greater than 25 in continuing calibrations in SDG 360-24686-1: ethyl ether (-25.2), and methyl tert-butyl ether (-26). These compounds were qualified estimated (J/UJ) in associated samples.

2.6 LABORATORY CONTROL SAMPLES/LABORATORY CONTROL SAMPLE DUPLICATES (LCS/LCSD)

In one or more Laboratory Control Samples (LCS) runs the following target compound recoveries were outside project limits (70-130 %) for recovery or relative percent difference (RPD):

- acetone
- methyl acetate (acetic acid, methyl ester)
- chloroethane
- dichlorodifluoromethane
- trichlorotrifluoromethane
- 1,4-dioxane
- 1,1,2-trichloro-1,2,2-trifluoroethane
- 2,4,4-trimethyl-1-pentene

A summary of LCS qualification actions is presented in Table 3.2 with results being assigned a validation qualifier reason code of LCS-H, LCS-L, or LCS-RPD. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24173-1 (OCRI-01) and SDG 360-24194-1 (OCRI-02)

The following compounds had percent recoveries outside of control limits in LCS and/or Laboratory Control Sample Duplicate (LCSD) samples analyzed in SDGs 360-24173-1 and 360-24194-1: acetone (40-69%), chloroethane (66%), and dichlorodifluoromethane (47-66%). These compounds were not detected in associated samples, and reporting limits were qualified estimated (UJ) in the final data set.

SDG 360-24194-1 (OCRI-02)

The following compound had a percent recovery outside of control limits in LCS and/or LCSD analyzed in SDG 360-24194-1: 2,4,4-trimethyl-1-pentene (134%). Positive detections in associated samples were qualified estimated (J).

SDG 360-24223-1 (OCRI-03)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24223-1: acetone (52-68%), 2,4,4-trimethyl-1-pentene (133%), and dichlorodifluoromethane (62-66%). Results in associated samples were qualified estimated (J/UJ).

SDG 360-24244-1 (OCRI-04)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24244-1: acetone (49-62%) and dichlorodifluoromethane (47%). Results in associated samples were qualified estimated (J/UJ).

SDG 360-24251-1 (OCRI-05)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24251-1: acetone (51-68%) and dichlorodifluoromethane (49-61%). Results in associated samples were qualified estimated (UJ).

SDG 360-24309-1 (OCRI-06)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24309-1: acetone (54-68%), chloroethane (68%), trichlorotrifluoromethane (65%), and dichlorodifluoromethane (46-61%). Results in associated samples were qualified estimated (UJ).

SDG 360-24327-1 (OCRI-07)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24327-1: acetone (56-66%) and dichlorodifluoromethane (47-62%). Results in associated samples were qualified estimated (UJ).

SDG 360-24343-1 (OCRI-08)

The following compound had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24343-1: trichlorofluoromethane (65%), acetone (56-66%) and dichlorodifluoromethane (47-62%). Results in associated samples were qualified estimated (UJ).

SDG 360-24365-1 (OCRI-09)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24365-1: trichlorofluoromethane (65%), acetone (54-68%) and dichlorodifluoromethane (32-60%). Results in associated samples were qualified estimated (UJ).

SDG 360-24417-1 (OCRI-10)

The following compound had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24417-1: dichlorodifluoromethane (58-60%). Results in associated samples were qualified estimated (UJ).

SDG 360-24444-1 (OCRI-11)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24444-1: dichlorodifluoromethane (31-67%) and 1,4-dioxane (62%). Results in associated samples were qualified estimated (UJ).

SDG 360-24454-1 (OCRI-12)

The following compound had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24454-1: dichlorodifluoromethane (32-65%). Results in associated samples were qualified estimated (UJ).

SDG 360-24499-1 (OCRI-13)

The following compound had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24499-1: dichlorodifluoromethane (45-60%). Results in associated samples were qualified estimated (UJ).

SDG 360-24563-1 (OCRI-14)

The following compounds had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24563-1: 1,1,2-trichloro-1,2,2-trifluoroethane (68%), dichlorodifluoromethane (39-61%), chloroethane (65%), and trichlorofluoromethane (67%). Results in associated samples were qualified estimated (UJ).

SDGs 360-24582-1 (OCRI-15), 360-24634 (OCRI-16), 360-24665 (OCRI-17), and 360-24686 (OCRI-18)

The following compound had percent recoveries outside of control limits in LCS and/or LCSD samples analyzed in SDG 360-24582-1, 360-24634-1, and 360-24665-1: dichlorodifluoromethane (46-65%). Results in associated samples were qualified estimated (UJ).

2.7 MATRIX SPIKES

Approximately one in twenty soil samples were analyzed as MS/MSD runs. Excluding SDG 360-24343-1 (OCRI-08), the following target compounds did not fall within project limits for recovery (70-130 %) and/or RPD (≤ 30) in at least one MS or MSD sample:

- acetone
- dichlorodifluoromethane
- hexachlorobutadiene
- naphthalene
- n-butylbenzene
- trans-1,3-dichloropropene
- 1,1,2-trichloro-1,2,2-trifluoroethane
- 1,2-dibromoethane
- 1,2,3-trichlorobenzene
- 1,2,4-trichlorobenzene
- 2-hexanone
- 2,4,4-trimethyl-2-pentene
- 1,4-dioxane

In SDG 360-24343-1 (OCRI-08) many compounds had recoveries outside of project limits as discussed below in the subsection on this SDG.

A summary of MS/MSD qualification actions is presented in Table 3.2 with results being assigned a validation qualifier reason code of MS-H, MS-L, or MS-RPD. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24223-1 (OCRI-03)

In sample OC-SB-426-5.0/7.0-XXX acetone (59% and 64%) and dichlorodifluoromethane (55% and 57%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-426-5.0/7.0-XXX and OC-SB-426-5.0/7.0-DUP.

SDG 360-24251-1 (OCRI-05)

In sample OC-SB-433-5.0/7.0-XXX acetone (66% and 67%) and dichlorodifluoromethane (68%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-433-5.0/7.0-XXX and OC-SB-433-5.0/7.0-DUP.

In sample OC-SB-446-5.0/7.0-XXX acetone (57% and 56%), 1,2-dibromoethane (68% and 67%), 2-hexanone (65% and 63%), dichlorodifluoromethane (65%), hexachlorobutadiene (64%), and trans-1,3-dichloropropene (69% and 69%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-446-5.0/7.0-XXX and OC-SB-446-5.0/7.0-DUP.

SDG 360-24309-1 (OCRI-06)

In sample OC-SB-430-8.0/10-XXX 1,1,2-trichloro-1,2,2-trifluoroethane (69% and 65%), 2,4,4-trimethyl-2-pentene (69% and 67%), dichlorodifluoromethane (54% and 52%), hexachlorobutadiene (55% and 50%), 1,2,3-trichlorobenzene (65%),1,2,4-trichlorobenzene (67%), and acetone (61%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-430-8.0/10-XXX and OC-SB-430-8.0/10-DUP.

SDG 360-24327-1 (OCRI-07)

In sample OC-SB-410-6.0/8.0-XXX dichlorodifluoromethane (58% and 55%) and acetone (68%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the un-spiked field sample and field duplicate, OC-SB-410-6.0/8.0-XXX and OC-SB-410-6.0/8.0-DUP.

SDG 360-24343-1 (OCRI-08)

Two samples were submitted for matrix spike analysis in SDG 360-24343-1 (OC-SB-451-2.5/4.5-XXX and OC-SB-455-6.0/8.0-XXX). In the matrix spike on sample OC-SB-451-2.5/4.5-XXX, 35 of the 77 compounds reported had percent recoveries that were below 70 percent. Recoveries ranged from 4 to 68 percent. Three compounds had high recoveries ranging from 131 to 287 percent. Hexachlorobutadiene had a recovery in the MSD of 4 and results were qualified rejected (R) in the original field sample and associated field duplicate. There were no detections in the original sample and the compounds with low recoveries were qualified estimated (UJ) at the

reporting limit in the field sample and field duplicate. Compounds with high recoveries in the MS or MSD were not qualified.

In the matrix spike for sample OC-SB-455-6.0/8.0-XXX, 59 of the 77 compounds had percent recoveries below 70 percent ranging from 5 to 66 percent. Three compounds had recoveries above 130 percent ranging from 140 to 333 percent. Hexachlorobutadiene had recoveries for the MS and MSD of 8 and 5 percent and result were qualified rejected (R) in the original field sample and associated field duplicate. There were no detections in the original sample and the compounds with low recoveries were qualified estimated (UJ) at the reporting limit in the field sample and field duplicate. Compounds with high recoveries in the MS or MSD were not qualified.

SDG 360-24365-1 (OCRI-09)

In sample OC-SB-442-8.0/10-XXX acetone (67% and 66%) and dichlorodifluoromethane (55% and 60%) had percent recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-442-8.0/10-XXX and OC-SB-442-8.0/10-DUP.

SDG 360-24417-1 (OCRI-10)

In sample OC-SB-465-8.0/10-XXX dichlorodifluoromethane (63% and 65%) had percent recoveries below control limits. The dichlorodifluoromethane result was qualified estimated (UJ) in the original field sample OC-SB-465-8.0/10-XXX.

SDG 360-24444-1 (OCRI-11)

In sample OC-SB-459-6.0/8.0-XXX dichlorodifluoromethane (56%) had percent recovery below control limits in the matrix spike duplicate and the result was qualified estimated (UJ) in the original sample OC-SB-459-6.0/8.0-XXX.

In sample OC-SB-467-6.0/8.0-XXX dichlorodifluoromethane (33% and 37%) had percent recoveries below control limits in the MS and MSD and results were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-467-6.0/8.0-XXX and OC-SB-467-6.0/8.0-DUP.

SDG 360-24563-1 (OCRI-14)

In sample OC-SB-427-8.0/10-XXX 1,2,3-trichlorobenzene (69% and 69%), n-butylbenzene (67% and 70%), dichlorodifluoromethane (62% and 58%), and hexachlorobutadiene (43% and 45%) had

recoveries below control limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC-SB-427-8.0/10-XXX and OC-SB-427-8.0/10-DUP.

In sample OC-SB-456-7.0/9.0-XXX dichlorodifluoromethane (65% and 68%) had percent recoveries below the control limit in the MS and MSD and the result was qualified estimated (UJ) in the original field sample OC-SB-456-7.0/9.0-XXX. The RPD between the MS and MSD percent recoveries for 1,4-dioxane (33) was above the control limit of 30. 1,4-Dioxane was qualified estimated (UJ) in the original field sample.

SDG 360-24582-1 (OCRI-15)

In sample OC-SS-416-0.0/1.0-XXX 1,2,3-trichlorobenzene (63% and 55%), 1,2,4-trichlorobenzene (63% and 54%), naphthalene (68% and 64%), n-butylbenzene (65%), dichlorodifluoromethane (62% and 62%), and hexachlorobutadiene (52% and 44%) had recoveries below limits. These compounds were qualified estimated (UJ) in the original field sample and field duplicate OC- SS-416-0.0/1.0-XXX and OC- SS-416-0.0/1.0-DUP.

2.8 PERFORMANCE EVALUATION SAMPLE (PES)

SDG 360-24365-1 (OCRI-09)

One soil VOC PES (OC-SB-PES-VS0355-VOC) was obtained from USEPA Region 1 New England and submitted for analysis by Method 8260B. Results reported by TestAmerica (sample ID: OC-SB-PES-VS0355-VOC) received a "PASS – Within Limits" for the analytes reported. Score sheets are presented in Attachment A.

3.0 SEMIVOLATILE ORGANIC COMPOUNDS (SVOCS)

Samples were analyzed for SVOCs by SW-846 8270C – Low Level method. Validation actions for samples that were analyzed for 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
  Field Duplicates
  Surrogate Recovery
  Internal Standards
* Detection Limits
  USEPA PES
* Sample Result Verification/EDD
* TICs
* N-nitrosodiphenylamine (NDPA)/DPA separation analyses

*** = 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. A summary of final results is presented on Table 2.3. A summary of data validation actions is presented on Table 3.3.

3.1 BLANKS

A subset of SVOC target compounds were routinely detected in method blanks reported throughout the data sets associated with the soil analysis. These included phthalates (bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, diethyl phthalate, and di-n-butyl phthalate), acetophenone, and benzoic acid. Sample results were qualified in accordance with the USEPA Region I guidelines. A summary of method blank qualification actions is presented in Table 3.3 for SVOCs with results being assigned a validation qualifier reason code of BL. Detailed discussions of qualification actions for each SDG are presented in the following sections.

Equipment rinse blanks were also collected during the soil sampling. The following compounds were reported in the equipment rinsate blanks:

- acetophenone (1.5 µg/L)
- anthracene (0.58 µg/L)
- benzoic acid (3.9 µg/L)
- benzyl alcohol (0.667 µg/L)
- bis(2-ethylhexyl)phthalate (44 µg/L)
- butyl benzyl phthalate (1.2 µg/L)
- diethyl phthalate (0.78 µg/L)
- di-n-butyl phthalate (1.8 µg/L)
- NDPA (0.75 µg/L)

Detections were qualified (EB) to indicate associated detections in equipment blanks. A summary of equipment blank qualification actions is presented in Table 3.3 for SVOCs with results being assigned a validation qualifier reason code of BL.

SDG 360-24173-1 (OCRI-1)

For a subset of samples, acetophenone (4.17 µg/kg), diethyl phthalate (4.98 µg/kg), and di-n-butyl phthalate (30.2 µg/kg) is reported the in method blank (MB-360-47986). An action level was established at five times the reported blank concentration for acetophenone (20.8 µg/kg), and ten times the reported blank concentration for diethyl phthalate (49.8 µg/kg), and di-n-butyl phthalate (302 µg/kg). The associated sample results for diethyl phthalate were non-detect with no further action required. Reported detections for acetophenone that were less than the action level were qualified non-detect (U) at the reporting limit. Reported detections for di-n-butyl phthalate that were less than the action level were qualified non-detect (U).

SDG 360-24194-1 (OCRI-2)

For a subset of samples, acetophenone (4.17 µg/kg), diethyl phthalate (4.98 µg/kg), and di-n-butyl phthalate (30.2 µg/kg) was reported the in method blank (MB-360-47986). An action level was established at five times the reported blank concentration for acetophenone (20.8 µg/kg), and ten times the reported blank concentration for diethyl phthalate (49.8 µg/kg), and di-n-butyl phthalate (302 µg/kg). The associated sample results for diethyl phthalate were non-detect with no further action required. Reported detections for acetophenone and di-n-butyl phthalate that were less than the action limit were qualified non-detect (U) at the reporting limit.

For a subset of samples, caprolactum (13.8 µg/kg), diethyl phthalate (4.70 µg/kg), and di-n-butyl phthalate (23.2 µg/kg) is reported in the method blank (MB-360-48119). An action level was established at five times the reported blank concentration for caprolactum (69 µg/kg), and ten times

the reported blank concentration for diethyl phthalate (47µg/kg), and di-n-butyl phthalate (232 µg/kg). Caprolactum and diethyl phthalate were non-detect with no further action required.

SDG 360-24223-1 (OCRI-3)

Bis(2-ethylhexyl)phthalate (10.4 µg/kg) was reported in the method blank (MB-360-48259). An action level was established at ten times the reported blank concentration for bis(2-ethylhexyl)phthalate (104 µg/kg). Reported detections for bis(2-ethylhexyl)phthalate that were less than the reporting limit and less than the action level were qualified non-detect (U) at the reporting limit.

SDG 360-24244-1 (OCRI-4)

Caprolactum (13.8 µg/kg) was reported in the method blank (MB-360-48119). An action level was established at five times the reported blank concentration for caprolactum (69 µg/kg). Sample results for caprolactum are non-detect with no further action required.

SDG 360-24251-1 (OCRI-5)

Di-n-butyl phthalate (73.3 µg/kg) was reported in the method blank (MB-360-48462). An action level was established at ten times the reported blank concentration for di-n-butyl phthalate (733 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required.

Di-n-butyl phthalate (107 µg/kg) and benzoic acid (31.5 µg/kg) was reported in the method blank (MB-360-48567). An action level was established at ten times the reported blank concentration for di-n-butyl phthalate (1070 µg/kg) and five times the reported concentration for benzoic acid (158 µg/kg). Associated sample detections for di-n-butyl phthalate were less than the action level and were qualified non-detect (U). Associated sample results for benzoic acid were qualified as rejected (R) during the continuing calibration review (Section 3.3).

SDG 360-24309-1 (OCRI-6)

Di-n-butyl phthalate (77 µg/kg) and benzoic acid (71.7 µg/kg) was reported in the method blank (MB-360-48691). An action level was established at ten times the reported blank concentration for di-n-butyl phthalate (770 µg/kg) and five times the reported concentration for benzoic acid (358 µg/kg). Associated sample results for di-n-butyl phthalate and benzoic acid were non-detect with no further action required.

Di-n-butyl phthalate (107 µg/kg) and benzoic acid (31.5 µg/kg) was reported in the method blank (MB-360-48567). An action level was established at ten times the reported blank concentration for di-n-butyl phthalate (1070 µg/kg) and five times the reported concentration for benzoic acid (158 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect, no further action required. Associated sample results for benzoic acid that were less than the action limits were qualified non-detect (U) at the reporting limit.

SDG 360-24327-1 (OCRI-7)

For a subset of samples, di-n-butyl phthalate (77 µg/kg and 97.6 µg/kg) and benzoic acid (71.7 µg/kg and 77 µg/kg) were reported in method blanks (MB-360-48691 and MB-360-48703, respectively). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (770 µg/kg and 976 µg/kg) and five times the reported concentrations for benzoic acid (359 µg/kg and 385 µg/kg). Reported detections for di-n-butyl phthalate and benzoic acid were less than the action levels and were qualified non-detect (U) at the reporting limits.

SDG 360-24343-1 (OCRI-8)

Di-n-butyl phthalate (86.9 µg/kg and 97.6 µg/kg) and benzoic acid (54 µg/kg and 77 µg/kg) were reported in method blanks (MB-360-48742 and MB-360-48703, respectively). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (869 µg/kg and 976 µg/kg) and five times the reported concentrations for benzoic acid (270 µg/kg and 385 µg/kg). Associated sample results for di-n-butyl phthalate and benzoic acid were non-detect with no further action required.

Di-n-butyl phthalate (86.9 µg/kg) and benzoic acid (54 µg/kg) were reported in method blank (MB-360-48742). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (869 µg/kg) and five times the reported concentrations for benzoic acid (270 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. Reported detections of benzoic acid in associated samples were less than the action level and were qualified non-detect (U) at the reporting limits.

Di-n-butyl phthalate (97.6 µg/kg) and benzoic acid (77 µg/kg) was reported in the method blank (MB-360-48703). An action level was established at ten times the reported blank concentration for di-n-butyl phthalate (976 µg/kg) and five times the reported concentration for benzoic acid (385

µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. Associated sample detections for benzoic acid were less than the action level and were qualified non-detect (U) at the reporting limit.

SDG 360-24365-1 (OCRI-9)

Benzoic acid (70.4 µg/kg) was reported in method blank (MB-360-48854). An action level was established at five times the reported concentration for benzoic acid (352 µg/kg). Associated sample detections for benzoic acid were less than the action limit and were qualified non-detect (U) at the reporting limit.

Di-n-butyl phthalate (86.9 µg/kg) and benzoic acid (54 µg/kg) were reported in method blank (MB-360-48742). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (869 µg/kg) and five times the reported concentrations for benzoic acid (270 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. Associated sample detections for benzoic acid were less than the action limit and were qualified non-detect (U) at the reporting limit.

SDG 360-24417-1 (OCRI-10)

Di-n-butyl phthalate (68 µg/kg), bis(2-ethylhexyl)phthalate (162 µg/kg), and benzoic acid (97.4 µg/kg) were reported in method blank (MB-360-49016). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (680 µg/kg) and bis(2-ethylhexyl)phthalate (1620 µg/kg), and five times the reported concentrations for benzoic acid (487 µg/kg). Associated sample results for di-n-butyl phthalate and benzoic acid were non-detect with no further action required. A subset of results for bis(2-ethylhexyl)phthalate that were less than the action level was qualified non-detect (U).

Di-n-butyl phthalate (82.2 µg/kg) and bis(2-ethylhexyl)phthalate (19.4 µg/kg) were reported in method blank (MB-360-48924). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (822 µg/kg) and bis(2-ethylhexyl)phthalate (194 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. A subset of sample results for bis(2-ethylhexyl)phthalate that were less than the action level was qualified non-detect (U).

SDG 360-24444-1 (OCRI-11)

Di-n-butyl phthalate (68 µg/kg), bis(2-ethylhexyl)phthalate (162 µg/kg), and benzoic acid (97.4 µg/kg) were reported in method blank (MB-360-49016). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (680 µg/kg) and bis(2-ethylhexyl)phthalate (1620 µg/kg), and five times the reported concentrations for benzoic acid (487 µg/kg). Associated sample results for di-n-butyl phthalate and benzoic acid were non-detect with no further action required. A subset of results for bis(2-ethylhexyl)phthalate that were less than the action level was qualified non-detect (U).

Di-n-butyl phthalate (82.2 µg/kg) and bis(2-ethylhexyl)phthalate (19.4 µg/kg) were reported in method blank (MB-360-48924). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (822 µg/kg) and bis(2-ethylhexyl)phthalate (194 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. A subset of results for bis(2-ethylhexyl)phthalate that were less than the action level was qualified non-detect (U).

SDG 360-24454-1 (OCRI-12)

Di-n-butyl phthalate (68 µg/kg), bis(2-ethylhexyl)phthalate (162 µg/kg), and benzoic acid (97.4 µg/kg) were reported in method blank (MB-360-49016). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (680 µg/kg) and bis(2-ehtylhexyl)phthalate (1620 µg/kg), and five times the reported concentrations for benzoic acid (487 µg/kg). Associated sample results for di-n-butyl phthalate and benzoic acid were non-detect with no further action required. A subset of sample results for bis(2-ethylhexyl)phthalate was less than the action level and were qualified non-detect (U).

Benzoic acid (97.4 µg/kg), di-n-butyl phthalate (68 µg/kg) and bis(2-ethylhexyl)phthalate (162 µg/kg) were reported in method blank (MB-360-49016). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (680 µg/kg) and bis(2-ethylhexyl)phthalate (1620 µg/kg) and five times the reported blank concentration for benzoic acid (487 µg/kg). Associated sample results for benzoic acid and di-n-butyl phthalate were non-detect with no further action required. A subset of results for bis(2-ethylhexyl)phthalate was less than the action level and was qualified non-detect (U).

SDG 360-24499-1 (OCRI-13)

Di-n-butyl phthalate (68 µg/kg), bis(2-ethylhexyl)phthalate (162 µg/kg), and benzoic acid (97.4 µg/kg) were reported in method blank (MB-360-49016). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (680 µg/kg) and bis(2-ehtylhexyl)phthalate (1620 µg/kg), and five times the reported concentrations for benzoic acid (487 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. A subset of sample detections for benzoic acid and bis(2-ethylhexyl)phthalate were less than the action level and were qualified non-detect (U).

Di-n-butyl phthalate (72.7 µg/kg), bis(2-ethylhexyl)phthalate (211 µg/kg), and benzoic acid (62.2 µg/kg) were reported in method blank (MB-360-49041). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (727 µg/kg) and bis(2-ehtylhexyl)phthalate (2110 µg/kg), and five times the reported blank concentration for benzoic acid (311 µg/kg). Associated sample results for benzoic acid were non-detect with no further action required. A subset of sample detections for bis(2-ethylhexyl)phthalate and di-n-butyl phthalate were less than the action level and were qualified non-detect (U).

SDG 360-24563-1 (OCRI-14)

Di-n-butyl phthalate (72.7 µg/kg), bis(2-ethylhexyl)phthalate (211 µg/kg), and benzoic acid (62.2 µg/kg) were reported in method blank (MB-360-49041). Action levels were established at ten times the reported blank concentrations for di-n-butyl phthalate (727 µg/kg) and bis(2-ehtylhexyl)phthalate (2110 µg/kg), and five times the reported blank concentration for benzoic acid (311 µg/kg). Sample results less than the action limits were qualified non-detect (U) or non-detect (U) at the reporting limits.

Benzoic acid (81.3 µg/kg), bis (2-ethylhexyl) phthalate (14 µg/kg), and di-n-butyl phthalate (56.6 µg/kg) were reported in method blank (MB-360-49246). Action limits were established at ten times the reported blank concentrations for bis (2-ethylhexyl) phthalate (140 µg/kg) and di-n-butyl phthalate (566 µg/kg) and five times the reported blank concentration for benzoic acid (406.5 µg/kg). Associated sample results for benzoic acid and di-n-butyl phthalate were non-detect with no further action required. A subset of sample detections for bis (2-ethylhexyl) phthalate less than the action limit were qualified non-detect (U).

SDG 360-24582-1 (OCRI-15)

Benzoic acid (81.3 µg/kg), bis (2-ethylhexyl) phthalate (14 µg/kg), and di-n-butyl phthalate (56.6 µg/kg) were reported in method blank (MB-360-49246). Action limits were established at ten times the reported blank concentrations for bis (2-ethylhexyl) phthalate (140 µg/kg) and di-n-butyl phthalate (566 µg/kg) and five times the reported blank concentration for benzoic acid (406.5 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. Associated sample detections for benzoic acid were qualified non-detect (U) at the reporting limit. A subset of sample detections for bis (2-ethylhexyl) phthalate less than the action limit were qualified non-detect (U) or non-detect (U) at the reporting limit.

Di-n-butyl phthalate (65.2 µg/kg) and benzoic acid (99.8 µg/kg) were reported in method blank (MB-360-49345). Action limits were established at ten times the reported blank concentrations for di-n-butyl phthalate (652 µg/kg) and five times the reported blank concentration for benzoic acid (499 µg/kg). Associated sample results for di-n-butyl phthalate were non-detect with no further action required. Associated sample detections for benzoic acid were qualified non-detect (U).

SDG 360-24634-1 (OCRI-16)

Di-n-butyl phthalate (65.2 µg/kg) and benzoic acid (99.8 µg/kg) were reported in method blank (MB-360-49345). Action limits were established at ten times the reported blank concentrations for di-n-butyl phthalate (652 µg/kg) and five times the reported blank concentration for benzoic acid (499 µg/kg). Associated sample detections for di-n-butyl phthalate and benzoic acid were qualified non-detect (U).

SDG 360-24665-1 (OCRI-17)

Di-n-butyl phthalate (88.6 µg/kg) and benzoic acid (95.1 µg/kg) were reported in method blank (MB-360-49545). Action limits were established at ten times the reported blank concentrations for di-n-butyl phthalate (886 µg/kg) and five times the reported blank concentration for benzoic acid (476 µg/kg). Associated sample detections for di-n-butyl phthalate and benzoic acid were qualified non-detect (U) or non-detect (U) at the reporting limit.

SDG 360-24686-1 (OCRI-18)

Di-n-butyl phthalate (61.2 µg/kg) and benzoic acid (104 µg/kg) were reported in method blank (MB-360-49658). Action limits were established at ten times the reported blank concentrations for

di-n-butyl phthalate (612 µg/kg) and five times the reported blank concentration for benzoic acid (520 µg/kg). Associated sample detections for benzoic acid that were less than the action limit were qualified non-detect (U) or non-detect (U) at the reporting limit if less than the reporting limit. Sample results for di-n-butyl phthalate were non-detect with no further action required.

3.2 INITIAL CALIBRATION

In a subset of initial calibrations SVOC target compounds 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, benzoic acid, 2-nitroaniline, and hexachlorocyclopentadiene did not meet linearity or response goals in the USEPA Region I validation guidelines. A summary of initial calibration qualification actions is presented in Table 3.3 for SVOCs with results being assigned a validation qualifier reason code of Initial Calibration Verification Relative Standard Deviation (ICVRSD) or ICVRRF. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24173-1 (OCRI-1)

The laboratory performed linear regressions for a subset of calibrated analytes. In the initial calibration performed on August 27, 2009, the regression coefficient for 2,4-dinitrophenol (0.9810) and 4,6-dinitro-2-methylphenol (0.9860) are less than the Quality Control (QC) limit of 0.99. Associated sample results for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol were non-detect and were qualified estimated (UJ).

SDG 360-24194-1 (OCRI-2)

The laboratory performed linear regressions for a subset of calibrated analytes. In the initial calibration performed on August 27, 2009, the regression coefficient for 2,4-dinitrophenol (0.9810) and 4,6-dinitro-2-methylphenol (0.9860) are less than the QC limit of 0.99. Associated sample results for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol were non-detect and were qualified estimated (UJ).

In the initial calibration performed on September 9, 2009, the regression coefficient for 2,4-dinitrophenol (0.9830) is less than the QC limit of 0.99. Associated sample results for 2,4-dinitrophenol were non-detect and were qualified estimated (UJ).

SDG 360-24244-1 (OCRI-4)

The average RRF for benzoic acid (0.0383) is less than the QC limit of 0.05. Sample results for benzoic acid were non-detect and were qualified rejected (R).

SDG 360-24251-1 (OCRI-5)

In the initial calibration (48992) associated for a subset of samples, the average RRF for benzoic acid (0.0468), 2,4-dinitrophenol (0.0486), and 2-nitroaniline (0.0460) were less than the QC limit of 0.05. The linear regression coefficient for 2,4-dinitrophenol (0.986) was less than the QC limit of 0.99. Associated sample results for benzoic acid, 2,4-dinitrophenol, and 2-nitroaniline were non-detect and were rejected (R).

In the initial calibration associated for a subset of samples, the average RRF for benzoic acid (0.0357) is less than the QC limit of 0.05. The linear regression coefficient for 2,4-dinitrophenol (0.987) is less than the QC limit of 0.99. Associated sample results for benzoic acid were non-detect and were rejected (R). Associated sample results for 2,4-dinitrophenol were non-detect and were qualified estimated (UJ).

SDG 360-24309-1 (OCRI-6)

In the initial calibration the average RRF for benzoic acid (0.0468) was less than the QC limit of 0.05. The linear regression coefficient for 2,4-dinitrophenol (0.986) was less than the QC limit of 0.99. Associated sample results for benzoic acid were non-detect and were rejected (R). Associated sample results for 2,4-dinitrophenol were non-detect and were qualified estimated (UJ).

SDG 360-24327-1 (OCRI-7)

In the initial calibration associated for a subset of samples, the average RRF for benzoic acid (0.0468), 2,4-dintrophenol (0.0486), and 2-nitroaniline (0.046) were less than the QC limit of 0.05. The linear regression coefficient for 2,4-dinitrophenol (0.986) was less than the QC limit of 0.99. The result for benzoic acid, 2,4-dintrophenol, and 2-nitroaniline in associated sample OC-SB-404-13/15-XXX was non-detect and was rejected (R).

SDG 360-24343-1 (OCRI-8)

In the initial calibration associated for a subset of samples, the average RRF for benzoic acid (0.0468), 2,4-dintrophenol (0.0486), and 2-nitroaniline (0.046) were less than the QC limit of 0.05.

The linear regression coefficient for 2,4-dinitrophenol (0.986) was less than the QC limit of 0.99. Associated sample results for benzoic acid, 2,4-dintrophenol, and 2-nitroaniline that were non-detect were rejected (R).

SDG 360-24365-1 (OCRI-9)

In the initial calibration associated with a subset of samples, the RSD for benzoic acid (57) exceeded the QC limit of 30. The result for benzoic acid in associated sample OC-SB-442-20/22-XXX was non-detect and was qualified estimated (UJ).

In the initial calibration associated with a subset of samples, the RRF for benzoic acid (0.0357) was less than the QC limit of 0.050, and the linear regression coefficient for 2,4-dinitrophenol (0.9870) was less than the QC limit of 0.99. The result for benzoic acid in associated sample OC-SB-447-18/20-XXX was non-detect and was rejected (R). The associated sample result for 2,4-dinitrophenol was non-detect and was qualified estimated (UJ).

SDG 360-24417-1 (OCRI-10)

In the initial calibration associated for a subset of samples, the average RRF for 2-nitroaniline (0.0468) was less than the QC limit of 0.05. The linear regression coefficient for benzoic acid (0.9890) was less than the QC limit of 0.99. The results for 2-nitroaniline in associated samples were non-detect and were rejected (R). The results for benzoic acid in associated samples were non-detect and were qualified estimated (UJ).

SDG 360-24444-1 (OCRI-11)

In the initial calibration associated for a subset of samples, the average RRF for 2-nitroaniline (0.0468) was less than the QC limit of 0.05. The linear regression coefficient for benzoic acid (0.9890) was less than the QC limit of 0.99. The results for 2-nitroaniline in associated samples were non-detect and were rejected (R). The result for benzoic acid in associated samples was non-detect and was qualified estimated (UJ).

3.3 CONTINUING CALIBRATION STANDARDS

In a subset of continuing calibrations, the following SVOC target compounds did not meet calibration verification accuracy or response goals in the USEPA Region I validation guidelines:

- 2,4-dimethylphenol
- 2,4-dinitrophenol
- 4-nitrophenol

- benzaldehyde
- benzoic acid
- butylbenzylphthalate
- dibenz(a,h)anthracene
- di-n-octyl phthalate
- NDMA
- 4,6-dinitro-2-methylphenol
- pentachlorophenol
- hexachlorocyclopentadiene

A summary of continuing calibration qualification actions is presented in Table 3.3 for SVOCs with results being assigned a validation qualifier reason code of CCV%D or CCVRRF. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24173-1 (OCRI-1)

For a subset of samples, the percent difference for 2,4-dimethylphenol (26) and benzoic acid (32) exceeded the QC limit of 25. Results for 2,4-dimethylphenol and benzoic acid in associated samples were qualified estimated (J/UJ).

SDG 360-24194-1 (OCRI-2)

For a subset of samples, the percent difference for 2,4-dimethylphenol (26) and benzoic acid (32) exceeded the QC limit of 25. The results for 2,4-dimethylphenol and benzoic acid in associated samples OC-SB-421-0.0/1.0-XXX and OC-SB-421-10.5/12.5-XXX were qualified estimated (J/UJ).

For a subset of samples, the percent difference for hexachlorocyclopentadiene (74) and 2,4-dinitrophenol (28) exceed the QC limit of 25, and the response factor for hexachlorocyclopentadiene (0.0361) is less than the QC limit of 0.05. The result for hexachlorocyclopentadiene in associated sample OC-SB-421-0.0/1.0-XXX is non-detect and was rejected (R). Results for 2,4-dinitrophenol were qualified previously during the initial calibration review.

For a subset of samples, the percent difference for hexachlorocyclopentadiene (88), 2,4-dinitrophenol (53), 4,6-dintiro-2-methylphenol (59), butyl benzyl phthalate (29), bis(2-ethylhexyl) phthalate (29), and di-n-octyl phthalate (49) exceeds the QC limit of 25; and the response factor for hexachlorocyclopentadiene (0.0125), 2,4-dinitrophenol (0.0168), and 4,6-dintiro-2-methylphenol (0.0269) is less than the QC limit of 0.05. Associated samples are OC-SB-424-7.0/9.0-XXX and

OC-SB-425-0.0/1.0-XXX. Associated sample results for butyl benzyl phthalate, bis (2-ethylhexyl) phthalate, and di-n-octyl phthalate were qualified estimated (J/UJ). Associated sample results for hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4,6-dintiro-2-methylphenol are non-detect and were rejected (R).

SDG 360-24244-1 (OCRI-4)

The RRF for benzoic acid (0.0308) is less than the QC limit of 0.05. Sample results for benzoic acid were qualified previously under the initial calibration criteria.

SDG 360-24251-1 (OCRI-5)

In the continuing calibration (360-48993) associated with a subset of samples, the RRF for benzoic acid (0.0342) and 2,4-dinitrophenol (0.0328) were less than the QC limit of 0.05. Associated sample results for benzoic acid and 2,4-dinitrophenol were qualified previously under the initial calibration criteria.

In the continuing calibration (360-48930) associated with a subset of samples, the RRF for benzoic acid (0.0238) was less than the QC limit of 0.05. The percent difference of benzaldehyde (36) and 2,4-dinitrophenol (-26) exceeded the QC limit of 25. Associated sample results for benzoic acid were rejected (R). Associated sample results for benzaldehyde and 2,4-dinitrophenol were qualified estimated (UJ).

In the continuing calibration associated with a subset of samples, the RRF for benzoic acid (0.0148) was less than the QC limit of 0.05. Associated sample results for benzoic acid were qualified previously during the initial calibration review.

SDG 360-24309-1 (OCRI-6)

In the continuing calibration associated with a subset of samples, the response factors for benzoic acid (0.0342), 2,4-dinitrophenol (0.0328), and pentachlorophenol (0.0483) were less than the QC limit of 0.05. Associated sample results for benzoic acid were qualified previously under the initial calibration criteria. Associated sample results for 2,4-dinitrophenol and pentachlorophenol were non-detect and were qualified rejected (R).

In the continuing calibration associated with a subset of samples, the response factor for benzoic acid (0.0275) was less than the QC limit of 0.05. Associated sample results for benzoic acid were qualified previously under the initial calibration criteria.

In the continuing calibration associated with a subset of samples, the percent difference for 4-nitrophenol (-28) exceeds the QC limit of 25. Associated sample results for 4-nitrophenol were qualified estimated (UJ).

SDG 360-24327-1 (OCRI-7)

In the continuing calibration associated with a subset of samples, the RRF for benzoic acid (0.0279) and 2-nitroaniline (0.047) were less than the QC limit of 0.05. The result for benzoic acid and 2-nitroaniline in associated sample OC-SB-404-13/15-XXX was qualified previously under the initial calibration criteria. The results for benzoic acid and 2-nitroaniline in associated samples OC-SB-404-5.0/7.0-XXX and OC-SB-409-0.0/1.0-XXX were non-detect and were qualified rejected (R).

In the continuing calibration associated with a subset of samples, the percent difference for 4-nitrophenol (-28) exceeded the QC limit of 25. The result for 4-nitrophenol in associated sample OC-SB-403-13/15-XXX was non-detect and was qualified estimated (UJ).

In the continuing calibration associated with a subset of samples, the RRF for benzoic acid (0.0166), 2,4-dinitrophenol (0.0372), 4,6-dinitro 2-methyl phenol (0.0399), and 2-nitroaniline (0.0449) were less than the QC limit of 0.05. The percent difference for 4-nitrophenol (31), 4,6-dinitro 2-methyl phenol (27), and dibenzo (a,h) anthracene (26) exceeded the QC limit of 25. Associated sample results that were non-detect for benzoic acid, 2,4-dinitrophenol, 4,6-dinitro 2-methyl phenol, and 2-nitroaniline were rejected (R). The results for 4-nitrophenol and dibenz(a,h)anthracene in associated samples were qualified estimated (J/UJ).

SDG 360-24343-1 (OCRI-8)

In the continuing calibration associated with a subset of samples, the RRF for benzoic acid (0.0166), 2,4-dinitrophenol (0.0372), 4,6-dinitro 2-methyl phenol (0.0399), and 2-nitroaniline (0.0449) were less than the QC limit of 0.05. The percent difference for 4-nitrophenol (31), 4,6-dinitro 2-methyl phenol (27), and dibenzo (a,h) anthracene (26) exceeded the QC limit of 25. The results for benzoic acid, 2,4-dinitrophenol, and 2-nitroaniline in associated samples were qualified

previously under the initial calibration criteria. Associated sample results for 4,6-dinitro 2-methyl phenol were non-detect and were rejected (R). The results for 4-nitrophenol and dibenz(a,h)anthracene in associated samples were qualified estimated (J/UJ).

SDG 360-24365-1 (OCRI-9)

In the continuing calibration associated with a subset of samples, the RRF for benzoic acid (0.0148) was less than the QC limit of 0.05. The result for benzoic acid in associated sample OC-SB-447-18/20-XXX was qualified previously during the initial calibration review.

SDG 360-24444-1 (OCRI-11)

In the continuing calibration associated with a subset of samples, the RRF for 2-nitroaniline (0.0454) was less than the QC limit of 0.05. The results for 2-nitroaniline in associated samples were qualified previously during the initial calibration review.

3.4 LABORATORY CONTROL SAMPLES

In a subset of LCS runs, the following target compounds did not fall within project limits for recovery or RPD:

- 1-methylnaphthalene
- 1,1'- biphenyl
- 1,3-dichlorobenzene
- 2-methyl phenol
- 2,3,4,6-tetrachlorophenol
- 3&4 methyl phenol
- 3,3'-dichlorobenzidine
- Acetophenone
- aniline
- atrazine
- benzoic acid
- bis(2-chloroethyl) ether
- caprolactum
- diphenyl methanone
- diphenyl ether
- n-nitrosodi-n-propylamine
- indeno[1,2,3-cd]pyrene

A summary of LCS qualification actions is presented in Table 3.3 with results being assigned a validation qualifier reason code of LCS-H, LCS-L, or LCS-RPD. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 360-24173-1 (OCRI-1)

For a subset of samples, the LCS and/or LCSD percent recovery of aniline (28), 2,3,4,6-tetrachlorophenol (160), atrazine (192), caprolactum (195), diphenyl methanone (148), and diphenyl ether (154) are outside of the QC limits. The RPD between the LCS and LCSD percent recoveries for aniline (90), 1,1'- biphenyl (56), 2,3,4,6-tetrachlorophenol (71), atrazine (72), caprolactum (68), diphenyl methanone (51), diphenyl ether (68) and 1-methylnaphthalene (62) exceeded the QC limit of 30. The result for aniline, 1,1'- biphenyl, 2,3,4,6-tetrachlorophenol, atrazine, caprolactum, diphenyl methanone, diphenyl ether, and 1-methylnaphthalene in associated samples were qualified estimated (J/UJ).

SDG 360-24194-1 (OCRI-2)

For a subset of samples, the LCS and/or LCSD percent recovery of aniline (28), 2,3,4,6-tetrachlorophenol (160), atrazine (192), caprolactum (195), diphenyl methanone (benzophenone) (148), and diphenyl ether (154) are outside of the QC limits. The RPD between the LCS and LCSD percent recoveries for aniline (90), 1,1'- biphenyl (56), 2,3,4,6-tetrachlorophenol (71), atrazine (72), caprolactum (68), diphenyl methanone (benzophenone) (51), diphenyl ether (68) and 1-methylnaphthalene (62) exceeded the QC limit of 30. The results for aniline, 1,1'- biphenyl, 2,3,4,6-tetrachlorophenol, atrazine, caprolactum, diphenyl methanone (benzophenone), diphenyl ether, and 1-methylnaphthalene in associated samples OC-SB-421-0.0/1.0-XXX and OC-SB-421-10.5/12.5-XXX were qualified estimated (J/UJ).

For a subset of samples, the LCS and/or LCSD percent recovery of 3,3'-dichlorobenzidine (33 and 33), aniline (38 and 31), benzoic acid (27), bis(2-chloroethyl) ether (34), and 1,3-dichlorobenzene (38) are less than the lower QC limits. Results for 3,3'-dichlorobenzidine, aniline, benzoic acid, bis(2-chloroethyl) ether, and 1,3-dichlorobenzene in associated samples OC-SB-421-8.0/10.0-XXX, OC-SB-424-0.0/1.0-XXX, OC-SB-424-17/19-XXX, OC-SB-425-7.0/9.0-XXX, OC-SB-425-18/19-XXX, and OC-SB-425-6.0/8.0-XXX were qualified estimated (J/UJ).

SDG 360-24223-1 (OCRI-3)

The LCS and/or LCSD percent recovery of aniline (35 and 38), benzoic acid (26 and 29), and bis (2-chloroethyl) ether (37) are less than the QC limits. The RPD between the LCS and LCSD percent recoveries for bis (2-chloroethyl) ether (45), 2-methyl phenol (43), 3&4 methyl phenol (34), acetophenone (40), and n-nitrosodi-n-propylamine (44) exceeded the QC limit of 30. Sample

results for aniline, benzoic acid, bis (2-chloroethyl) ether, 2-methyl phenol, 3&4 methyl phenol, acetophenone, and n-nitrosodi-n-propylamine were qualified estimated (J/UJ).

SDG 360-24251-1 (OCRI-5)

For a subset of samples, the LCS and/or LCSD (360-48462) percent recoveries of 3,3'-dichlorobenzidine (33 and 34), aniline (141), benzoic acid (22 and 20), and benzaldehyde (290 and 308) are outside the QC limits. Associated sample results for benzoic acid were qualified previously under the initial calibration criteria. Associated sample results for 3,3'-dichlorobenzidine were non-detect and were qualified estimated (UJ). Associated sample results for benzaldehyde and aniline were non-detect with no further action required.

For a subset of samples, the LCS and LCSD (360-48567) percent recoveries of 3,3'-dichlorobenzidine (32 and 32), aniline (32 and 29), and benzaldehyde (282 and 294) are outside QC limits. Associated sample result for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ). Associated sample results for benzaldehyde were non-detect with no further action required.

SDG 360-24309-1 (OCRI-6)

For a subset of samples, the LCS and/or LCSD percent recoveries of 3,3'-dichlorobenzidine (32 and 31), aniline (31 and 32), bis (2-chloroethyl) ether (37), and benzaldehyde (142) are outside the QC limits. Associated sample results for 3,3'-dichlorobenzidine, aniline, and bis (2-chloroethyl) ether were non-detect and were qualified estimated (UJ). Associated sample results for benzaldehyde were non-detect with no further action required.

For a subset of samples, the LCS and LCSD (360-48567) percent recoveries of 3,3'-dichlorobenzidine (32 and 32), aniline (32 and 29), and benzaldehyde (282 and 294) were outside of the QC limits. Associated sample result for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ). Associated sample results for benzaldehyde were non-detect with no further action required.

SDG 360-24327-1 (OCRI-7)

For a subset of samples, the LCS and/or LCSD percent recoveries of 3,3'-dichlorobenzidine (32 and 31), aniline (31and 32), bis (2-chloroethyl) ether (37), and benzaldehyde (142) are outside the QC limits. The RPD for bis (2-chloroethyl) ether (50) exceeds the QC limit of 30. Associated

sample results for 3,3'-dichlorobenzidine, aniline, and bis (2-chloroethyl) ether were non-detect and were qualified estimated (UJ). Associated sample results for benzaldehyde were non-detect with no further action required.

For a subset of samples, the LCS and LCSD percent recoveries of 3,3'-dichlorobenzidine (32/33 and 32/30) and aniline (26/27 and 26/30) were less than the QC limits. Associated sample results for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ).

SDG 360-24343-1 (OCRI-8)

For a subset of samples, the LCS and LCSD percent recoveries of 3,3'-dichlorobenzidine (32 and 33), aniline (27 and 28), and benzoic acid (25) were less than the QC limits. Associated sample results for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ).

For a subset of samples, the LCS and LCSD percent recoveries of 3,3'-dichlorobenzidine (32 and 33) and aniline (26 and 27) were less than the QC limits. Associated sample results for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ).

SDG 360-24365-1 (OCRI-9)

For a subset of samples, the LCS and LCSD percent recoveries of aniline (27 and 26) were less than the lower QC limit of 40. Associated sample results for aniline were non-detect and were qualified estimated (UJ).

For a subset of samples, the LCS and LCSD percent recoveries of aniline (27 and 28), 3,3'-dichlorobenzidine (32 and 33), and benzoic acid (25) were less than the lower QC limit of 40. Associated sample results for aniline, benzoic acid, and 3,3'-dichlorobenzidine were non-detect and were qualified estimated (UJ).

SDG 360-24417-1 (OCRI-10)

For a subset of samples, the LCS and LCSD percent recoveries of aniline (27, 26, 31, and 38) are outside the QC limits. Results for aniline in the associated samples were non-detect and the reporting limits were qualified estimated (UJ).

For a subset of samples, the LCS and LCSD percent recoveries of aniline (31 and 33) were less than the QC limits. Associated sample results for aniline were non-detect and were qualified estimated (UJ).

SDG 360-24444-1 (OCRI-11)

For a subset of samples, the LCS and LCSD percent recoveries of aniline (29 and 31) and bis(2-ethylhexyl)phthalate (141 and 141) are outside the QC limits. The result for aniline in associated sample OC-SB-459-26/28-XXX was non-detect and was qualified estimated (UJ). The associated sample result for bis(2-ethylhexyl)phthalate was qualified estimated (J).

For a subset of samples, the LCS and LCSD percent recoveries of aniline (31 and 33) were less than the QC limits. Associated sample results for aniline were non-detect and were qualified estimated (UJ).

SDG 360-24454-1 (OCRI-12)

For a subset of samples, the LCS and LCSD percent recoveries of aniline (29 and 31) and bis(2-ethylhexyl)phthalate (141 and 141) are outside the QC limits (LCS 360-49016). The results for aniline in associated samples were non-detect and were qualified estimated (UJ). The associated sample results for bis(2-ethylhexyl)phthalate were non-detect with no further action required.

SDG 360-24499-1 (OCRI-13)

The LCS and LCSD percent recoveries of aniline (29/31 and 27/30) and bis(2-ethylhexyl)phthalate (141/141 and 159/158) are outside the QC limits. The results for aniline in associated samples were qualified estimated (J/UJ). The results for bis(2-ethylhexyl)phthalate in associated samples were non-detect with no further action required.

SDG 360-24563-1 (OCRI-14)

The LCS and LCSD percent recoveries of aniline (27 and 30) and bis(2-ethylhexyl)phthalate (159 and 158) are outside the QC limits. The results for aniline in associated samples were non-detect and were qualified estimated (UJ). The reported detections for bis(2-ethylhexyl)phthalate were qualified estimated (J).

For a subset of samples, the LCS and LCSD percent recoveries of aniline (31 and 33) and indeno[1,2,3-cd] pyrene (154 and 144) exceeded the QC limits. Results for indeno[1,2,3-cd]

pyrene were non-detect with no further action required. Associated sample results for aniline were non-detect and were qualified estimated (UJ).

SDG 360-24582-1 (OCRI-15)

For a subset of samples, the LCS and LCSD percent recoveries of aniline (31 and 31) and indeno[1,2,3-cd]pyrene (154 and 144) are outside of the QC limits. The results for aniline in associated samples were non-detect and were qualified estimated (UJ). Associated sample detections of indeno[1,2,3-cd]pyrene were qualified estimated (J).

For a subset of samples, the LCS and LCSD percent recoveries of aniline (32 and 34) are less than the lower QC limit of 40. The results for aniline in associated samples were non-detect and were qualified estimated (UJ).

SDG 360-24634-1 (OCRI-16)

The LCS and LCSD percent recoveries of aniline (32 and 34) are less than the lower QC limit of 40. The results for aniline in associated samples were non-detect and were qualified estimated (UJ).

SDG 360-24665-1 (OCRI-17)

The LCS and LCSD percent recoveries of aniline (30 and 31) are less than the lower QC limit. The LCS/LCSD RPD of benzoic acid (31) exceeded the QC limit of 30. The results for aniline and benzoic acid were non-detect and were qualified estimated (UJ).

SDG 360-24686-1 (OCRI-18)

The LCS and LCSD percent recoveries of aniline (23 and 25) are less than the lower QC limit. The results for aniline were non-detect and were qualified estimated (UJ).

3.5 MATRIX SPIKES

Approximately one in 20 soil samples were analyzed as MS/MSD runs. The following target compounds did not fall within project limits for recovery or RPD in at least one MS or MSD sample, and results were qualified:

- 1,2-dichlorobenzene
- 1,3-dichlorobenzene
- 2-nitroaniline
- 2,3,4,6-tetrachlorophenol

- 2,4-dinitrophenol
- 3-nitroaniline
- 3,3'-dichlorobenzidine
- 4-nitrophenol
- 4-chloroaniline
- 4,6-dinitro-2-methylphenol
- acetophenone
- aniline
- azobenzene
- bis(2-ethylhexyl) phthalate
- benzyl alcohol
- bis (2-chloroethyl) ether
- caprolactum
- carbazole
- benzo[a]pyrene
- benzo[b]fluoranthene
- benzo[g,h,i]perylene
- benzo[k]fluoranthene
- dibenz(a,h)anthracene
- di-n-octyl phthalate
- n-nitrosodiphenylamine
- n-nitrosodi-n-propylamine
- hexachlorocyclopentadiene
- hexachloroethane
- indeno[1,2,3-cd]pyrene

A summary of MS/MSD qualification actions is presented in Table 3.3 with results being assigned a validation qualifier reason code of MS-H, MS-L, or MS-RPD. Detailed discussions of qualification actions for each SDG are presented in the following sections.

In addition, all of the MSD percent recoveries failed low in sample OC-SB-455-6.0/8.0-XXX and all of the RPDs were outside of criteria. All results for samples OC-SB-455-6.0/8.0-XXX and OC-SB-455-6.0/8.0-DUP were qualified estimated (UJ).

SDG 360-24194-1 (OCRI-2)

Sample OC-SB-421-8.0/10.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2,4-dinitrophenol (176 and 175), benzaldehyde (142), benzo (a) pyrene (311 and 305), benzoic acid (133), and pentachlorophenol (246 and 240) exceed the upper QC limits. The MS and/or MSD percent recoveries of 3,3'-dichlorobenzidine (37), bis(2-ethylhexyl) phthalate (35 and 26), hexachlorocyclopentadiene (0 and 0), and benzyl alcohol (19) are less than the lower QC limits. Results for 2,4-dinitrophenol, benzaldehyde, benzo (a) pyrene, benzoic acid, and

pentachlorophenol in the unspiked sample OC-SB-421-8.0/10.0-XXX are non-detect with no further action required. Results for 3,3'-dichlorobenzidine, bis(2-ethylhexyl) phthalate, and benzyl alcohol in the unspiked sample OC-SB-421-8.0/10.0-XXX were qualified estimated (J/UJ). The result for hexachlorocyclopentadiene in the unspiked sample OC-SB-421-8.0/10.0-XXX was non-detect and was rejected (R).

SDG 360-24223-1 (OCRI-3)

Sample OC-SB-426-5.0/7.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries for 1,2-dichlorobenzene (34), 1,3-dichlorobenzene (31 and 28), 2,4-dinitrophenol (24 and 25), acetophenone (39 and 35), aniline (29 and 20), bis (2-chloroethyl) ether (29 and 29), hexachlorocyclopentadiene (21 and 24), hexachloroethane (31), benzyl alcohol (25), and n-nitrosodi-n-propylamine (34 and 36) are less than the QC limits. Results for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 2,4-dinitrophenol, acetophenone, aniline, bis (2-chloroethyl) ether, hexachlorocyclopentadiene, hexachloroethane, benzyl alcohol, and n-nitrosodi-n-propylamine in the unspiked samples OC-SB-426-5.0/7.0-XXXand OC-SB-426-5.0/7.0-DUP were non-detect and were qualified estimated (UJ).

SDG 360-24244-1 (OCRI-4)

Sample OC-SB-443-0.0/1.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries for 2,3,4,6-tetrachlorophenol (31 and 27), 3,3'-dichlorobenzidine (24 and 28), aniline (25 and 30), caprolactum (27 and 23), bis (2-ethylhexyl) phthalate (-950 and -533), hexachlorocyclopentadiene (25 and 26), and carbazole (1) are less than the QC limits. The MS and/or MSD percent recoveries for 2,4-dinitrophenol (194 and 193) and benzoic acid (136 and 134) exceed the upper QC limit. The RPDs between the MS and MSD percent recoveries for azobenzene (44), bis (2-ethylhexyl) phthalate (66), and carbazole (99) exceed the QC limit of 30. The unspiked sample result for bis (2-ethylhexyl) phthalate is greater than four times the spiking concentration with no further action required. The unspiked sample results for 2,3,4,6-tetrachlorophenol, 3,3'-dichlorobenzidine, aniline, caprolactum, hexachlorocyclopentadiene, azobenzene, and carbazole were non-detect and were qualified estimated (UJ). The unspiked sample results for 2,4-dinitrophenol and benzoic acid were non-detect with no further action required.

SDG 360-24251-1 (OCRI-5)

Sample OC-SB-443-5.0/7.0-XXX was submitted for MS/MSD analysis. The MS and MSD percent recoveries of 3,3'-dichlorobenzidine (32 and 33), aniline (27 and 26), and hexachlorocyclopentadiene (6 and 7) are less than the QC limits. The unspiked results for 3,3'-dichlorobenzidine and aniline in samples OC-SB-443-5.0/7.0-XXX and OC-SB-443-5.0/7.0-DUP were non-detect and were qualified estimated (UJ). The unspiked result for hexachlorocyclopentadiene in samples OC-SB-443-5.0/7.0-XXX and OC-SB-443-5.0/7.0-DUP was non-detect and was rejected (R).

Sample OC-SB-446-5.0/7.0-XXX was submitted for MS/MSD analysis. The MS and MSD percent recoveries of 3,3'-dichlorobenzidine (21 and 23), benzaldehyde (268 and 264), and 4-nitrophenol (3 and 3) are outside the QC limits. The unspiked result for 3,3'-dichlorobenzidine in samples OC-SB-446-5.0/7.0-XXX and OC-SB-446-5.0/7.0-DUP were non-detect and were qualified estimated (UJ). The unspiked result for benzaldehyde in samples OC-SB-446-5.0/7.0-XXX and OC-SB-446-5.0/7.0-DUP were non-detect with no further action required. The unspiked results for 4-nitrophenol in samples OC-SB-446-5.0/7.0-XXX and OC-SB-446-5.0/7.0-DUP were non-detect and were rejected (R).

SDG 360-24309-1 (OCRI-6)

Sample OC-SB-430-8.0/10-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2,4-dinitrophenol (27), 3,3'-dichlorobenzidine (21 and 23), aniline (24 and 27), hexachlorocyclopentadiene (24 and 31) are less than the QC limits. The unspiked sample results for 2,4-dinitrophenol, 3,3'-dichlorobenzidine, aniline, hexachlorocyclopentadiene in associated samples OC-SB-430-8.0/10-XXX and OC-SB-430-8.0/10-DUP were non-detect and were qualified estimated (UJ).

SDG 360-24327-1 (OCRI-7)

Sample OC-SB-410-6.0/8.0-XXX was submitted for MS/MSD analysis. The MS and MSD percent recoveries for 3,3'-dichlorobenzidine (27 and 31) and aniline (26 and 30) are less than the QC limits. The unspiked sample results for 3,3'-dichlorobenzidine and aniline were non-detect and were qualified estimated (UJ).

SDG 360-24343-1 (OCRI-8)

Sample OC-SB-451-2.5/4.5-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recovery of 3,3'-dichlorobenzidine (6 and 8), 4-chloroaniline (26 and 31), aniline (17 and 16), hexachlorocyclopentadiene (39), benzo[a]pyrene (23), benzo[b]fluoranthene (23), benzo[g,h,i]perylene (27), benzo[k]fluoranthene (23), dibenz(a,h)anthracene (31), di-n-octyl phthalate (29),and indeno[1,2,3-cd]pyrene (23) are less than the QC limits. The RPD between the MS and MSD percent recovery for benzo[a]pyrene (69), benzo[b]fluoranthene (70), benzo[g,h,i]perylene (60), benzo[k]fluoranthene (73), dibenz(a,h)anthracene (59), di-n-octyl phthalate (62),and indeno[1,2,3-cd]pyrene (61) exceeded the QC limit of 30. The results for 3,3'-dichlorobenzidine, 4-chloroaniline, aniline, hexachlorocyclopentadiene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, dibenz(a,h)anthracene, di-n-octyl phthalate, and indeno[1,2,3-cd]pyrene in the unspiked samples OC-SB-451-2.5/4.5-XXX and OC-SB-451-2.5/4.5-DUP were qualified estimated (J/UJ).

Sample OC-SB-455-6.0/8.0-XXX was submitted for MS/MSD analysis. Low recoveries were reported for all spike compounds, and all of the RPDs exceeded limits outside of criteria. All results for samples OC-SB-455-6.0/8.0-XXX and OC-SB-455-6.0/8.0-DUP were non-detect and were qualified estimated (UJ).

SDG 360-24365-1 (OCRI-9)

Sample OC-SB-442-8.0/10-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of aniline (23 and 23), hexachlorocyclopentadiene (29 and 21), and benzoic acid (24) are less than the lower QC limits. The RPD between the MS and MSD percent recoveries for benzoic acid (102) exceeds the QC limit of 50. The unspiked sample results for aniline, hexachlorocyclopentadiene, and benzoic acid were non-detect and were qualified estimated (UJ).

SDG 360-24417-1 (OCRI-10)

Sample OC-SB-465-8.0/10-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2,4-dinitrophenol (22 and 18), aniline (30 and 29), benzoic acid (18 and 18), hexachlorocyclopentadiene (35 and 34), and 4,6-dinitro-2-methylphenol (23) are less than the QC limits. The MS percent recovery for 1,1'-biphenyl (166), 1-methylnaphthalene (156), 2,3,4,6-tetrachlorophenol (159), atrazine (194), benzophenone (170), caprolactum (189), diphenyl oxide (166) exceeded the upper QC limit of 140. The RPD between the MS percent recovery of 1,1'-

biphenyl (68), 1-methylnaphthalene (67), 2,3,4,6-tetrachlorophenol (72), atrazine (72), benzophenone (59), caprolactum (73), and diphenyl oxide (67) exceeded the QC limit of 50. The unspiked sample results in samples OC-SB-465-8.0/10-XXX and OC-SB-465-8.0/10-DUP for 1,1'-biphenyl (biphenyl), 1-methylnaphthalene, 2,3,4,6-tetrachlorophenol, atrazine, benzophenone (diphenylmethanone), caprolactum, 2,4-dinitrophenol, aniline, benzoic acid, hexachlorocyclopentadiene, 4,6-dinitro-2-methylphenol and diphenyl oxide (diphenyl ether) were non-detect and were qualified estimated (UJ).

SDG 360-24444-1 (OCRI-11)

Sample OC-SB-459-6.0/8.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 3,3'-dichlorobenzidine (0 and 33), aniline (37 and 39), atrazine (0), bis(2-ethylhexyl)phthalate (-4770), NDMA (28 and 30), hexachlorocyclopentadiene (0 and 0), benzo[b]fluoranthene (0), and benzo[k]fluoranthene (0) are less than the lower QC limits. The MS and/or MSD percent recovery for 2,4-dinitrophenol (131 and 133), 2-nitroaniline (2770 and 2950), 3-nitroaniline (1570 and 1470), benzoic acid (194 and 193), di-n-octyl phthalate (150 and 149), and bis(2-ethylhexyl)phthalate (1160) exceeded the upper QC limits. The RPD between the MS and MSD percent recovery of atrazine (200), hexachlorocyclopentadiene (200), benzo[b]fluoranthene (200), and benzo[k]fluoranthene (200) exceeded the QC limit of 50. The unspiked sample results in associated samples OC-SB-459-6.0/8.0-XXX and OC-SB-459-6.0/8.0-DUP for bis(2-ethylhexyl)phthalate were greater than four times the spiking concentration with no further action required. The associated samples unspiked results for 2,4-dinitrophenol, 3-nitroaniline, benzoic acid, di-n-octyl phthalate were non-detect with no further action required. The associated samples unspiked results for 2-nitroaniline were qualified previously under the initial calibration criteria. The associated samples unspiked results for aniline and NDMA were non-detect and were qualified estimated (UJ). The associated samples unspiked results for 3,3'-dichlorobenzidine, atrazine, hexachlorocyclopentadiene, benzo[b]fluoranthene, and benzo[k]fluoranthene were non-detect and were rejected (R).

Sample OC-SB-467-6.0/8.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of aniline (28 and 26), bis(2-ethylhexyl)phthalate (-19 and -13), benzoic acid (27), and hexachlorocyclopentadiene (26 and 29) are less than the lower QC limits. The RPD between the MS and MSD percent recovery of benzoic acid (82) exceeded the QC limit of 50. The unspiked sample results in associated samples OC-SB-467-6.0/8.0-XXX and OC-SB-467-6.0/8.0-DUP aniline, benzoic acid, and hexachlorocyclopentadiene were non-detect and were qualified

estimated (UJ). The associated samples unspiked results for bis(2-ethylhexyl)phthalate were qualified estimated (J).

SDG 360-24563-1 (OCRI-14)

Sample OC-SB-427-8.0/10-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2,4-dinitrophenol (17 and 18), 2-nitroaniline (16), 3,3'-dichlorobenzidine (15 and 15), 3-nitroaniline (37 and 37), 4,6-dinitro-2-methylphenol (18 and 17), 4-chloroaniline (3 and 6), aniline (17 and 10), benzo[a]pyrene (35), bis (2-ethylhexyl) phthalate (-604 and -810), 4-nitrophenol (6 and 6), hexachlorocyclopentadiene (0 and 0), hexachloroethane (39 and 36), and NDPA (35) are less than the QC limits. The RPDs between the MS and MSD percent recovery for 2-nitroaniline (104), 4-chloroaniline (126), and benzo[a]pyrene (90) exceeded the QC limit of 50. Associated samples are OC-SB-427-8.0/10-XXX and OC-SB-427-8.0/10-DUP. The unspiked sample results for bis (2-ethylhexyl) phthalate were greater than four times the spiking concentration with no further action required. The unspiked sample result for 2,4-dinitrophenol, 2-nitroaniline, 3,3'-dichlorobenzidine, 3-nitroaniline, 4,6-dinitro-2-methylphenol, aniline, benzo[a]pyrene, hexachloroethane, and NDPA were qualified estimated (J/UJ). The unspiked sample results for 4-chloroaniline, 4-nitrophenol, and hexachlorocyclopentadiene were non-detect and were rejected (R).

Sample OC-SB-456-7.0/9.0-XXX was submitted for MS/MSD analysis. The MS and MSD percent recoveries of aniline (26 and 25) was less than the QC limit. The MSD percent recovery of bis (2-ethylhexyl) phthalate (786) exceeded the upper QC limit. The RPD between the MS and MSD percent recovery for bis (2-ethylhexyl) phthalate (156) exceeded the QC limit of 50. Associated samples are OC-SB-456-7.0/9.0-XXX and OC-SB-456-7.0/9.0-DUP. The unspiked sample results for aniline and bis (2-ethylhexyl) phthalate were non-detect and were qualified estimated (UJ).

SDG 360-24582-1 (OCRI-15)

Sample OC-SB-416-0.0/1.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2-nitroaniline (0 and 0), 3,3'-dichlorobenzidine (0 and 0), 3-nitroaniline (35), 4-chloroaniline (0 and 0), aniline (0 and 0), benzyl alcohol (0 and 0), bis(2-ethylhexyl) phthalate (30), and di-n-butyl phthalate (0) are less than the lower QC limits. The MS and/or MSD percent recoveries of 2,4-dinitrophenol (190 and 185) exceeded the upper QC limit. The RPD between the MS and MSD percent recovery for 3-nitroaniline (74), bis(2-ethylhexyl)phthalate (106), and di-n-

butyl phthalate (200) exceeded the QC limit of 50. Associated samples are OC-SB-416-0.0/1.0-XXX and OC-SB-416-0.0/1.0-DUP. The unspiked sample results for 2,4-dinitrophenol were non-detect with no further action required. The unspiked sample results for 3-nitroaniline and bis (2-ethylhexyl) phthalate were qualified estimated (J/UJ). The unspiked sample results for 2-nitroaniline, 3,3'-dichlorobenzidine, 4-chloroaniline, aniline, benzyl alcohol, and di-n-butyl phthalate were non-detect and were qualified rejected (R).

SDG 360-24665-1 (OCRI-17)

Sample OC-SS-434-0.0/1.0-XXX was submitted for MS/MSD analysis. The MS and/or MSD percent recoveries of 2-nitroaniline (18 and 14), 3,3'-dichlorobenzidine (0 and 0), 3-nitroaniline (8 and 9), 4-chloroaniline (0 and 18), aniline (14 and 5), azobenzene (45), hexachlorocyclopentadiene (26 and 18), NDPA (34 and 27), and hexachloroethane (31) are less than the lower QC limits. The RPD between the MS and MSD percent recovery for aniline (97), indeno[1,2,3-cd]pyrene (51), and 4-chloroaniline (200) exceeded the QC limit of 50. The unspiked sample reporting limits for 2-nitroaniline, azobenzene, indeno[1,2,3-cd]pyrene, hexachlorocyclopentadiene, NDPA, and hexachloroethane were qualified estimated (UJ). The unspiked sample results for 3-nitroaniline, aniline, 3,3'-dichlorobenzidine, 4-chloroaniline were non-detect and were rejected (R).

SDG 360-24686-1 (OCRI-18)

Sample OC-SB-473-4.0/6.0-XXX was submitted for MS/MSD analysis. The MS and MSD percent recoveries of 2-nitroaniline (23 and 24), hexachlorocyclopentadiene (14 and 12), and hexachloroethane (31 and 31) are less than the lower QC limits. The unspiked sample results for 2-nitroaniline, hexachlorocyclopentadiene, and hexachloroethane were non-detect and were qualified estimated (UJ).

3.6 FIELD DUPLICATES

SDG 360-24582-1 (OCRI-15)

Sample OC-SB-416-0.0/1.0-XXX was submitted with a field duplicate sample for OC-SB-416-0.0/1.0-DUP. The RPD for benzo[a]anthracene (104), benzo[a]pyrene (95), benzo[b]fluoranthene (69), chrysene (70), fluoranthene (59), and indeno(1,2,3-cd)pyrene (67) exceeded the QC limit of 50. The results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, chrysene, fluoranthene, and indeno(1,2,3-cd)pyrene in samples OC-SB-416-0.0/1.0-XXX and OC-SB-416-0.0/1.0-DUP were qualified estimated (J).

3.7 SURROGATE RECOVERY

SDG 360-24173-1 (OCRI-1)

Surrogate percent recoveries for the dilution analyses of samples OC-SB-416-8.0/9.0-XXX (50x) and OC-SB-420-0.0/1.0-XXX (10x and 100x) are zero, and sample OC-SB-412-6.0/7.0-XXX (5x) is ten. Surrogate percent recoveries from the initial analysis were within limits, and results from dilutions were reported without qualification.

The surrogate percent recoveries for terphenyl-d14 in samples OC-SB-416-8.0/9.0-XXX (704) and OC-SB-420-6.5/8.5-XXX (285) exceed the QC limit. The two other base/neutral surrogates were within limits, and results were accepted without qualification.

Surrogate percent recoveries for 2-fluorophenol (0), phenol-d5 (0), and 2,4,6-tribromophenol (4) in sample OC-SB-420-0.0/1.0-XXX are less than ten. The laboratory reanalyzed the sample with similar results. Acid fraction results in sample OC-SB-420-0.0/1.0-XXX that were non-detect were rejected (R). The reported detection for 2,4-dimethylphenol in sample OC-SB-420-0.0/1.0-XXX was qualified estimated (J).

SDG 360-24194-1 (OCRI-2)

Surrogate percent recoveries for the dilution analyses of sample OC-SB-421-0.0/1.0-XXX (10x and 20x) and OC-SB-421-10.5/12.5-XXX (20x, 100x, and 1000x) were zero. Surrogate percent recoveries from the initial analysis were within criteria with no further action required.

SDG 360-24223-1 (OCRI-3)

Surrogate percent recoveries for 2-fluorophenol (22), and 2,4,6-tribromophenol (24) in sample OC-SB-419-0.0/1.0-XXX are less than the lower QC limit of 30. Acid fraction results in sample OC-SB-419-0.0/1.0-XXX were qualified estimated (UJ).

SDG 360-24244-1 (OCRI-4)

Surrogate percent recoveries for 2,4,6-tribromophenol in samples OC-SB-432-5.0/7.0-XXX (12), OC-SB-432-0.0/1.0-XXX (18), OC-SB-432-14/16-XXX (11) are less than the lower QC limit of 30. The other surrogate recoveries are within criteria with no further action required.

SDG 360-24365-1 (OCRI-9)

The percent recoveries of 2-fluorobiphenyl (24) and terphenyl-d14 (28) in sample OC-SB-447-3.0/5.0-XXX are less than the lower QC limit. Based upon professional judgment, base/neutral fraction results in sample OC-SB-447-3.0/5.0-XXX were qualified estimated (J/UJ).

SDG 360-24417-1 (OCRI-10)

Surrogate percent recoveries in sample OC-SB-459-0.0/1.0-XXX ranged from eight percent to nine percent. Results in sample OC-SB-459-0.0/1.0-XXX that were non-detect were rejected (R). Reported detection of bis(2ethylhexyl)phthalate was qualified estimated (J).

SDG 360-24444-1 (OCRI-11)

Surrogate percent recoveries in sample OC-SB-459-0.0/1.0-XXX ranged from eight percent to nine percent. Results in sample OC-SB-459-0.0/1.0-XXX that were non-detect were rejected (R). Reported detection of bis(2ethylhexyl)phthalate was qualified estimated (J).

SDG 360-24499-1 (OCRI-13)

The 2,4,6-tribromophenol percent recovery in sample OC-SB-417-8.0/10-XXX was less than the lower QC limit of 30, the other surrogates were in criteria with no further action required.

3.8 INTERNAL STANDARDS

A subset of samples was qualified due to internal standard responses. Sample results are summarized on Table 3.3 with the reason code IS-L or IS-H.

SDG 360-24173-1 (OCRI-1)

The percent area responses for chrysene-d12 and perylene-d12 in the dilution reanalysis for bis (2-ethylhexyl)phthalate in samples OC-SB-420-6.5/8.5-XXX (23 and 378) and OC-SB-416-8.0/9.0-XXX (8.9 and 304) are outside the QC limits of 50 to 150. The results for bis(2-ethylhexyl)phthalate in samples OC-SB-420-6.5/8.5-XXX and OC-SB-416-8.0/9.0-XXX were qualified estimated (J).

SDG 360-24194-1 (OCRI-2)

The percent area response for 1,4-dichlorobenzene-d4 (43), naphthalene-d8 (49.8), and perylene-d12 (38) in sample OC-SB-425-0.0/1.0-XXX are less than the QC limit of 50. Results for

compounds associated with these internal standards from the September 10, 2009 analysis reported in sample OC-SB-425-0.0/1.0-XXX were qualified estimated (J/UJ).

SDG 360-24244-1 (OCRI-4)

In the low level analysis for NDMA, the percent area response for the internal standard 1,4-dichlorobenzene-d4 in sample OC-SB-443-6.0/8.0-XXX (37) is less than the control limit of 50 percent. The result for NDMA in sample OC-SB-443-6.0/8.0-XXX was non-detect and was qualified estimated (U).

SDG 360-24251-1 (OCRI-5)

The internal standard percent area responses for perylene-d12 in samples OC-SB-441-17/19-XXX (204), OC-SB-446-15/17-XXX (209), OC-SB-446-0.0/1.0-XXX (250), and OC-SB-438-20/22-XXX (246) exceed the upper QC limit of 150 percent. Reported detection of indeno[1,2,3-cd]pyrene and benzo[g,h,i]perylene in sample OC-SB-446-0.0/1.0-XXX were qualified estimated (J). Results for analytes quantified under perylene-d12 in other associated samples were non-detect with no further action required.

SDG 360-24309-1 (OCRI-6)

The percent area response of perylene-d12 (230) exceeds the upper QC limit in sample OC-SB-407-0.0/1.0-XXX. The results for analytes quantified under perylene-d12 in sample OC-SB-407-0.0/1.0-XXX were non-detect with no further action required.

The percent area responses of perylene-d12 in samples OC-SB-430-0.0/1.0-XXX (42), OC-SB-430-8.0/10-XXX (32), and OC-SB-430-8.0/10-DUP (48), were less than the lower QC limit of 50. The results for analytes quantified under perylene-d12 in the associated samples were non-detect and were qualified estimated (UJ).

The percent area responses of chrysene-d12 (44) was less than the lower QC limit in sample OC-SB-430-8.0/10-XXX. The results for analytes quantified under chrysene -d12 in sample OC-SB-430-8.0/10-XXX were qualified estimated (J/UJ).

SDG 360-24327-1 (OCRI-7)

The percent area responses for chrysene-d12 and perylene-d12 in samples OC-SB-403-0.0/1.0-XXX (47 and 39), OC-SB-404-5.0/7.0-XXX (48 and 38), and OC-SB-403-6.0/8.0-XXX (44 and

36) are less than the QC limit of 50. The results for chrysene, di-n-octyl phthalate, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, indeno[1,2,3-cd]pyrene, dibenz(a,h)anthracene, and benzo[g,h,i]perylene in samples OC-SB-403-0.0/1.0-XXX, OC-SB-404-5.0/7.0-XXX, and OC-SB-403-6.0/8.0-XXX were non-detect and were qualified estimated (UJ).

SDG 360-24365-1 (OCRI-9)

The percent area responses for chrysene-d12 (42 and 39) and perylene-d12 (43 and 41) in sample OC-SB-447-0.0/1.0-XXX were less than the lower QC limit of 50. The results for analytes quantified using these internal standards in sample OC-SB-447-0.0/1.0-XXX were qualified estimated (J/UJ).

The percent area responses for phenanthrene-d10 (210), chrysene-d12 (206), and perylene-d12 (253) in sample OC-SB-452-0.0/1.0-XXX were greater than the upper QC limit of 100. The detections for analytes quantified under these internal standards in sample OC-SB-452-0.0/1.0-XXX were qualified estimated (J).

SDG 360-24444-1 (OCRI-11)

The percent area responses for chrysene-d12 in samples OC-SB-459-6.0/8.0-DUP (39) and OC-SB-459-6.0/8.0-XXX (43) were less than the lower QC limit of 50. The results for pyrene, butyl benzyl phthalate, 3,3'-dichlorobenzidine, benzo[a]anthracene, and chrysene in samples OC-SB-459-6.0/8.0-DUP and OC-SB-459-6.0/8.0-XXX were qualified estimated (J/UJ).

SDG 360-24454-1 (OCRI-12)

The percent area responses for chrysene-d12 (48) and perylene-d12 (44) in sample OC-SB-472-0.0/1.0-XXX, and perylene-d12 (45) in sample OC-SB-472-30/32-XXX were less than the lower QC limit of 50. The result for pyrene, butyl benzyl phthalate, 3,3'-dichlorobenzidine, bis(2-ethylhexyl)phthalate, benzo[a]anthracene, and chrysene in sample OC-SB-472-0.0/1.0-XXX and di-n-octyl phthalate, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, indeno [1,2,3-cd]pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene in samples OC-SB-472-0.0/1.0-XXX and OC-SB-472-30/32-XXX were qualified estimated (J/UJ).

SDG 360-24563-1 (OCRI-14)

The percent area responses for naphthalene-d8 (203), chrysene-d12 (213), phenanthrene-d10 (236), and acenaphthene –d10 (224) in sample OC-SB-456-0.0/1.0-XXX were greater than the upper QC limit. The reported detections for analytes quantified under these internal standards in sample OC-SB-456-0.0/1.0-XXX were qualified estimated (J).

The percent area responses for perylene-d12 (36) in samples OC-SB-427-8.0/10-DUP (36) and OC-SB-427-8.0/10-XXX (444) were below the QC limits. The results for analytes quantified under perylene-d12 in sample OC-SB-427-8.0/10-DUP were non-detect and were qualified estimated (UJ). The results for analytes quantified under perylene-d12 in sample OC-SB-427-8.0/10-XXX were non-detect with no further action required.

The percent area response for chrysene-d12 in samples OC-SB-427-8.0/10-DUP (304) and OC-SB-427-8.0/10-XXX (281) were greater than the upper QC limit. The reported detection for analytes quantified under chrysene-d12 in samples OC-SB-427-8.0/10-DUP and OC-SB-427-8.0/10-XXX were qualified estimated (J).

SDG 360-24582-1 (OCRI-15)

The percent area response of chrysene-d12 in sample OC-SB-415-0.0/1.0-XXX (48) was less than the lower QC limit of 50. The result for pyrene, butyl benzyl phthalate, 3,3'-dichlorobenzidine, benzo[a]anthracene, bis(2-ethylhexyl)phthalate, and chrysene in sample OC-SB-415-0.0/1.0-XXX were qualified estimated (J/UJ).

SDG 360-24634-1 (OCRI-16)

The percent area responses of perylene-d10 in sample OC-SB-417-0.0/1.0-XXX (322) and OC-SB-429-0.0/1.0-XXX (240) exceeded the QC limit. Analytes quantified under that the internal standard were non-detect with no further action required.

SDG 360-24686-1 (OCRI-18)

The percent area response of perylene-d12 in sample OC-SS-458-0.0/1.0-XXX (47) was less than the lower QC limit of 50. Results for analytes quantified under perylene-d12 in sample OC-SS-458-0.0/1.0-XXX were qualified estimated.

3.9 PERFORMANCE EVALUATION SAMPLE (PES) RESULTS

PESs were submitted. With the exception of bis(2-chloroethoxy)methane, all PES compounds were reported within control limits indicating good accuracy. The laboratory performance for bis(2-chloroethoxy)methane indicates a high bias (-H) to the results. Bis(2-chloroethoxy)methane was not detected in samples and results were reported without qualification.

3.10 NDPA/DPA SEPARATION ANALYSES

Because the routine SVOC analysis using Method 8270C does not differentiate between NDPA and DPA (all detections of these compounds are reported as NDPA), a subset of Method 8270C samples was submitted to the laboratory for NDPA and DPA analysis with florisil clean up to separate these compounds. A listing of samples selected for the additional NDPA/DPA separation analysis is found on Table 1. For these samples, NDPA results from both the routine 8270C analysis and the florisil separation analysis were reported by the lab. During validation the NDPA results reported without florisil cleanup were removed from the final data set (refused) and the NDPA results from the florisil clean up were reported. Results reported from the florisil cleanup indicate the NDPA results reported in the routine 8270C analyses are a combination of NDPA and DPA.

SDG 360-24251-1 (OCRI-5)

Sample OC-SB-448-17/19-XXX had DPA reported in the unfractionated sample result and with fractionation. Both sets of data were reported by the lab. Based upon professional judgment, the unfractionated DPA result was refused, and the fractionated result was reported in the final data.

The case narrative states that DPA separation was not requested for sample OC-SB-433-0.0/1.0-XXX. But the lab performed a fractionation clean up and reported both the fractionated and unfractionated NDPA results. Based upon professional judgment, the unfractionated NDPA result was used in the final data set.

4.0 POLYCHLORINATED BIPHENYLS (PCB)

Samples were analyzed for PCBs by SW-846 Method 8082.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Blanks
* Surrogate Recovery
* Laboratory Control Sample
* Initial and Continuing Calibration Standards
* Matrix Spikes
* Field Duplicates
* PCB Identification
  Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.4.

4.1 DETECTION LIMITS

SDG 360-24582-1 (OCRI-15)

Sample OC-SS-403-0.0/1.0-XXX was analyzed at a 10X dilution and sample OC-SS-404-0.0/1.0-XXX was analyzed at a 5X dilution due to high concentrations of PCB-1260. Reporting limits for all other PCBs in these samples are elevated.

5.0 EXTRACTABLE PETROLEUM HYDROCARBONS (EPH)

Samples were analyzed for extractable petroleum hydrocarbons (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
* Field Duplicates
  Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.5. A summary of data validation actions is presented on Table 3.5.

5.1 SURROGATE RECOVERY

In a subset of samples the laboratory reported surrogate recoveries below the lower QC limit of 40. Samples include OC-SB-421-0.0/1.0-XXX (100X), OC-SB-432-14/16-XXX (20X), OC-SB-432-0.0/1.0-XXX (10X), OC-SB-427-12/14-XXX (20X), and OC-SB-447-3.0/5.0-XXX (10X). These samples were analyzed at dilutions, and based on professional judgment, results were not qualified due to surrogate recovery.

5.2 MATRIX SPIKES

SDG 360-24563-1 (OCRI-14)

The MS/MSD associated with sample OC-SB-427-8.0/10-XXX and its field duplicate OC-SB-427-8.0/10-DUP had percent recoveries below the lower QC limit of 40 for C19-C36 aliphatics (20/30) and C9-C18 aliphatics (25/33), which may indicate low bias (-L). Results for C19-C36 aliphatics, C9-C18 aliphatics, and total EPH in samples OC-SB-427-8.0/10-XXX and OC-SB-427-8.0/10-DUP were qualified as estimated (J/UJ). See Table 3.5 for a summary of validation qualification actions.

5.3 DETECTION LIMITS

Dilution analyses were performed on the samples below due to high target compound concentrations. Reporting limits for analytes that were not detected in the following samples are elevated:

- OC-SB-421-0.0/1.0-XXX (100X)
- OC-SB-432-0.0/1.0-XXX (10X)
- OC-SB-432-14/16-XXX (20X)
- OC-SB-447-0.0/1.0-XXX (10X)
- OC-SB-447-3.0/5.0-XXX (10X)
- OC-SB-427-8.0/10-DUP (5X)
- OC-SB-427-8.0/10-XXX (5X)
- OC-SB-428-0.0/0.1-XXX (10X)

6.0 VOLATILE PETROLEUM HYDROCARBONS (VPH)

Samples were analyzed for volatile petroleum hydrocarbon (VPH) by MADEP 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
* Field Duplicates
  Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.6. A summary of data validation actions is presented on Table 3.6.

6.1 SURROGATE RECOVERY

A subset of samples results were qualified due to low surrogate recovery. A summary of qualified results is presented on Table 3.6 with code SS-L.

360-24194-1 (OCRI-02)

Surrogate recoveries were below the lower QC limit of 70 in sample OC-SB-421-10.5/12.5-XXX for 2,5-dibromotoluene on both the photoionization detector (PID) [64] and flame ionization detector (FID) [62]. All VPH results for sample OC-SB-421-10.5/12.5-XXX were qualified as estimated (J/UJ).

The surrogate recovery was below the lower QC limit of 70 in sample OC-SB-421-8.0/10.0-XXX for 2,5-dibromotoluene on the PID (68). The C9-C10 aromatics result and the total VPH result in sample OC-SB-421-8.0/10.0-XXX were qualified as estimated (UJ) at the reporting limit.

360-24244 (OCRI-04)

Surrogate recoveries were below the lower QC limit of 70 for both the PID and FID analyses for 2,5-dibromotoluene in samples OC-SB-432-0.0/1.0-XXX (43/45), OC-SB-432-14/16-XXX

(51/55), and OC-SB-432-5.0/7.0-XXX (54/58). All VPH results for samples OC-SB-432-0.0/1.0-XXX, OC-SB-432-14/16-XXX, and OC-SB-432-5.0/7.0-XXX were qualified as estimated (J/UJ).

360-24251 (OCRI-05)

Surrogate recoveries were below the lower QC limit of 70 for both the PID and FID analyses for 2,5-dibromotoluene in samples OC-SB-440-0.0/1.0-XXX (58/62), OC-SB-440-23/25-XXX (57/60), and OC-SB-440-6.0/8.0-XXX (56/60). All VPH results were reported as non-detect by the laboratory for samples OC-SB-440-0.0/1.0-XXX, OC-SB-440-23/25-XXX, and OC-SB-440-6.0/8.0-XXX and were qualified as estimated (UJ) at the reporting limit.

360-24563 (OCRI-14)

Surrogate recoveries were below the lower QC limit of 70 for both the PID and FID analyses for 2,5-dibromotoluene in samples OC-SB-427-12/14-XXX (67/69) and OC-SB-428-8.0/10-XXX (55/58). All VPH results for samples OC-SB-427-12/14-XXX and OC-SB-428-8.0/10-XXX were qualified as estimated (J/UJ).

The surrogate recovery was below the lower QC limit of 70 in sample OC-SB-427-8.0/10.0-XXX for 2,5-dibromotoluene on the PID (61). The C9-C10 aromatics result and the total VPH result in sample OC-SB-427-8.0/10.0-XXX were qualified as estimated (UJ) at the reporting limit.

The surrogate recovery was below the lower QC limit of 70 in sample OC-SB-428-0.0/1.0-XXX for 2,5-dibromotoluene on the FID (69). The C5-C8 and C9-C12 aliphatic results and the total VPH result in sample OC-SB-428-0.0/1.0-XXX were qualified as estimated (UJ) at the reporting limit.

6.2 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-432-14/16-XXX (10X)\
- OC-SB-432-5.0/7.0-DUP (10X)
- OC-SB-459-6.0/8.0-DUP (5X)
- OC-SB-459-6.0/8.0-XXX (5X)
- OC-SB-447-3.0/5.0-XXX (5X)
- OC-SB-427-12/14-XXX (10X)
- OC-SB-428-8.0/10-DUP (10X)

7.0 TARGET ANALYTE LIST (TAL) (INCLUDING MERCURY)

Samples were analyzed for TAL metals by SW-846 Method 6010B and mercury by SW-846 Method 7471.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
Blanks
Laboratory Control Sample
Matrix Spike Analysis
Field Duplicates
Laboratory Duplicate Analysis
* Interference Check Sample
Serial Dilution Analysis
Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.7. A summary of data validation actions is presented on Table 3.7.

7.1 BLANKS

A subset of analyte results were qualified due to equipment or method blank detections. A summary of qualification actions is presented in Table 3.7. Results qualified due to blanks were assigned a reason code BL.

Aluminum, barium, calcium, copper, iron, lead, magnesium, manganese, mercury, nickel, selenium, silver, thallium, and zinc were reported in the equipment blanks. Aluminum, calcium, iron, and manganese are common cations detected in soils. Based upon professional judgment, sample detections of aluminum, calcium, iron, and manganese were not qualified due to equipment blank detections.

Sample detections of barium, copper, lead, magnesium, mercury, nickel, selenium, thallium, and zinc were evaluated against equipment blank results. Based upon professional judgment, reported detections of barium, magnesium, and nickel were not qualified. Reported detections of copper, lead,

mercury, selenium, silver, thallium, and zinc were evaluated on an SDG and associated equipment blank basis. Detailed discussions of qualification actions for each SDG are presented in the following sections.

The laboratory qualified samples results associated with method blank detections with a "B". After review of the method blanks, the "B" qualifiers were removed.

SDG 360-24173-1 (OCRI-1)

Copper, lead, and zinc were reported in the equipment blank associated with OCRI-01 and 01A. Reported detections of zinc were significantly greater than equipment blank results and zinc results were not qualified. Based upon professional judgment, low concentration detections of copper and lead were qualified (EB) to indicate associated detections in the equipment blank.

SDG 360-24194-1 (OCRI-2)

Barium, magnesium, and nickel were reported in the equipment blank associated with OCRI-02 and 02A. Reported detections of barium, magnesium, and nickel were significantly greater than equipment blank results, and based on professional judgment the data were not qualified.

SDG 360-24223-1 (OCRI-3)

Aluminum, selenium, and zinc were reported in the equipment blank associated with OCRI-03 and 03A. Selenium was not detected in associated samples. Reported detections of aluminum and zinc were significantly greater than equipment blank results, and based on professional judgment the data were not qualified.

Thallium (0.0792 milligrams per kilogram [mg/kg]) was reported in the method blank (M360-48052) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for thallium and tin that were less than the action levels were qualified non-detect (U).

Tin (0.511 mg/kg) was reported in the method blank (M360-49084) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

SDG 360-24244-1 (OCRI-4)

Copper, selenium, and zinc were reported in the equipment blank associated with OCRI-04 and 04A. Associated sample results for selenium were non-detect. Reported detections of zinc were significantly greater than equipment blank results and based on professional judgment the zinc results were not qualified. The result for copper in sample OC-SB-443-6.0/8.0-XXX was qualified (EB) to indicate potential field contamination.

Tin (0.451 mg/kg) was reported in the method blank (M360-48107) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

Tin (0.511 mg/kg) was reported in the method blank (M360-49084) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

SDG 360-24251-1 (OCRI-5)

Nickel (0.194 mg/kg) and tin (0.475 mg/kg) were reported in the method blank (M360-48244) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results for nickel and tin that were less than the action levels were qualified non-detect (U).

Thallium was reported in the CCBs associated with a subset of samples. An action level was established at five times the highest reported blank concentrations and the raw data was reviewed. The results for thallium in samples OC-SB-448-8.0/10-XXX and OC-SB-439-0.0-1.0-XXX were less than the action level and were qualified non-detect (U).

SDG 360-24309-1 (OCRI-6)

Tin (0.430 mg/kg) was reported in the method blank (M360-48302) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

Thallium (0.154 mg/kg) was reported in the method blank (M360-49332) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for thallium that were less than the action level were qualified non-detect (U).

Thallium was reported in the equipment blank associated with a subset of samples. Action levels were established at five times the highest reported blank concentrations and the raw data was reviewed. Associated sample results for thallium were qualified (EB) to indicate potential field contamination associated with the equipment blank.

SDG 360-24327-1 (OCRI-7)

Copper and thallium were reported in the equipment blank associated with OCRI-07 and 07A. Associated sample results for thallium were non-detect. Reported detections of copper were significantly greater than equipment blank results, and based on professional judgment the results were not qualified due the equipment blank.

Tin (0.463 mg/kg) was reported in the method blank (M360-48369) associated with all samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

Sodium (13.1 mg/kg) was reported in the method blank (M360-49332) associated with all samples. An action level was established at five times the reported method blank concentration. Sample results for sodium that were less than the action level were qualified non-detect (U).

SDG 360-24343-1 (OCRI-8)

Copper and thallium were reported in the equipment blank associated with OCRI-08 and 08A. Associated sample results for thallium were non-detect. Reported detections of copper were significantly greater than equipment blank results, and based on professional judgment the results were not qualified due to the equipment blank.

Tin (0.453 mg/kg) was reported in the method blank (M360-48419) associated with all samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

SDG 360-24365-1 (OCRI-9)

Copper and thallium were reported in the equipment blank associated with OCRI-09 and 09A. Reported detections of copper were significantly greater than equipment blank results, and based on professional judgment the copper results were not qualified. Associated sample detections for thallium were qualified (EB) to indicate potential field contamination associated with the equipment blank.

Thallium was reported in the CCBs associated with a subset of samples. An action level was established at five times the highest reported blank concentration and the raw data were reviewed. Reported detections of thallium that were less than the action level were qualified non-detect (U).

SDG 360-24417-1 (OCRI-10)

Copper and mercury were reported in the equipment blank associated with OCRI-10 and 10A. Reported detections of copper were significantly greater than equipment blank results, and based on professional judgment the data were not qualified. Associated sample detections for mercury that were less than the action level were qualified (EB) to indicate potential field contamination associated with the equipment blank.

Tin (0.418 mg/kg) was reported in the method blank (M360-48596) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

Selenium and thallium were reported in the CCBs associated with a subset of samples. Action levels were established at five times the highest reported blank concentration and the raw data were reviewed. Reported detections of selenium and thallium that were less than the action levels were qualified non-detect (U).

SDG 360-24444-1 (OCRI-11)

Copper and mercury were reported in the equipment blank associated with OCRI-11 and 11A. Reported detections of copper were significantly greater than equipment blank result, and based on professional judgment the data were not qualified. Associated sample results for mercury were non-detect.

Sodium (13.5 mg/kg), and tin (0.491 mg/kg) were reported in the method blank (M360-48665) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results for sodium and tin that were less than the action level were qualified non-detect (U).

SDG 360-24454-1 (OCRI-12)

Copper was reported in the equipment blank associated with OCRI-12 and 12A. Reported detections of copper were significantly greater than equipment blank results, and based on professional judgment the data were not qualified.

Sodium (14.1 mg/kg) and tin (0.501 mg/kg) were reported in the method blank (M360-48719) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results for sodium and tin that were less than the action level were qualified non-detect (U).

SDG 360-24499-1 (OCRI-13)

Copper, lead, selenium, silver, thallium, and zinc were reported in the equipment blank associated with OCRI-13 and 13A. Reported detections of copper, lead, silver, thallium, and zinc were significantly greater than equipment blank results, and based on professional judgment the data were not qualified. Associated sample results for selenium were non-detect.

Silver (0.0960 mg/kg) and tin (0.544 mg/kg) were reported in the method blank (M360-48897) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results for silver and tin that were less than the action level were qualified non-detect (U).

Thallium was reported in the CCBs associated with a subset of samples. An action level was established at five times the highest reported blank concentration and the raw data were reviewed. Sample results for thallium that were less than the action level were qualified non-detect (U).

SDG 360-24563-1 (OCRI-14)

Thallium was reported in the equipment blank associated with OCRI-14 and 14A. The results for thallium in associated sample OC-SB-456-16/18-XXX was qualified (EB) to indicate potential field contamination associated with the equipment blank.

Sodium (14.9 mg/kg) and tin (0.481 mg/kg) were reported in the method blank (M360-48949) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results for sodium and tin that were less than the action level were qualified non-detect (U).

SDG 360-24582-1 (OCRI-15)

Selenium (0.244 mg/kg) was reported in the method blank (M360-49128) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for selenium that were less than the action level were qualified non-detect (U).

Thallium was reported in the CCBs associated with all samples. An action level was established at five times the highest reported blank concentration and the raw data were reviewed. The reported detection of thallium in sample OC-SS-412-0.0/1.0-XXX was less than the action level and was qualified non-detect (U).

SDG 360-24634-1 (OCRI-16)

Copper, lead, selenium, and thallium were reported in the equipment blank associated with OCRI-16. Reported detections of lead were significantly greater than equipment blank results, and based on professional judgment the lead results were not qualified. Associated sample results for selenium and thallium were non-detect. Associated sample detections for copper were qualified (EB) to indicate potential blank contamination associated with the equipment blank.

Tin (0.409 mg/kg) was reported in the method blank (M360-49208) associated with a subset of samples. An action level was established at five times the reported method blank concentration. Sample results for tin that were less than the action level were qualified non-detect (U).

Arsenic and thallium were reported in the CCBs associated with all samples. Action levels were established at five times the highest reported blank concentrations and the raw data were reviewed. The reported detections of arsenic and thallium that were less than the action levels were qualified non-detect (U).

SDG 360-24665-1 (OCRI-17)

Copper and thallium were reported in the equipment blank associated with OCRI-17, 17A, and 17B. Reported detections of copper were significantly greater than equipment blank results, the data were not qualified. Associated sample results for thallium were non-detect.

Calcium (7.37 mg/kg), iron (1.56 mg/kg), magnesium (1.99 mg/kg), and tin (0.44 mg/kg) were reported in the method blank (M360-49480) associated with a subset of samples. Action levels were established at five times the reported method blank concentrations. Sample results were greater than the action levels, and no further action was required.

Selenium was reported in the CCBs associated with all samples. An action level was established at five times the highest reported blank concentration and the raw data were reviewed. Associated sample results for selenium were non-detect, and no further action was required.

SDG 360-24686-1 (OCRI-18)

Copper and thallium were reported in the equipment blank associated with OCRI-18. Reported detections of copper were significantly greater than equipment blank results and copper results were not qualified. Associated sample results for thallium that were non-detect.

Antimony, selenium, and thallium were reported in the CCBs associated with all samples. Action levels were established at five times the highest reported blank concentrations and the raw data was reviewed. Associated sample results for antimony, selenium, and thallium that were less than the action level were qualified non-detect (U).

7.2 LABORATORY CONTROL SAMPLE

LCS results were evaluated using recovery limits of 80-120 percent. Samples associated with LCS that did not meet project goals were qualified. A summary of qualifications is presented on Table 3.7 with LCS-L reason codes.

SDG 360-24251-1 (OCRI-5)

The LCS percent recoveries of potassium (78 and 78) associated with a subset of samples was less than the lower QC limit of 80. Associated sample results for potassium were qualified estimated (J).

SDG 360-24309-1 (OCRI-6)

The LCS percent recovery of antimony (79) was less than the lower QC limit of 80. Associated sample results for antimony were qualified estimated (J/UJ).

7.3 MATRIX SPIKE ANALYSIS

MS results were evaluated using recovery limits of 75-125 percent. Samples associated with LCS that did not meet project goals were qualified. A summary of qualifications is presented on Table 3.7 with MS-L or MS-H reason codes.

Matrix spike recovery for the analytical program was reviewed. Antimony percent recoveries were less than the lower QC limit for all but one sample. Results for antimony in all samples were qualified estimated (J/UJ) and are considered to be potentially biased low. Post digestion spike recovery for antimony was within QC limits in most samples indicating a matrix effect for antimony. Refer to the table below for program matrix spike recovery summary of antimony.

SDG	Lab Sample ID	Field Sample ID	Antimony MS Recovery (%)
OCRI-03	360-24223-9	OC-SB-426-5.0/7.0-XXX	61
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	27
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	32
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	80
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	70
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	44
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	65
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	62
OCRI-08	360-24343-17	OC-SB-455-6.0/8.0-XXX	46
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	50
OCRI-10	360-24417-10	OC-SB-465-8.0/10-XXX	63
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	38
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	64
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	68
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	65
OCRI-13A	360-24499-3	OC-SB-469-28/30-XXX	61
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	60
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	67
OCRI-15	360-24582-22	OC-SS-416-0.0/1.0-XXX	56
OCRI-16	360-24634-1	OC-SS-417-0.0/1.0-XXX	61
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	29
OCRI-18	360-24686-1	OC-SB-400-17/19-XXX	67

SDG 360-24244-1 (OCRI-4)

Sample OC-SB-432-0.0/1.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (387), antimony (27), barium (61), calcium (64), iron (1760), magnesium (129), potassium (150), thallium (70), and zinc (137) were outside of the QC limits. The unspiked sample result for aluminum, calcium, iron, and zinc were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony, barium, and thallium were qualified estimated (J/UJ). Associated sample detections for magnesium and potassium were qualified estimated (J).

Sample OC-SB-443-18/20-XXX was submitted for MS analysis. The MS percent recovery of aluminum (550), antimony (32), calcium (211), iron (222), and magnesium (157) was outside of the QC limits. The unspiked sample concentrations of aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Antimony were qualified estimated (J/UJ). Associated sample detections for calcium and magnesium were qualified estimated (J).

SDG 360-24251-1 (OCRI-5)

Samples OC-SB-433-5.0/7.0-XXX and OC-SB-446-5.0/7.0-XXX were submitted for MS analysis. The MS percent recoveries of aluminum (156 and 178), antimony (70), and iron (-2 and 153) were outside of the QC limits. The unspiked sample result for aluminum and iron in sample OC-SB-433-5.0/7.0-XXX was greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24309-1 (OCRI-6)

Sample OC-SB-430-8.0/10-XXX was submitted for MS analysis. The MS percent recovery of aluminum (-75), antimony (44), chromium (64), iron (-279) and magnesium (58) were less than the lower QC limit of 75. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony, chromium, and magnesium were qualified estimated (J/UJ).

SDG 360-24327-1 (OCRI-7)

Sample OC-SB-410-6.0/8.0-XXX was submitted for MS analysis. The MS percent recovery of antimony (65) and iron (67) were less than the lower QC limit of 75. The unspiked sample result

for iron was greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24343-1 (OCRI-8)

Samples OC-SB-451-2.5/4.5-XXX and OC-SB-455-6.0/8.0-XXX were submitted for MS analysis. The MS percent recoveries of aluminum (203 and 35), antimony (62 and 46), and iron (148 and 13) were outside of the QC limits. The unspiked sample result for aluminum and iron in sample OC-SB-455-6.0/8.0-XXX and iron in sample OC-SB-451-2.5/4.5-XXX were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24365-1 (OCRI-9)

Sample OC-SB-442-8.0/10-XXX was submitted for MS analysis. The MS percent recovery of aluminum (220), antimony (50), and iron (141) were outside of the QC limits. The unspiked sample result for aluminum and iron was greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24417-1 (OCRI-10)

Sample OC-SB-465-8.0/10-XXX was submitted for MS analysis. The MS percent recovery of antimony (63) and iron (162) were outside of the QC limits. The unspiked sample result for iron was greater than four times the spiking concentration. Associated sample results for antimony were qualified estimated (J/UJ).

Sample OC-SB-463-28/30-XXX was submitted for MS analysis. The MS percent recovery of aluminum (287), antimony (38), calcium (161), iron (325), magnesium (62), manganese (-16), and potassium (144) were outside of the QC limits. The unspiked sample results for aluminum, iron, magnesium, and manganese were greater than four times the spiking concentration and MS results were not evaluated. Reported detections for calcium and potassium were qualified estimated (J). Associated sample results for antimony were qualified estimated (UJ).

SDG 360-24444-1 (OCRI-11)

Sample OC-SB-459-6.0/8.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (242), antimony (64), and iron (135) were outside of the QC limits. The unspiked

sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

Sample OC-SB-467-6.0/8.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (314), antimony (68), and iron (241) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24454-1 (OCRI-12)

Sample OC-SB-461-5.0/7.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (142), antimony (65), and iron (56) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (UJ).

SDG 360-24499-1 (OCRI-13)

Sample OC-SB-469-28/30-XXX was submitted for MS analysis. The MS percent recovery of aluminum (51), antimony (61), calcium (31), chromium (52), copper (46), iron (-6410), manganese (-190), nickel (58), and tin (71) were less than the lower QC limit of 75. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. With the exception of manganese, post digestion spike recoveries were within QC limits. Associated sample results for antimony, calcium, chromium, copper, manganese, nickel, and tin were qualified estimated (J/UJ).

SDG 360-24563-1 (OCRI-14)

Sample OC-SB-427-8.0/10-XXX was submitted for MS analysis. The MS percent recovery of aluminum (131), antimony (67), and iron (152) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

Sample OC-SB-456-7.0/9.0-XXX was submitted for MS analysis. The MS percent recovery of antimony (60), chromium (74), iron (-322), and potassium (71) were outside of the QC limits. The

unspiked sample result for iron was greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony, chromium, and potassium were qualified estimated (J/UJ).

SDG 360-24582-1 (OCRI-15)

Sample OC-SS-416-0.0/1.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (150), antimony (56), barium (65), iron (-390), lead (64), and zinc (33) were outside of the QC limits. The unspiked sample results for aluminum, iron, and zinc were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony, barium, and lead were qualified estimated (J/UJ).

SDG 360-24634-1 (OCRI-16)

Sample OC-SS-417-0.0/1.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (296), antimony (61), and iron (350) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24665-1 (OCRI-17)

Sample OC-SS-434-0.0/1.0-XXX was submitted for MS analysis. The MS percent recovery of aluminum (328), antimony (29), and iron (177) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (UJ).

SDG 360-24686-1 (OCRI-18)

Sample OC-SB-400-17/19-XXX was submitted for MS analysis. The MS percent recovery of aluminum (45), antimony (67), and iron (-75) were outside of the QC limits. The unspiked sample results for aluminum and iron were greater than four times the spiking concentration and MS results were not evaluated. Associated sample results for antimony were qualified estimated (J/UJ).

7.4 FIELD DUPLICATES

Field duplicate results were reviewed using a RPD goal of 50. Samples associated with field duplicates not meeting this goal were qualified estimated. A summary of qualified results is presented on Table 3.7 with a reason code of FD.

SDG 360-24563-1 (OCRI-14)

The RPD for copper (95) exceeded the QC limit of 50. The results for copper in associated samples in SDG 360-24563-1 were qualified estimated (J).

SDG 360-24582-1 (OCRI-15)

The RPD for barium (97), lead (67), and mercury (113) exceeded the QC limit of 50. The results for barium, lead, and mercury n associated samples in SDG 360-24582-1 were qualified estimated (J/UJ).

7.5 LABORATORY DUPLICATE ANALYSIS

Laboratory duplicate results were reviewed using a RPD goal of 35. Samples associated with lab duplicates not meeting this goal were qualified estimated. A summary of qualified results is presented on Table 3.7 with a reason code of LD.

SDG 360-24244-1 (OCRI-4)

The laboratory performed a duplicate analysis of sample OC-SB-432-0.0/1.0-XXX -. The RPD lead (61) and nickel (42) exceeded the QC limit of 35. Associated SDG sample results for lead and nickel were qualified estimated (J).

SDG 360-24309-1 (OCRI-6)

The laboratory performed a duplicate analysis of sample OC-SB-430-8.0/10-XXX. The RPD for copper (52) exceeded the QC limit of 35. Sample results for copper in SDG 360-24309-1 were qualified estimated (J).

SDG 360-24343-1 (OCRI-8)

The laboratory performed a duplicate analysis of sample OC-SB-451-2.5/4.5-XXX. The RPD for antimony (116) exceeded the QC limit of 35. Associated sample results for antimony were qualified estimated (J/UJ).

SDG 360-24417-1 (OCRI-10)

The percent difference for calcium (40) and sodium (38) exceeded the QC limit of 35. The results for calcium and sodium in associated samples were qualified estimated (J).

SDG 360-24499-1 (OCRI-13)

The laboratory performed a duplicate analysis of sample OC-SB-469-28/30-XXX. The RPD for aluminum (56), arsenic (84), cadmium (158), calcium (98), chromium (106), cobalt (111), copper (170), iron (168), lead (42), manganese (166), nickel (176), and tin (105) exceeded the QC limit of 35. Associated SDG sample results for aluminum, arsenic, cadmium, calcium, chromium, cobalt, copper, iron, lead, manganese, nickel, and tin were qualified estimated (J).

SDG 360-24563-1 (OCRI-14)

The laboratory performed a duplicate analysis of sample OC-SB-427-8.0/10-XXX. The RPD for beryllium (113) exceeded the QC limit of 35. Associated SDG sample results for beryllium were qualified estimated (J).

SDG 360-24582-1 (OCRI-15)

The laboratory performed a duplicate analysis of sample OC-SS-416-0.0/1.0-XXX. The RPD for barium (57), lead (79), and mercury (112) exceeded the QC limit of 35. Associated SDG sample results for barium, lead, and mercury were qualified estimated (J/UJ).

7.6 SERIAL DILUTION

SDG 360-24173-1 (OCRI-1), SDG 360-24194-1 (OCRI-2), and SDG 360-24223-1 (OCRI-3)

The lab did not perform a serial dilution analysis.

SDG 360-24251-1 (OCRI-5)

The percent difference for magnesium (23) exceeds the QC limit of 15. The diluted result for magnesium is greater than the undiluted result. Associated sample results for magnesium were qualified estimated (J).

SDG 360-24417-1 (OCRI-10)

The percent difference for chromium (16) exceeded the QC limit of 15. The diluted result for chromium was greater than the undiluted result. Reported detections for chromium in associated samples were qualified estimated (J).

The percent difference for manganese (16) exceeded the QC limit of 15. The diluted result for manganese was greater than the undiluted result. Reported detections for manganese in associated samples were qualified estimated (J).

7.7 DETECTION LIMITS

Quantitation limit standards (QLS) were reviewed to evaluate accuracy at the quantitation limit. Results not meeting validation goals were qualified estimated. Qualified results are summarized on Table 3.7 with a reason code of QLS-L.

The quantitation limit check standard percent recoveries of tin ranged from 50 to 66 throughout the soil analytical program. All sample results for tin were qualified estimated (J/UJ).

SDG 360-24309-1 (OCRI-6)

The QLS percent recoveries of potassium (68 and 66) were less than the lower QC limit of 70. Associated sample results were qualified estimated (J/UJ).

SDG 360-24327-1 (OCRI-7)

The QLS percent recovery of potassium (68) was less than the lower QC limit of 70. Associated sample results were qualified estimated (J/UJ).

8.0 HEXAVALENT CHROMIUM

Samples were analyzed for hexavalent chromium by SW-846 Method 7199.

Data were reviewed for the following parameters:

* Data Completeness
  Holding Time
* Blanks
* Initial and Continuing Calibration Standards
* Laboratory Control Sample
* Matrix Spike Analysis
* Laboratory Duplicate Analysis
* Field Duplicates
* Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.8. A summary of data validation actions is presented on Table 3.8.

8.1 HOLDING TIMES

SDG 360-24454-1 (OCRI-12)

Sample OC-SB-470-31/33-XXX was prepared for analysis 24 days outside the 30 day holding time. The hexavalent chromium detection in sample OC-SB-470-31/33-XXX was qualified as estimated (J).

9.0 AMMONIA

Samples were analyzed for Ammonia by QuikChem: Lachat Method 10-107-06-1-A.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
  Blanks
* Laboratory Control Sample
  Matrix Spike Analysis
* Laboratory Duplicate Analysis
  Field Duplicates
* Detection Limits
* Sample Result Verification/EDD

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

A subset of results was qualified due to blanks, MS/MSD, and field duplicate results. A summary of final results is presented on Table 2.9. A summary of data validation actions is presented on Table 3.9.

9.1 BLANKS

SDG 360-24244-1 (OCRI-04)

Equipment blank OC-EBK-003 reported a detection of ammonia at 0.90 milligrams per liter (mg/L). A review of sampling dates and equipment blank results for the entire data set indicated that OC-EBK-03 is associated with samples in SDG 360-24244. Ammonia detections in soil samples OC-SB-432-0.0/1.0-XXX, OC-SB-432-14/16-XXX, OC-SB-432-5.0/7.0-XXX, OC-SB443-0.0/1.0-XXX, OC-SB-443-18/20-XXX, OC-SB-445-25/27-XXX, OC-SB-445-8.0/10-XXX, OC-SB-437-0.0/1.0-XXX, OC-SB-437-21/23-XXX, and OC-SB-437-5.0/7.0-XXX were qualified as EB to indicate detections in the associated aqueous equipment blank.

9.2 MATRIX SPIKE ANALYSIS

SDG 360-24417-1 (OCRI-10)

Of the 23 MS/MSDs analyzed with the entire data set, 22 were within the percent recovery QC limits. The MS/MSD associated with sample OC-SB-465-8.0/10.0-XXX and its field duplicate OC-SB-465-8.0/10.0-XXX in SDG 360-24417 had percent recoveries below the lower QC limit of 75 percent for ammonia (16/20), which may indicate low bias. Ammonia LCS percent recoveries

were within the QC limits. Based on professional judgment, ammonia results in all samples in SDG 360-24417 were qualified as estimated (J/UJ).

9.3 FIELD DUPLICATES

SDG 360-24563-1 (OCRI-14)

Of the 14 ammonia field duplicate sets associated with the entire data set, 13 were within the QC limits. Ammonia is reported in sample OC-SB-456-7.0/9.0-XXX as non-detect (U) while its field duplicate, OC-SB-456-7.0/9.0-DUP, has a detection of ammonia at greater than 2X the reporting limit. A review of field duplicate sampling dates for the entire data set indicated that sample OC-SB-456-7.0/9.0-XXX and its field OC-SB-456-7.0/9.0-DUP are associated with a subset of samples in SDG 360-24563. Based on professional judgment, ammonia results in associated samples OC-SB-456-0.0/1.0-XXX, OC-SB-456-16/18-XXX, OC-SB-456-7.0/9.0-DUP, OC-SB-456-7.0/9.0-XXX, OC-SB-457-0.0/1.0-XXX, and OC-SB-457-8.0/10-XXX were qualified as estimated (J/UJ).

10.0 ANIONS (CHLORIDE AND SULFATE)

Samples were analyzed for chloride and sulfate by EPA Method 300.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
  Blanks
* Laboratory Control Sample
  Matrix Spike Analysis
* Laboratory Duplicate Analysis
* Field Duplicates
* Detection Limits
* Sample Result Verification/EDD

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

A subset of results was qualified due to blanks or MS/MSD. A summary of final results is presented on Table 2.10. A summary of data validation actions is presented on Table 3.10.

10.1 BLANKS

SDG 360-24251-1 (OCRI-05)

A detection of sulfate was reported in equipment blank OC-EBK-004 at 21 mg/L. A review of sampling dates and equipment blank results for the entire data set indicated that OC-EBK-004 is associated with samples in SDG 360-24251-1. Sulfate detections in soil samples OC-SB-440-23/25-XXX, OC-SB-446-0.0/1.0-XXX, OC-SB-446-15/17-XXX, and OC-SB-438-22/22-XXX were qualified as EB to indicate detections in the associated aqueous equipment blank.

10.2 MATRIX SPIKE ANALYSIS

SDG 360-24223-1 (OCRI-03)

Of the 21 MS/MSDs analyzed with the entire data set, 20 were within the percent recovery QC limits. The MS/MSD associated with sample OC-SB-415-0.0/1.0-XXX in SDG 360-24223-1 had percent recoveries above the upper QC limit of 125 percent for chloride (131/131), which may indicate high bias. Chloride LCS percent recoveries were also within the QC limits. Based on professional judgment, the chloride detection in sample OC-SB-419-0.0/1.0-XXX in SDG 360-24223 was qualified as estimated (J).

11.0 FORMALDEHYDE/ACETALDEHYDE

Samples were analyzed for formaldehyde and acetaldehyde by SW-846 Method 8315.

Data were reviewed for the following parameters:

* Data Completeness
  Holding Time
  Blanks
* Initial and Continuing Calibration Standards
  Laboratory Control Sample
  Matrix Spike Analysis
* Laboratory Duplicate Analysis
  Field Duplicates
* Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.11. A summary of data validation actions is presented on Table 3.11.

11.1 HOLDING TIME

The USEPA SW-846 Methods identify a maximum holding time of three days to extraction followed by analysis within three days for water samples. No specific holding time is identified for aldehydes in soil in the EPA SW-846 Methods. A holding time of three days to extraction followed by analysis within three days was identified for both water and soil samples in QAPP Worksheet Table 12b. However, the extraction holding time identified in the laboratory SOP in QAPP Attachment B is seven days to extraction. The laboratory followed the SOP. The majority of the soil samples were extracted between four days and seven days after collection. Based on professional judgment the seven day extraction holding time was used when evaluating holding times. All samples were analyzed within three days of extraction.

11.2 QUALITY CONTROL (QC) BLANKS

Low concentrations of acetaldehyde and formaldehyde were reported in a subset of method blanks and equipment rinse blanks. Acetaldehyde was reported in a subset of soil method blanks in SDGs 360-24327-1 (OCRI-07), 360-24444-1 (OCRI-11), 360-24454-1 (OCRI-12), and 360-24499-1 (OCRI-13) ranging from 30 to 39 µg/kg. Acetaldehyde detections in these samples were qualified

non-detect (U) at the reporting limit. Qualified results are summarized in Table 3.10 with an assigned reason code of BL.

Formaldehyde was reported in water method blanks at concentrations between the method detection limit (MDL) and RL ranging from 5 - 11.9 µg/L. Water method blanks were only associated with equipment rinse blanks and no samples were qualified due to the water method blank detections.

Formaldehyde was not detected above the MDL in soil method blanks, but peaks for formaldehyde below the MDL were observed in chromatograms for soil method blanks. Based on communications with TAL (Driver, 2010), small amounts of formaldehyde and acetaldehyde are generated during the sample preparation derivitization process in both method blanks and actual field samples. Soil method blanks are prepared using only the glassware and reagents used in the soil preparation, and no soil is extracted. The amount of formaldehyde that forms in soil samples may vary based on soil matrix conditions and the amount of organic material in the samples. TAL reports that it is common to have formaldehyde and acetaldehyde detections in all soil samples due to formaldehyde and acetaldehyde generation due to matrix reactions. Formaldehyde was reported in the majority of soil samples at concentrations less than 300 µg/kg. There is potential that low concentrations (< 300 µg/kg) represent false positive results for both formaldehyde and acetaldehyde in the data set.

Formaldehyde was detected in a subset of equipment rinse blanks at low concentrations between the MDL (5 µg/L) and QL (50 µg/L). A summary of formaldehyde detections in equipment blanks is presented below. Because the concentrations observed in the rinse blanks are relatively low and similar concentrations are reported in method blanks, and the potential for the generation of low concentrations of formaldehyde during sample preparation, results were not qualified due to the equipment rinse blank results based on professional judgment.

SDG	lab_sample_id	field_sample_id	param_name	Result	qual	Unit	Date Collected
OCRI-02	360-24194-12	OC-EBK-002	Formaldehyde	7.1	J	ug/l	8/19/2009
OCRI-04	360-24244-14	OC-EBK-003	Formaldehyde	9.9	J	ug/l	8/21/2009
OCRI-05	360-24251-26	OC-EBK-004	Formaldehyde	6.9	J	ug/l	8/24/2009
OCRI-07	360-24327-19	OC-EBK-005	Formaldehyde	8.1	J B	ug/l	8/27/2009
OCRI-18	360-24686-20	OC-EBK-012	Formaldehyde	12	J B	ug/l	9/17/2009

11.3 LABORATORY CONTROL SAMPLE RESULTS

With the exception of acetaldehyde recovery in SDG 360-24563-1 (OCRI-14), LCS recoveries were within the project limits of 80-120 percent. Percent recovery of acetaldehyde (72-76) in SDG 360-24563-1 was slightly below the project limits and all acetaldehyde results for samples in this data set were qualified estimated (J/UJ). Qualified results are summarized on Table 3.11 with a reason code of LCS-L.

11.4 MATRIX SPIKE ANALYSIS

In a subset of MS/MSD analyses recovery of formaldehyde and acetaldehyde was below the project limits of 75-125 percent. A summary of MS/MSD recoveries is presented below. With the exception of acetaldehyde in SDG 360-24563-1 (OCRI-14) discussed above, LCS percent recoveries reported in soil data sets were within the project limits of 80-120, indicating a soil matrix effect was occurring. Results for the original samples associated with low MS recoveries are qualified estimated (J/UJ) in the final data set. Qualified results are summarized on Table 3.11 with a reason code of MS-L. These spike results indicate low recovery of formaldehyde may have occurred in some samples and results are biased low.

SDG	lab_sample_id	field_sample_id	param_name	%R		Unit
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Acetaldehyde	90		percent
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Acetaldehyde	88		percent
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Formaldehyde	82		percent
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Formaldehyde	84		percent
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Acetaldehyde	83		percent
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Acetaldehyde	83		percent
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Formaldehyde	106		percent
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Formaldehyde	103		percent
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Acetaldehyde	13	*	percent
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Acetaldehyde	14	*	percent
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Formaldehyde	44	*	percent
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Formaldehyde	44	*	percent
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Acetaldehyde	85		percent
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Acetaldehyde	87		percent
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Formaldehyde	90		percent
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Formaldehyde	89		percent
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	Acetaldehyde	84		percent
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	Acetaldehyde	81		percent
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	Formaldehyde	88		percent
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	Formaldehyde	89		percent
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	Acetaldehyde	79		percent
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	Acetaldehyde	81		percent
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	Formaldehyde	76		percent

SDG	lab_sample_id	field_sample_id	param_name	%R		Unit
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	Formaldehyde	77		percent
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Acetaldehyde	30	*	percent
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Acetaldehyde	25	*	percent
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Formaldehyde	43	*	percent
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Formaldehyde	48	*	percent
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Acetaldehyde	88		percent
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Acetaldehyde	92		percent
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Formaldehyde	89		percent
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Formaldehyde	108		percent
OCRI-10	360-24417-10	OC-SB-465-8.0/10-XXX	Acetaldehyde	84		percent
OCRI-10	360-24417-10	OC-SB-465-8.0/10-XXX	Acetaldehyde	88		percent
OCRI-10	360-24417-10	OC-SB-465-8.0/10-XXX	Formaldehyde	94		percent
OCRI-10	360-24417-10	OC-SB-465-8.0/10-XXX	Formaldehyde	87		percent
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Acetaldehyde	53	*	percent
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Acetaldehyde	51	*	percent
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Formaldehyde	79		percent
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Formaldehyde	85		percent
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Acetaldehyde	80		percent
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Acetaldehyde	81		percent
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Formaldehyde	82		percent
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Formaldehyde	81		percent
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	Acetaldehyde	84		percent
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	Acetaldehyde	93		percent
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	Formaldehyde	109		percent
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	Formaldehyde	98		percent
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Acetaldehyde	75		percent
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Acetaldehyde	81		percent
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Formaldehyde	85		percent
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Formaldehyde	85		percent
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Acetaldehyde	63	*	percent
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Acetaldehyde	63	*	percent
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Formaldehyde	83		percent
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Formaldehyde	82		percent
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Acetaldehyde	26	*	percent
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Acetaldehyde	26	*	percent
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Formaldehyde	57	*	percent
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Formaldehyde	56	*	percent
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Acetaldehyde	12	*	percent
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Acetaldehyde	14	*	percent
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Formaldehyde	26	*	percent
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Formaldehyde	23	*	percent

11.5 FIELD DUPLICATE

Good agreement was observed for the majority of soil field duplicates. Results for field duplicates collected from OC-SB-442-8.0/10-XXX had an RPD (112) that did not meet the project goal of 50

for soils. Results for formaldehyde in OC-SB-442-8.0/10-XXX and OC-SB-442-8.0/10-DUP were qualified estimated (J).

12.0 PHYHALIC ANHYDRIDE

Samples were analyzed for Phthalic Anhydride by a laboratory specific modified method 8000 – HPLC (TestAmerica – Tallahassee: method LC65). A chemist review was performed on the phthalic anhydride data set.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Times and Preservation
* Blanks
* Initial Calibration Standards (10% of the data set)
* Initial Calibration Verification Standards (10% of the data set)
* Continuing Calibration Standards (10% of the data set)
* Laboratory Control Sample
  Matrix Spikes
* Field Duplicates
* Detection Limits
* Miscellaneous
* Sample Result Verification/EDD

Except for the validation actions noted below, the results are interpreted to be usable as reported by the laboratory. A summary of final results is presented on Table 2.12. A summary of data validation actions is presented on Table 3.12.

12.1 MATRIX SPIKE ANALYSIS

Project MS/MSD recovery limits were established at 60 -140 percent (RPD ≤ 50) for soil samples collected during the program. MS/MSD recoveries were less than these limits in a subset of samples and results were qualified during validation. A summary of qualified data is discussed below and included in Table 3.12 with reason codes MS-L.

SDG 360-24173-1 (OCRI-01)

The following samples had percent recoveries of phthalic anhydride that were outside of the control limits: OC-SB-416-0.0/1.0-XXX (MS=47%, MSD=45%) and OC-SB-412-6.0/7.0-XXX (MS=57%). Phthalic anhydride was not detected in samples and reporting limits were qualified estimated (UJ) in samples OC-SB-416-0.0/1.0-XXX and OC-SB-412-6.0/7.0-XXX.

SDG 360-24327-1 (OCRI-07)

The percent recovery of phthalic anhydride was below the lower control limit in the MSD analyzed on sample OC-SB-410-6.0/8.0-XXX (55%). Reporting limits for phthalic anhydride were qualified estimated (UJ) in the un-spiked field sample (OC-SB-410-6.0/8.0-XXX) and associated field duplicate (OC-SB-410-6.0/8.0-DUP).

SDG 360-24417-1 (OCRI-10)

The percent recoveries of phthalic anhydride were below the lower control limit in the MS/MSD analyzed on sample OC-SB-465-8.0/10-XXX (MS=52%, MSD=58%). Reporting limits for phthalic anhydride were qualified estimated (UJ) in the un-spiked field sample (OC-SB-465-8.0/10-XXX) and associated field duplicate (OC-SB-465-8.0/10-DUP).

SDG 360-24563-1 (OCRI-14)

The percent recoveries of phthalic anhydride were below the lower control limit in the MS/MSD analyzed on sample OC-SB-427-8.0/10-XXX (MS=19%, MSD=18%) and on sample OC-SB-456-7.0/9.0-XXX (MS=24%, MSD=19%). Reporting limits for phthalic anhydride were qualified estimated (UJ) in the un-spiked field sample (OC-SB-427-8.0/10-XXX and OC-SB-456-7.0/9.0-XXX) and associated field duplicate (OC-SB-427-8.0/10-DUP and OC-SB-456-7.0/9.0-DUP).

SDG 360-24665-1 (OCRI-17)

The percent recoveries of phthalic anhydride were below the lower control limit in the MS/MSD analyzed on sample OC-SS-434-0.0/1.0-XXX (MS=12%, MSD=15%). Reporting limits for phthalic anhydride were qualified estimated (UJ) in the un-spiked field sample (OC-SS-434-0.0/1.0-XXX).

SDG 360-24686-1 (OCRI-18)

The percent recoveries of phthalic anhydride were below the lower control limit in the MS/MSD analyzed on sample OC-SB-473-0.0/1.0-XXX (MS=55%, MSD=46%). Reporting limits for phthalic anhydride were qualified estimated (UJ) in the un-spiked field sample (OC-SB-473-0.0/1.0-XXX).

13.0 TOTAL ORGANIC CARBON (TOC)

Samples were analyzed for total organic carbon (TOC) by Lloyd Kahn.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
* Blanks
* Initial and Continuing Calibration Standards
* Laboratory Control Sample
* Matrix Spike Analysis
* Laboratory Duplicate Analysis
* Field Duplicates
* Detection Limits
* Sample Result Verification/EDD

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

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

A summary of final results is presented on Table 2.13.

14.0 HYDRAZINE, MONO-METHYLHYDRAZINE (MMH), UNSYMMETRICAL DIMETHYLHYDRIZINE (UDMH)

Samples were analyzed for hydrazine, monomethylhydrazine (MMH), and unsymmetrical dimethylhydrazine (UDMH) by a modified SW-846 Method 8315 LC/MS/MS. Reporting limits for soils were hydrazine (2 µg/kg), MMH (5 µg/kg), and UDMH (5 µg/kg).

Data were reviewed for the following parameters:

* Data Completeness
Holding Time and Sample Preservation
* Blanks
* Initial and Continuing Calibration Standards
* Laboratory Control Sample
Matrix Spike Analysis
* Laboratory Duplicate Analysis
* Field Duplicates
* Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.14. A summary of data validation actions is presented on Table 3.14.

14.1 HOLDING TIME AND SAMPLE PRESERVATION

Sample receipt records for SDGs OLN21 and OLN22 indicate that sample temperatures at the time of sample receipt exceeded sample preservation goals of 4ºC. Sample temperatures ranged from 6 – 10ºC. Based on professional judgment results for the following samples in these data groups were qualified as estimated (UJ) in the final data set with a reason code of SP.

method	field_sample_id
SW8315A	OC-SB-459-6.0/8.0-DUP
SW8315A	OC-SB-459-6.0/8.0-XXX
SW8315A	OC-SB-465-8.0/10-DUP
SW8315A	OC-SB-465-8.0/10-XXX
SW8315A	OC-SB-468-8.0/10-XXX
SW8315A	OC-SB-471-3.0/5.0-XXX

14.2 MATRIX SPIKE ANALYSIS

MS/MSD analyses were completed on samples from ten soil locations. Low recoveries for hydrazine and MMH were reported in a 6 of 10 soil MS/MSD analyses. Low UDMH recoveries were reported in one MS/MSD. A summary of recoveries is presented below:

analysis_method	field_sample_id	Hydrazine Conc. In sample		Hydrazine %R	MMH %R	UDMH %R
SW8315A MOD	OC-SB-410-6.0/8.0-DUP	2.48	U	12-13*	11-11*	56-60
SW8315A MOD	OC-SB-413-1.0/5.0-XXX	2.28	U	9-10*	6-6*	55-56
SW8315A MOD	OC-SB-430-8.0/10-XXX	2.16	U	14-14*	16-17*	65-68
SW8315A MOD	OC-SB-442-8.0/10-XXX	3.4		55-57	64-67	88-92
SW8315A MOD	OC-SB-446-5.0/7.0-DUP	2.48	U	60-63	84-87	95-96
SW8315A MOD	OC-SB-451-2.5/4.5-XXX	2.3		18-18*	22-22*	46-51
SW8315A MOD	OC-SB-456-7.0/9.0-XXX	2.7		64-68	85-86	94-95
SW8315A MOD	OC-SB-459-0.0/1.0-XXX	2.12	U	2-2*	1-2*	10-12*
SW8315A MOD	OC-SB-459-6.0/8.0-XXX	8.6	J	14-15*	20-22*	66-73
SW8315A MOD	OC-SB-465-8.0/10-XXX	210	J	46-78	46-50	84-85

The project recovery limit goal for soil MS/MSD samples is 40-140 percent. Hydrazine recoveries in the spike samples with low recoveries ranged from 2 to 18 percent. MMH recoveries in the same samples ranged from 1 – 22 percent. MS/MSD RPDs were low with recovery trends matching between the MS and MSD for a given sample indicating a consistent matrix effect had occurred. In all data sets recoveries in the soil LCS samples were within the project control limits of 70-130 percent indicating that the laboratory method was in control and that the soil matrix was impacting the recovery of hydrazines. Because good recovery was always observed in the LCS samples, and recovery trends matched between MS an MSD runs, these results suggest that degradation of hydrazine compounds occurred when introduced to the soil matrix from some locations. Based on professional judgment sample results were not qualified during validation due to the low MS/MSD recoveries.

14.3 REPORTING LIMITS

The laboratory used the MDL when reporting results for target compounds that were not detected in samples. The final result for these data entries was changed to the quantitation limit in the final data set to match reporting goals identified in the QAPP.

15.0 N, N-DIMETHYLFORMAMIDE (DMF)

Samples were analyzed for N, N-Dimethylformamide (DMF) by a modified SW-846 Method 8033 GC/NPD. Reporting limits were 20 µg/L for aqueous QC samples. Soil reporting limits specified by the laboratory method were listed as 200 µg/kg in the QAPP. The actual soil reporting limit achieved by the laboratory method is 800 µg/kg. Sample quantitation limits for soils ranged from 400 µg/kg to 2800 µg/kg.

Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
* Blanks
* Initial and Continuing Calibration Standards
  Laboratory Control Sample
* Matrix Spike Analysis
* Surrogate Recovery
* Laboratory Duplicate Analysis
* Field Duplicates
* Detection Limits
* Sample Result 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. A summary of final results is presented on Table 2.15. A summary of data validation actions is presented on Table 3.15.

15.1 LABORATORY CONTROL SAMPLE

SDG W-7: Recoveries of DMF in both LCS (66 and 67 %) associated with samples in SDG W-7 were below project QC limits of 70 -130 percent. LCSD recoveries were within limits. DMF was not detected in any samples and reporting limits for all soil samples in SDG W-7 were qualified estimated (UJ). A summary of qualified samples is presented in Table 3.15.

16.0 REFERENCES

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Data validation was completed by MACTEC project chemists:

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TABLES

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
Field Samples																									
SB-400	OC-SB-400-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1	6	5										
SB-400	OC-SB-400-5.0/7.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1	6	5										
SB-400	OC-SB-400-17/19-XXX	18-Sep-09	OCRI-18/-18A		79				23			2	1	6	5										
SB-401	OC-SB-401-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-401	OC-SB-401-7.5/9.5-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-402	OC-SB-402-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	78	1	1		23	1	1	2	1			2	1					1159656	3	WIL-3	1
SB-402	OC-SB-402-7.5/9.5-XXX	26-Aug-09	OCRI-06	77	78	1	1		23	1	1	2	1			2	1					1159657	3	WIL-3	1
SB-403	OC-SB-403-0.0/1.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159656	3	WIL-4	1
SB-403	OC-SB-403-6.0/8.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-403	OC-SB-403-13/15-XXX	26-Aug-09	OCRI-07/-07A		79				23			2	1			2									
SB-404	OC-SB-404-5.0/7.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-404	OC-SB-404-13/15-XXX	26-Aug-09	OCRI-07/-07A		79				23			2	1			2									
SB-405	OC-SB-405-0.0/1.0-XXX	18-Aug-09	OCRI-01	77	79				23	1		2	1												
SB-405	OC-SB-405-8.0/9.0-XXX	18-Aug-09	OCRI-01	77	79				23	1		2	1												
SB-405	OC-SB-405-14/15-XXX	18-Aug-09	OCRI-01/-01A	77	79				23			2	1												
SB-406	OC-SB-406-0.0/1.0-XXX	17-Sep-09	OCRI-17/-17B	77	79				23	1		2	1												
SB-406	OC-SB-406-8.0/10-XXX	17-Sep-09	OCRI-17	77	79				23	1		2	1												
SB-406	OC-SB-406-13/15-XXX	17-Sep-09	OCRI-17/-17A		79				23			2	1												
SB-407	OC-SB-407-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	78	1	1		23	1	1	2	1			2	1					1159656	3	WIL-3	1
SB-407	OC-SB-407-8.0/10-XXX	26-Aug-09	OCRI-06	77	78	1	1		23	1	1	2	1			2	1					1159657	3	WIL-3	1
SB-407	OC-SB-407-26/28-XXX	26-Aug-09	OCRI-06/-06A		79				23		1	2	1			2									
SB-408	OC-SB-408-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-408	OC-SB-408-7.0/9.9-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-409	OC-SB-409-0.0/1.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159656	3	WIL-4	1
SB-409	OC-SB-409-6.0/8.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-409	OC-SB-409-15/17-XXX	26-Aug-09	OCRI-07/-07A		79				23			2	1			2									
SB-410	OC-SB-410-0.0/1.0-XXX	27-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159656	3	WIL-4	1
SB-410	OC-SB-410-6.0/8.0-DUP	27-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-410	OC-SB-410-6.0/8.0-XXX	27-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-410	OC-SB-410-17/19-XXX	27-Aug-09	OCRI-07/-07A		79				23			2	1			2									
SB-411	OC-SB-411-0.0/1.0-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159656	3	WIL-4	1
SB-411	OC-SB-411-4.7/6.7-XXX	26-Aug-09	OCRI-07	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-412	OC-SB-412-0.0/1.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1					1158426	3	WIL-1	1
SB-412	OC-SB-412-6.0/7.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1					1158425	3	WIL-1	1
SB-412	OC-SB-412-12/13-XXX	18-Aug-09	OCRI-01/-01A		79				23			2	1			2									
SB-413	OC-SB-413-0.0/1.0-XXX	17-Sep-09	OCRI-17	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-7	1
SB-413	OC-SB-413-1.0/5.0-XXX	17-Sep-09	OCRI-17	77	78	1	1		23	1		2	1			2	1					1162387	3	WIL-7	1
SB-413	OC-SB-413-10/12-XXX	17-Sep-09	OCRI-17/-17A		79				23			2	1			2									
SB-414	OC-SB-414-0.0/1.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-414	OC-SB-414-6.0/8.0-XXX	26-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-414	OC-SB-414-20/22-XXX	26-Aug-09	OCRI-06/-06A		79				23			2	1												
SB-415	OC-SB-415-0.0/1.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1												
SB-415	OC-SB-415-5.0/7.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1												
SB-415	OC-SB-415-16/18-XXX	20-Aug-09	OCRI-03/-03A		79				23			2	1												
SB-416	OC-SB-416-0.0/1.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1					1158426	3	WIL-1	1
SB-416	OC-SB-416-8.0/9.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1					1158425	3	WIL-1	1
SB-416	OC-SB-416-13/14-XXX	18-Aug-09	OCRI-01/-01A	77	79				23			2	1			2									
SB-417	OC-SB-417-0.0/1.0-XXX	10-Sep-09	OCRI-13	77	79				23	1		2	1												
SB-417	OC-SB-417-8.0/10-XXX	10-Sep-09	OCRI-13	77	79				23	1		2	1												
SB-417	OC-SB-417-20/22-XXX	10-Sep-09	OCRI-13/-13A		79				23			2	1												
SB-418	OC-SB-418-0.0/1.0-XXX	27-Aug-09	OCRI-07	77	79				23	1		2	1			2									
SB-418	OC-SB-418-8/10-XXX	27-Aug-09	OCRI-07	77	79				23	1		2	1			2									
SB-418	OC-SB-418-15/17-XXX	27-Aug-09	OCRI-07/-07A		79				23			2	1			2									
SB-419	OC-SB-419-0.0/1.0-XXX	19-Aug-09	OCRI-03	77	78	1	1		23	1		2	1			2	1							WIL-1	1
SB-419	OC-SB-419-3.0/5.0-XXX	19-Aug-09	OCRI-03	77	78	1	1		23	1		2	1			2	1					1158830	3	WIL-1	1
SB-419	OC-SB-419-17/19-XXX	19-Aug-09	OCRI-03/-03A		79				23			2	1			2									
SB-420	OC-SB-420-0.0/1.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1								
SB-420	OC-SB-420-6.5/8.5-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2	1					1158425	3	WIL-1	1
SB-420	OC-SB-420-12/14-XXX	18-Aug-09	OCRI-01/-01A	77	79				23			2	1			2									
SB-421	OC-SB-421-0.0/1.0-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1	1	2	1	6	5	2	1					1158426	3	WIL-1	1
SB-421	OC-SB-421-8.0/10-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1	1	2	1	6	5	2	1					1158425	3	WIL-1	1

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
SB-421	OC-SB-421-10.5/12.5-XXX	19-Aug-09	OCRI-02/-02A	77	79				23		1	2	1	6	5	2									
SB-422	OC-SB-422-0.0/1.0-XXX	25-Aug-09	OCRI-06	77	78	1	1		23	1		2	1			2	1					1159284	3	WIL-3	1
SB-422	OC-SB-422-6.0/8.0-XXX	25-Aug-09	OCRI-06	77	78	1	1		23	1		2	1			2	1					1159282	3	WIL-3	1
SB-422	OC-SB-422-13/15-XXX	25-Aug-09	OCRI-06/-06A		79				23			2	1			2									
SB-423	OC-SB-423-0.0/1.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1			2									
SB-423	OC-SB-423-5.0/6.0-XXX	18-Aug-09	OCRI-01	77	78	1	1		23	1		2	1												
SB-423	OC-SB-423-13/14-XXX	18-Aug-09	OCRI-01/-01A		79				23			2	1												
SB-424	OC-SB-424-0.0/1.0-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1		2	1			2	1					1158426	3	WIL-1	1
SB-424	OC-SB-424-7.0/9.0-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1		2	1			2	1								
SB-424	OC-SB-424-17/19-XXX	19-Aug-09	OCRI-02/-02A		79				23			2	1			2									
SB-425	OC-SB-425-0.0/1.0-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1		2	1			2	1								
SB-425	OC-SB-425-6.0/8.0-XXX	19-Aug-09	OCRI-02	77	78	1	1		23	1		2	1			2	1					1158425	3	WIL-1	1
SB-425	OC-SB-425-18/20-XXX	19-Aug-09	OCRI-02/-02A		79				23			2	1			2									
SB-426	OC-SB-426-0.0/1.0-XXX	19-Aug-09	OCRI-03	77	78	1	1		23	1	1	2	1			2	1					1158831	3	WIL-1	1
SB-426	OC-SB-426-5.0/7.0-DUP	19-Aug-09	OCRI-03	77	78	1	1		23	1	1	2	1				1					1158830	3	WIL-3	1
SB-426	OC-SB-426-5.0/7.0-XXX	19-Aug-09	OCRI-03	77	78	1	1		23	1	1	2	1				1					1158830	3	WIL-3	1
SB-426	OC-SB-426-13/15-XXX	19-Aug-09	OCRI-03/-03A		79				23		1	2	1												
SB-427	OC-SB-427-0.0/1.0-XXX	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1					1161544	3	WIL-7	1
SB-427	OC-SB-427-8.0/10-DUP	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1								
SB-427	OC-SB-427-8.0/10-XXX	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1								
SB-427	OC-SB-427-12/14-XXX	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1								
SB-427	OC-SB-427-17/19-XXX	10-Sep-09	OCRI-14/-14A	77	79	1			23			2	1	6	5	2									
SB-428	OC-SB-428-0.0/1.0-XXX	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1								
SB-428	OC-SB-428-8.0/10-DUP	10-Sep-09	OCRI-14											6	5										
SB-428	OC-SB-428-8.0/10-XXX	10-Sep-09	OCRI-14	77	78	1	1		23	1		2	1	6	5	2	1								
SB-428	OC-SB-428-23/25-XXX	10-Sep-09	OCRI-14	77	79				23			2	1	6	5	2									
SB-429	OC-SB-429-6.0/8.0-XXX	25-Aug-09	OCRI-06	77	79				23	1		2	1												
SB-429	OC-SB-429-16/18-XXX	25-Aug-09	OCRI-06/-06A		79				23			2	1												
SB-430	OC-SB-430-0.0/1.0-XXX	25-Aug-09	OCRI-06	77	78	1	1		23	1		2	1			2	1					1159284	3	WIL-3	1
SB-430	OC-SB-430-8.0/10-DUP	25-Aug-09	OCRI-06	77	78	1	1		23	1		2	1			2	1					1159282	3	WIL-3	1
SB-430	OC-SB-430-8.0/10-XXX	25-Aug-09	OCRI-06	77	78	1	1		23	1		2	1			2	1					1159282	3	WIL-3	1
SB-430	OC-SB-430-19/21-XXX	25-Aug-09	OCRI-06/-06A		79				23			2	1			2									
SB-431	OC-SB-431-0.0/1.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1									1158831	3		
SB-431	OC-SB-431-7.0/9.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1									1158830	3		
SB-432	OC-SB-432-0.0/1.0-XXX	20-Aug-09	OCRI-04	77	78	1			23	1		2	1	6	5	2	1					1158831	3	WIL-1	1
SB-432	OC-SB-432-5.0/7.0-XXX	20-Aug-09	OCRI-04	77	78	1	1		23	1		2	1	6	5	2	1					1158831	3	WIL-1	1
SB-432	OC-SB-432-14/16-XXX	20-Aug-09	OCRI-04	77	78	1	1		23	1		2	1	6	5	2	1					1158831	3		
SB-433	OC-SB-433-0.0/1.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-433	OC-SB-433-5.0/7.0-DUP	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-433	OC-SB-433-5.0/7.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-433	OC-SB-433-20/22-XXX	24-Aug-09	OCRI-05/-05A		79				23			2	1												
SB-434	OC-SB-434-0.0/1.0-XXX	10-Sep-09	OCRI-13	77	78	1	1		23	1		2	1			2	1					1161544	3	WIL-7	1
SB-434	OC-SB-434-7.0/9.0-XXX	10-Sep-09	OCRI-13	77	78	1	1		23	1		2	1			2	1					1161543	3	WIL-7	1
SB-434	OC-SB-434-15/16-XXX	10-Sep-09	OCRI-13/-13A		79				23			2	1			2									
SB-435	OC-SB-435-0.0/1.0-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-7	1
SB-435	OC-SB-435-6.0/10-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-7	1
SB-435	OC-SB-435-11/15-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-7	1
SB-436	OC-SB-436-0.0/1.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1									1158831	3		
SB-436	OC-SB-436-6.0/8.0-XXX	20-Aug-09	OCRI-03	77	79				23	1		2	1									1158830	3		
SB-436	OC-SB-436-13/15-XXX	20-Aug-09	OCRI-03/-03A		79				23			2	1												
SB-437	OC-SB-437-0.0/1.0-XXX	21-Aug-09	OCRI-04	77	79	1			23	1		2	1			2	1					1158831	3	WIL-1	1
SB-437	OC-SB-437-5.0/7.0-XXX	21-Aug-09	OCRI-04	77	78	1	1		23	1		2	1			2	1					1158830	3	WIL-1	1
SB-437	OC-SB-437-21/23-XXX	21-Aug-09	OCRI-04/-04A		79				23			2	1			2									
SB-438	OC-SB-438-0.0/1.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-438	OC-SB-438-5.0/7.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-438	OC-SB-438-20/22-XXX	24-Aug-09	OCRI-05/-05A	77	79				23			2	1												
SB-439	OC-SB-439-0.0-1.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-439	OC-SB-439-8.0/10-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1												
SB-439	OC-SB-439-16/18-XXX	24-Aug-09	OCRI-05/-05A						23			2	1												
SB-440	OC-SB-440-0.0/1.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1	6	5										
SB-440	OC-SB-440-6.0/8.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1	6	5										
SB-440	OC-SB-440-23/25-XXX	24-Aug-09	OCRI-05/-05A	77	79				23			2	1	6	5										

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
SB-441	OC-SB-441-0.0/1.0-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1	6	5										
SB-441	OC-SB-441-8.0/10-XXX	24-Aug-09	OCRI-05	77	79				23	1		2	1	6	5										
SB-441	OC-SB-441-17/19-XXX	24-Aug-09	OCRI-05/-05A		79				23			2	1	6	5										
SB-442	OC-SB-442-0.0/1.0-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160157	3	WIL-4	1
SB-442	OC-SB-442-8.0/10-DUP	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160158	3	WIL-4	1
SB-442	OC-SB-442-8.0/10-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160158	3	WIL-4	1
SB-442	OC-SB-442-20/22-XXX	31-Aug-09	OCRI-09/-09A		79				23			2	1			2									
SB-443	OC-SB-443-0.0/1.0-XXX	20-Aug-09	OCRI-04	77	78	1	1		23	1		2	1				1					1158831	3	WIL-1	1
SB-443	OC-SB-443-6.0/8.0-XXX	20-Aug-09	OCRI-04	77	78	1	1		23	1		2	1			2	1					1158830	3	WIL-1	1
SB-443	OC-SB-443-18/20-XXX	20-Aug-09	OCRI-04/-04A		79				23			2	1			2									
SB-444	OC-SB-444-0.0/1.0-XXX	27-Aug-09	OCRI-08	77	78	1	1		23	1		2	1			2	1					1159656	3	WIL-4	1
SB-444	OC-SB-444-5.0/7.0-XXX	27-Aug-09	OCRI-08	77	78	1	1		23	1		2	1			2	1					1159657	3	WIL-4	1
SB-444	OC-SB-444-12/14-XXX	27-Aug-09	OCRI-08/-08A	77	79				23			2	1			2									
SB-445	OC-SB-445-0.0/1.0-XXX	21-Aug-09	OCRI-04	77	78	1	1		23	1		2	1			2	1					1158831	3	WIL-3	1
SB-445	OC-SB-445-8.0/10-XXX	21-Aug-09	OCRI-04	77	78	1	1		23	1		2	1			2	1					1158830	3	WIL-3	1
SB-445	OC-SB-445-25/27-XXX	21-Aug-09	OCRI-04/-04A		79				23			2	1			2									
SB-446	OC-SB-446-0.0/1.0-XXX	25-Aug-09	OCRI-05	77	78	1	1		23	1		2	1			2	1					1159284	3	WIL-3	1
SB-446	OC-SB-446-5.0/7.0-DUP	25-Aug-09	OCRI-05	77	78	1	1		23	1		2	1			2	1					1159283	3	WIL-3	1
SB-446	OC-SB-446-5.0/7.0-XXX	25-Aug-09	OCRI-05	77	78	1	1		23	1		2	1			2	1					1159283	3	WIL-3	1
SB-446	OC-SB-446-15/17-XXX	25-Aug-09	OCRI-05/-05A		79				23			2	1			2									
SB-447	OC-SB-447-0.0/1.0-XXX	31-Aug-09	OCRI-09	77	79				23	1	1	2	1	6	5										
SB-447	OC-SB-447-3.0/5.0-XXX	31-Aug-09	OCRI-09	77	79				23	1	1	2	1	6	5										
SB-447	OC-SB-447-18/20-XXX	31-Aug-09	OCRI-09/-09A	77	78				23		1	2	1	6	5										
SB-448	OC-SB-448-0.0/1.0-XXX	25-Aug-09	OCRI-05	77	78	1	1		23	1	1	2	1			2	1					1159284	3	WIL-3	1
SB-448	OC-SB-448-8.0/10-XXX	25-Aug-09	OCRI-05	77	78	1	1		23	1	1	2	1			2	1					1159283	3	WIL-3	1
SB-448	OC-SB-448-17/19-XXX	25-Aug-09	OCRI-05	77	78	1	1		23	1	1	2	1			2	1					1160157	3	WIL-6	1
SB-449	OC-SB-449-0.0/1.0-XXX	27-Aug-09	OCRI-08	77	78	1	1	9	23	1		2	1			2	1					1159656	3	WIL-4	1
SB-449	OC-SB-449-6.0/8.0-XXX	27-Aug-09	OCRI-08	77	79				23	1		2	1					1		1	1				
SB-449	OC-SB-449-11/13-XXX	27-Aug-09	OCRI-08/-08A		79				23			2	1												
SB-450	OC-SB-450-0.0/1.0-XXX	09-Sep-09	OCRI-13	77	78	1	1		23	1		2	1			2	1					1161210	3	WIL-7	1
SB-450	OC-SB-450-8.0/10-XXX	09-Sep-09	OCRI-13	77	78	1	1		23	1		2	1			2	1					1161211	3	WIL-7	1
SB-450	OC-SB-450-33/35-XXX	09-Sep-09	OCRI-13/-13A		79				23			2	1			2									
SB-451	OC-SB-451-0.0/1.0-XXX	28-Aug-09	OCRI-08	77	78	1	1		23	1		2	1			2	1					1159827	3	WIL-4	1
SB-451	OC-SB-451-2.5/4.5-DUP	28-Aug-09	OCRI-08	77	79	1			23	1		2	1			2	1					1159828	3	WIL-4	1
SB-451	OC-SB-451-2.5/4.5-XXX	28-Aug-09	OCRI-08	77	78	1	1		23	1		2	1			2	1					1159828	3	WIL-4	1
SB-451	OC-SB-451-18/20-XXX	28-Aug-09	OCRI-08/-08A		79				23			2	1			2									
SB-452	OC-SB-452-0.0/1.0-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160157	3	WIL-6	1
SB-452	OC-SB-452-5.0/7.0-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160158	3	WIL-6	1
SB-452	OC-SB-452-13/15-XXX	31-Aug-09	OCRI-09/-09A		79				23			2	1			2									
SB-453	OC-SB-453-0.0/1.0-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-8	1
SB-453	OC-SB-453-1.0/6.0-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-8	1
SB-454	OC-SB-454-0.0/1.0-XXX	27-Aug-09	OCRI-08	77	79				23	1		2	1												
SB-454	OC-SB-454-6.0/8.0-XXX	27-Aug-09	OCRI-08	77	79				23	1		2	1					1		1	1				
SB-454	OC-SB-454-18/20-XXX	27-Aug-09	OCRI-08/-08A		79				23			2	1					1		1	1				
SB-455	OC-SB-455-0.0/1.0-XXX	28-Aug-09	OCRI-08										1												
SB-455	OC-SB-455-6.0/8.0-DUP	28-Aug-09	OCRI-08	77	79				23	1		2	1												
SB-455	OC-SB-455-6.0/8.0-XXX	28-Aug-09	OCRI-08	77	79				23	1		2	1												
SB-455	OC-SB-455-28/30-XXX	28-Aug-09	OCRI-08/-08A		79				23			2	1												
SB-456	OC-SB-456-0.0/1.0-XXX	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-456	OC-SB-456-7.0/9.0-DUP	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-456	OC-SB-456-7.0/9.0-XXX	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-456	OC-SB-456-16/18-XXX	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-457	OC-SB-457-0.0/1.0-XXX	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-457	OC-SB-457-8.0/10-XXX	11-Sep-09	OCRI-14	77	78	1	1		23	1		2	1			2	1	1		1	1	1161544	3	WIL-7	1
SB-457	OC-SB-457-28/30-XXX	14-Sep-09	OCRI-15	77	78	1	1		23	1		2	1			2	1	1		1	1	1162388	3	WIL-8	1
SB-458	OC-SB-458-0.0/1.0-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1					1160157	3	WIL-6	1
SB-458	OC-SB-458-5.0/7.0-XXX	31-Aug-09	OCRI-09	77	78	1	1		23	1		2	1			2	1								
SB-458	OC-SB-458-22/24-XXX	31-Aug-09	OCRI-09/-09A		79				23			2	1			2									
SB-459	OC-SB-459-0.0/1.0-XXX	03-Sep-09	OCRI-11	77	78	1	1	9	23	1	1	2	1			2	1					1160614	3	WIL-6	1
SB-459	OC-SB-459-6.0/8.0-DUP	03-Sep-09	OCRI-11	77	78	1	1		23	1	1	2	1	6	5	2	1	1		1	1	1160615	3	WIL-6	1
SB-459	OC-SB-459-6.0/8.0-XXX	03-Sep-09	OCRI-11	77	78	1	1		23	1	1	2	1	6	5	2	1	1		1	1	1160615	3	WIL-6	1
SB-459	OC-SB-459-26/28-XXX	03-Sep-09	OCRI-11/-11A	77	79				23		1	2	1			2									

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
SB-460	OC-SB-460-0.0/1.0-XXX	01-Sep-09	OCRI-09	77	79				23	1		2	1											WIL-6	1
SB-460	OC-SB-460-5.5/7.5-XXX	01-Sep-09	OCRI-09	77	79				23	1		2	1											WIL-6	1
SB-460	OC-SB-460-30/32-XXX	01-Sep-09	OCRI-09/-09A		79				23			2	1												
SB-461	OC-SB-461-0.0/1.0-XXX	03-Sep-09	OCRI-12					9																	
SB-461	OC-SB-461-5.0/7.0-XXX	03-Sep-09	OCRI-12	77	79				23	1		2	1					1		1	1				
SB-461	OC-SB-461-28/30-XXX	03-Sep-09	OCRI-12/-12A	77	79				23			2	1												
SB-462	OC-SB-462-0.0/1.0-XXX	03-Sep-09	OCRI-11	77	79				23	1		2	1												
SB-462	OC-SB-462-4.0/6.0-XXX	03-Sep-09	OCRI-11	77	79				23	1		2	1												
SB-462	OC-SB-462-31/33-XXX	03-Sep-09	OCRI-11/-11A	77	79				23			2	1												
SB-463	OC-SB-463-0.0/1.0-XXX	01-Sep-09	OCRI-10	77	79				23	1		2	1									1160157	3		
SB-463	OC-SB-463-6.0/8.0-XXX	01-Sep-09	OCRI-10	77	79				23	1		2	1									1160158	3		
SB-463	OC-SB-463-28/30-XXX	01-Sep-09	OCRI-10/-10A		79				23			2	1												
SB-464	OC-SB-464-0.0/1.0-XXX	01-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160157	3	WIL-6	1
SB-464	OC-SB-464-5.0/7.0-XXX	01-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160158	3	WIL-6	1
SB-464	OC-SB-464-26/28-XXX	01-Sep-09	OCRI-10/-10A		79				23			2	1			2									
SB-465	OC-SB-465-0.0/1.0-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1	1	2	1			2	1					1160614	3	WIL-6	1
SB-465	OC-SB-465-8.0/10-DUP	02-Sep-09	OCRI-10	77	78	1	1		23	1	1	2	1			2	1					1160616	3	WIL-6	1
SB-465	OC-SB-465-8.0/10-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1	1	2	1			2	1					1160616	3	WIL-6	1
SB-465	OC-SB-465-16/18-XXX	02-Sep-09	OCRI-10/-10A	77	79				23		1	2	1			2									
SB-466	OC-SB-466-0.0/1.0-XXX	08-Sep-09	OCRI-13	77	79				23	1	1	2	1												
SB-466	OC-SB-466-6.0/8.0-XXX	08-Sep-09	OCRI-13	77	78	1	1		23	1	1	2	1			2	1	1		1	1	1161210	3	WIL-7	1
SB-466	OC-SB-466-30/32-XXX	08-Sep-09	OCRI-13	77	78	1	1		23	1	1	2	1			2	1	1		1	1	1161210	3	WIL-7	1
SB-467	OC-SB-467-0.0/1.0-XXX	02-Sep-09	OCRI-11					9																	
SB-467	OC-SB-467-6.0/8.0-DUP	02-Sep-09	OCRI-11	77	79			9	23	1		2	1												
SB-467	OC-SB-467-6.0/8.0-XXX	02-Sep-09	OCRI-11	77	79			9	23	1		2	1												
SB-467	OC-SB-467-30/32-XXX	02-Sep-09	OCRI-11/-11A/-11B	77	79			9	23			2	1												
SB-468	OC-SB-468-0.0/1.0-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160614	3	WIL-6	1
SB-468	OC-SB-468-8.0/10-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160616	3	WIL-6	1
SB-468	OC-SB-468-31/33-XXX	02-Sep-09	OCRI-10/-10A		79				23			2	1			2									
SB-469	OC-SB-469-0.0/1.0-XXX	08-Sep-09	OCRI-13	77	79				23	1		2	1					1		1	1				
SB-469	OC-SB-469-7.0/9.0-XXX	09-Sep-09	OCRI-13	77	79				23	1		2	1					1		1	1				
SB-469	OC-SB-469-28/30-XXX	09-Sep-09	OCRI-13/-13A	77	79				23			2	1							1					
SB-469	OC-SB-469-36/37-XXX	09-Sep-09	OCRI-13	77	79				23	1		2	1	6	5										
SB-470	OC-SB-470-0.0/1.0-XXX	04-Sep-09	OCRI-12	77	79				23	1		2	1					1		1	1				
SB-470	OC-SB-470-7.0/9.0-XXX	04-Sep-09	OCRI-12	77	79				23	1		2	1					1		1	1				
SB-470	OC-SB-470-31/33-XXX	04-Sep-09	OCRI-12/-12A	77	79				23			2	1					1		1	1				
SB-471	OC-SB-471-0.0/1.0-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160614	3	WIL-6	1
SB-471	OC-SB-471-3.0/5.0-XXX	02-Sep-09	OCRI-10	77	78	1	1		23	1		2	1			2	1					1160616	3	WIL-6	1
SB-471	OC-SB-471-26/28-XXX	02-Sep-09	OCRI-10/-10A		79				23			2	1			2									
SB-472	OC-SB-472-0.0/1.0-XXX	04-Sep-09	OCRI-12	77	78	1	1	9	23	1		2	1			2	1					1160847	3	WIL-6	1
SB-472	OC-SB-472-8.0/10-XXX	04-Sep-09	OCRI-12	77	78	1	1	9	23	1		2	1			2	1	1		1	1	1160847	3	WIL-6	1
SB-472	OC-SB-472-30/32-XXX	04-Sep-09	OCRI-12	77	78	1	1	9	23	1		2	1			2	1	1		1	1	1160847	3	WIL-7	1
SB-473	OC-SB-473-0.0/1.0-XXX	18-Sep-09	OCRI-18	77	78	1	1		23	1	1	2	1			2	1	1		1	1	1162601	3	WIL-8	1
SB-473	OC-SB-473-4.0/6.0-XXX	18-Sep-09	OCRI-18	77	78	1	1		23	1	1	2	1			2	1	1		1	1	1162600	3	WIL-8	1
SB-473	OC-SB-473-13/15-XXX	18-Sep-09	OCRI-18/-18A		79				23		1	2	1			2									
SS-400	OC-SS-400-0.0/1.0-XXX	14-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-401	OC-SS-401-0.1/1.0-XXX	14-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-402	OC-SS-402-0.0/1.0-XXX	14-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-403	OC-SS-403-0.0/1.0-XXX	14-Sep-09	OCRI-15					9																	
SS-404	OC-SS-404-0.0/1.0-XXX	14-Sep-09	OCRI-15	77	79			9	23	1		2	1												
SS-405	OC-SS-405-0.0/1.0-XXX	14-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-406	OC-SS-406-0.0/1.0.-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-407	OC-SS-407-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-408	OC-SS-408-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-409	OC-SS-409-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79			9	23	1		2	1												
SS-410	OC-SS-410-0.0/1.0-XXX	15-Sep-09	OCRI-15					9																	
SS-411	OC-SS-411-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-412	OC-SS-412-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79			9	23	1		2	1												
SS-413	OC-SS-413-0.0/1.0-XXX	15-Sep-09	OCRI-15					9																	
SS-414	OC-SS-414-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-415	OC-SS-415-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79				23	1		2	1												
SS-416	OC-SS-416-0.0/1.0-DUP	15-Sep-09	OCRI-15	77	79			9	23	1		2	1					1		1	1				

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
SS-416	OC-SS-416-0.0/1.0-XXX	15-Sep-09	OCRI-15	77	79			9	23	1		2	1					1		1	1				
SS-417	OC-SS-417-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79			9	23	1		2	1												
SS-418	OC-SS-418-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-419	OC-SS-419-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-420	OC-SS-420-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-421	OC-SS-421-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-422	OC-SS-422-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-423	OC-SS-423-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-424	OC-SS-424-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	78	1	1		23	1	1	2	1			2	1					1162388	3	WIL-8	1
SS-425	OC-SS-425-0.0/1.0-XXX	15-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-426	OC-SS-426-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-427	OC-SS-427-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-428	OC-SS-428-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-429	OC-SS-429-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-430	OC-SS-430-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-431	OC-SS-431-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-432	OC-SS-432-0.0/1.0-XXX	16-Sep-09	OCRI-16	77	79				23	1		2	1												
SS-434	OC-SS-434-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	78	1	1		23	1	1	2	1			2	1					1162388	3	WIL-8	1
SS-435	OC-SS-435-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1												
SS-436	OC-SS-436-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1					1		1	1				
SS-437	OC-SS-437-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1					1		1	1				
SS-440	OC-SS-440-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-442	OC-SS-442-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1												
SS-449	OC-SS-449-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1												
SS-450	OC-SS-450-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-451	OC-SS-451-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	79				23	1		2	1												
SS-453	OC-SS-453-0.0/1.0-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-8	1
SS-454	OC-SS-454-0.0/1.0-XXX	17-Sep-09	OCRI-17	77	79				23	1		2	1												
SS-455	OC-SS-455-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	78	1	1		23	1	1	2	1			2	1					1162388	3	WIL-8	1
SS-456	OC-SS-456-0.0/1.0-XXX	18-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-8	1
SS-457	OC-SS-457-0.0/1.0-XXX	17-Sep-09	OCRI-18	77	78	1	1		23	1	1	2	1			2	1					1162601	3	WIL-8	1
SS-458	OC-SS-458-0.0/1.0-XXX	18-Sep-09	OCRI-18	77	79				23	1		2	1												
SS-459	OC-SS-459-0.0/1.0-XXX	18-Sep-09	OCRI-18	77	78	1	1		23	1		2	1			2	1					1162601	3	WIL-8	1
SS-460	OC-SS-460-0.0/1.0-XXX	16-Sep-09	OCRI-17	77	78	1	1		23	1		2	1			2	1					1162388	3	WIL-8	1
SS-461	OC-SS-461-0.0/1.0-XXX	18-Sep-09	OCRI-18	77	79				23	1		2	1												
Performance Evaluation Samples																									
OC-PE-METALS	OC-PE-MS00149-METALS	01-Sep-09	OCRI-09						23	1															
OC-PE-PCB	OC-PE-TT2488-PCB	01-Sep-09	OCRI-09					9																	
OC-PE-SVOC	OC-PE-SS1039-SVOC	01-Sep-09	OCRI-09		79																				
OC-PE-VOC	OC-SB-PE-VS0355-VOC	01-Sep-09	OCRI-09	77																					
Equipment Rinsate Blanks																									
RINSE BLANK	OC-EBK-001	18-Aug-09	OCRI-01	77	73				23	1		2	1			2	1					1158426	3	WIL-1	1
RINSE BLANK	OC-EBK-002	19-Aug-09	OCRI-02	77	73	1			23	1		2	1	6	5	2	1					1158426	3	WIL-1	1
RINSE BLANK	OC-EBK-003	21-Aug-09	OCRI-04	77	73	1			23	1		2	1			2	1					1158831	3	WIL-3	1
RINSE BLANK	OC-EBK-004	24-Aug-09	OCRI-05	77	73	1			23	1		2	1	6	5	2	1					1159284	3	WIL-3	1
RINSE BLANK	OC-EBK-005	27-Aug-09	OCRI-07	77	73	1			23	1		2	1			2	1					1159656	3	WIL-4	1
RINSE BLANK	OC-EBK-006	31-Aug-09	OCRI-09	77	73	1		9	23	1		2	1			2	1	1	1	1		1160157	3	WIL-6	1
RINSE BLANK	OC-EBK-007	03-Sep-09	OCRI-11	77	73				23	1		2	1												
RINSE BLANK	OC-EBK-008	08-Sep-09	OCRI-12	77	73	1		9	23	1		2	1	6	5	2	1	1	1	1		1161210	3	WIL-7	1
RINSE BLANK	OC-EBK-009	10-Sep-09	OCRI-14	77	72				23	1		2	1												
RINSE BLANK	OC-EBK-010	14-Sep-09	OCRI-15	77	72	1			23	1		2	1			2	1					1162388	3		
RINSE BLANK	OC-EBK-011	16-Sep-09	OCRI-16	77	73	1			23	1		2	1			2	1					1162388	3	WIL-7	1
RINSE BLANK	OC-EBK-012	17-Sep-09	OCRI-18	77	73	1			23	1		2	1			2	1					1162601	3	WIL-8	1
Triip Blanks																									
TRIP BLANK	OC-TBK-001	18-Aug-09	OCRI-01	77																					
TRIP BLANK	OC-TBK-002	19-Aug-09	OCRI-02	77																					
TRIP BLANK	OC-TBK-003	19-Aug-09	OCRI-02											6											
TRIP BLANK	OC-TBK-004	20-Aug-09	OCRI-03	77																					
TRIP BLANK	OC-TBK-005	21-Aug-09	OCRI-04	77										6											
TRIP BLANK	OC-TBK-006	24-Aug-09	OCRI-05	77										6											
TRIP BLANK	OC-TBK-007	25-Aug-09	OCRI-05	77										6											

Table 1
Sample Summary
Data Validation Report
2009 OU1 Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Test America - Massachusetts												Test America - Florida		Test America - New Jersey				Lancaster		Katahdin	
Location	Field Sample ID	Date Sampled	Sample Delivery Group	SW8260	SW8270	SW8270	SW8270	SW8082	SW6010	SW7470 / SW7471	Lloyd_ Kahn	E300	LACH_107_ 06_1_B	MAVPH	MAEPH	SW8315	LC65	SW7199	SM4500_ H+	SM2580B	SW9045	Sample Delivery Group	SW8315A	Sample Delivery Group	SW846 M8033
				VOCs	SVOCs	Diphenyl amine	NDMA - Low Level	PCBs	Metals	Mercury	TOC	Anions	Ammonia	VPH	EPH	Formaldehyde/ Acetaldehyde	Phthalic Anhydride	Hexavalent Chromium	pH	ORP	pH		Hydrazine		Dimethyl formamide
TRIP BLANK	OC-TBK-008	26-Aug-09	OCRI-06	77										6											
TRIP BLANK	OC-TBK-009	27-Aug-09	OCRI-07	77																					
TRIP BLANK	OC-TBK-010	28-Aug-09	OCRI-08	77																					
TRIP BLANK	OC-TBK-011	31-Aug-09	OCRI-09	77										6											
TRIP BLANK	OC-TBK-012	02-Sep-09	OCRI-10	77																					
TRIP BLANK	OC-TBK-013	03-Sep-09	OCRI-11	77										6											
TRIP BLANK	OC-TBK-014	04-Sep-09	OCRI-12	77																					
TRIP BLANK	OC-TBK-015	09-Sep-09	OCRI-13	77										6											
TRIP BLANK	OC-TBK-016	10-Sep-09	OCRI-13	77																					
TRIP BLANK	OC-TBK-017	11-Sep-09	OCRI-14	77										6											
TRIP BLANK	OC-TBK-018	14-Sep-09	OCRI-15	77																					
TRIP BLANK	OC-TBK-019	15-Sep-09	OCRI-15	77																					
TRIP BLANK	OC-TBK-020	16-Sep-09	OCRI-16	77																					
TRIP BLANK	OC-TBK-021	17-Sep-09	OCRI-17	77																					
TRIP BLANK	OC-TBK-022	18-Sep-09	OCRI-18	77										6											

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

Prepared by / Date: KJC 07/07/10
Checked by / Date: TLC 07/08/10

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
Lab Sample ID		360-24173-1		360-24173-11		360-24173-12		360-24173-13		360-24173-14		360-24173-15		360-24173-17	
Field Sample ID		OC-SB-405-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-12/14-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-5.0/6.0-XXX	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,1,1-Trichloroethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,1,2,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	140	UJ	100	U	2,800	U	2.6	U	2.3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	13	U	720	U	500	U	14,000	U	13	U	11	U
1,1,2-Trichloroethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,1-Dichloroethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,1-Dichloroethene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,1-Dichloropropene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2,3-Trichlorobenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2,3-Trichloropropane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2,4-Trichlorobenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2,4-Trimethylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2-Dibromo-3-chloropropane	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
1,2-Dibromoethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2-Dichlorobenzene	ug/kg	2.3	U	2.6	U	73	J	100	U	2,800	U	2.6	U	2.3	U
1,2-Dichloroethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,2-Dichloropropane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,3,5-Trimethylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,3-Dichlorobenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,3-Dichloropropane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,4-Dichlorobenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
1,4-Dioxane	ug/kg	230	UJ	260	UJ	14,000	UJ	10,000	UJ	280,000	UJ	260	UJ	230	UJ
2,2-Dichloropropane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.7	U	5.1	U	2,100		200	U	240,000	J	5.2	U	4.6	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.7	U	5.1	U	540		44	J	75,000		5.2	U	4.6	U
2-Butanone	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
2-Chlorotoluene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
2-Hexanone	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
4-Chlorotoluene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
4-iso-Propyltoluene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
4-Methyl-2-pentanone	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
Acetic acid, methyl ester	ug/kg	47	U	51	U	2,900	U	2,000	UJ	56,000	UJ	52	U	46	U
Acetone	ug/kg	230	UJ	260	UJ	14,000	UJ	10,000	UJ	280,000	UJ	260	UJ	230	UJ
Benzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Bromobenzene	ug/kg	2.3	U	2.6	U	140	UJ	100	U	2,800	U	2.6	U	2.3	U
Bromochloromethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Bromodichloromethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Bromoform	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Bromomethane	ug/kg	4.7	U	5.1	U	290	U	200	U	5,600	U	5.2	U	4.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Carbon disulfide	ug/kg	2.3	U	2.6	U	140	U	520		2,800	U	2.6	U	2.3	J
Carbon tetrachloride	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Chlorobenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Chlorodibromomethane	ug/kg	2.3	U	2.6	U	140	UJ	100	U	2,800	U	2.6	U	2.3	U
Chloroethane	ug/kg	4.7	U	5.1	U	290	UJ	200	U	5,600	U	5.2	U	4.6	U
Chloroform	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Chloromethane	ug/kg	4.7	U	5.1	U	290	U	200	U	5,600	U	5.2	U	4.6	U
Cis-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
cis-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Cyclohexane	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
Dibromomethane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Dichlorodifluoromethane	ug/kg	4.7	UJ	5.1	UJ	290	UJ	200	UJ	5,600	UJ	5.2	UJ	4.6	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
	Lab Sample ID	360-24173-1		360-24173-11		360-24173-12		360-24173-13		360-24173-14		360-24173-15		360-24173-17	
	Field Sample ID	OC-SB-405-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-12/14-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-5.0/6.0-XXX	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Diisopropylether	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Ethyl benzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Ethyl-t-Butyl Ether	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Hexachlorobutadiene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Isopropylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Methyl cyclohexane	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Methyl Tertbutyl Ether	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Methylene chloride	ug/kg	9.3	U	10	U	570	U	400	U	11,000	U	10	U	9.2	U
n-Butylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Naphthalene	ug/kg	23	U	26	U	160	J	1,000	U	28,000	U	26	U	23	U
Propylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
sec-Butylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Styrene	ug/kg	2.3	U	2.6	U	310		100	U	2,800	U	2.6	U	2.3	U
tert-Butylbenzene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Tetrachloroethene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Tetrahydrofuran	ug/kg	23	U	26	U	1,400	U	1,000	U	28,000	U	26	U	23	U
Toluene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
trans-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
trans-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Trichloroethene	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Trichlorofluoromethane	ug/kg	4.7	U	5.1	U	290	U	200	U	5,600	U	5.2	U	4.6	U
Vinyl chloride	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U
Xylene, m/p	ug/kg	4.7	U	5.1	U	290	U	200	U	5,600	U	5.2	U	4.6	U
Xylene, o	ug/kg	2.3	U	2.6	U	140	U	100	U	2,800	U	2.6	U	2.3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-02	
Lab Sample ID		360-24173-2		360-24173-3		360-24173-4		360-24173-5		360-24173-6		360-24173-9		360-24194-1	
Field Sample ID		OC-SB-405-14/15-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-13/14-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-421-0.0/1.0-XXX	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,1,1-Trichloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,1,2,2-Tetrachloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	UJ	2.7	U	150	UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	540	U	57,000	U	13	U	11	U	530	U	13	U	730	U
1,1,2-Trichloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,1-Dichloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,1-Dichloroethene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,1-Dichloropropene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2,3-Trichlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2,3-Trichloropropane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2,4-Trichlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2,4-Trimethylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2-Dibromo-3-chloropropane	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
1,2-Dibromoethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2-Dichlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2-Dichloroethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,2-Dichloropropane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,3,5-Trimethylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,3-Dichlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,3-Dichloropropane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,4-Dichlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
1,4-Dioxane	ug/kg	11,000	UJ	1,100,000	UJ	250	UJ	220	UJ	11,000	UJ	270	UJ	15,000	UJ
2,2-Dichloropropane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
2,4,4-Trimethyl-1-pentene	ug/kg	2,300	J	1,200,000	J	5.1	U	37	J	140,000	J	5.4	U	1,200	
2,4,4-Trimethyl-2-Pentene	ug/kg	620		310,000		5.1	U	10		36,000		5.4	U	610	
2-Butanone	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
2-Chlorotoluene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
2-Hexanone	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
4-Chlorotoluene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
4-iso-Propyltoluene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
4-Methyl-2-pentanone	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
Acetic acid, methyl ester	ug/kg	2,100	UJ	230,000	UJ	51	U	44	U	2,100	UJ	54	U	2,900	U
Acetone	ug/kg	11,000	UJ	1,100,000	UJ	250	UJ	220	UJ	11,000	UJ	270	UJ	15,000	UJ
Benzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Bromobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	UJ	2.7	U	150	UJ
Bromochloromethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Bromodichloromethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Bromoform	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Bromomethane	ug/kg	210	U	23,000	U	5.1	U	4.4	U	210	U	5.4	U	290	U
Butane, 2-methoxy-2-methyl-	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Carbon disulfide	ug/kg	110	U	11,000	U	2.5	U	4.4		110	U	2.7	U	150	U
Carbon tetrachloride	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Chlorobenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Chlorodibromomethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	UJ	2.7	U	150	UJ
Chloroethane	ug/kg	210	U	23,000	U	5.1	U	4.4	U	210	UJ	5.4	U	290	UJ
Chloroform	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Chloromethane	ug/kg	210	U	23,000	U	5.1	U	4.4	U	210	U	5.4	U	290	U
Cis-1,2-Dichloroethene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
cis-1,3-Dichloropropene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Cyclohexane	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
Dibromomethane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Dichlorodifluoromethane	ug/kg	210	UJ	23,000	UJ	5.1	UJ	4.4	UJ	210	UJ	5.4	UJ	290	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-02	
	Lab Sample ID	360-24173-2		360-24173-3		360-24173-4		360-24173-5		360-24173-6		360-24173-9		360-24194-1	
	Field Sample ID	OC-SB-405-14/15-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-13/14-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-421-0.0/1.0-XXX	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Diisopropylether	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Ethyl benzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Ethyl-t-Butyl Ether	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Hexachlorobutadiene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Isopropylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Methyl cyclohexane	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Methyl Tertbutyl Ether	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Methylene chloride	ug/kg	430	U	46,000	U	10	U	8.9	U	420	U	11	U	580	U
n-Butylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Naphthalene	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
Propylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
sec-Butylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Styrene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
tert-Butylbenzene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Tetrachloroethene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Tetrahydrofuran	ug/kg	1,100	U	110,000	U	25	U	22	U	1,100	U	27	U	1,500	U
Toluene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
trans-1,2-Dichloroethene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
trans-1,3-Dichloropropene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Trichloroethene	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Trichlorofluoromethane	ug/kg	210	U	23,000	U	5.1	U	4.4	U	210	U	5.4	U	290	U
Vinyl chloride	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U
Xylene, m/p	ug/kg	210	U	23,000	U	5.1	U	4.4	U	210	U	5.4	U	290	U
Xylene, o	ug/kg	110	U	11,000	U	2.5	U	2.2	U	110	U	2.7	U	150	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-03	
Lab Sample ID		360-24194-2		360-24194-3		360-24194-4		360-24194-6		360-24194-7		360-24194-9		360-24223-1	
Field Sample ID		OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-415-0.0/1.0-XXX	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,1,1-Trichloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,1,2,2-Tetrachloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	UJ	2.7	U	2.8	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	660	U	12	U	14	U	11	U	670	U	14	U	14	U
1,1,2-Trichloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,1-Dichloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,1-Dichloroethene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,1-Dichloropropene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2,3-Trichlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2,3-Trichloropropane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2,4-Trichlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2,4-Trimethylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2-Dibromo-3-chloropropane	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
1,2-Dibromoethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2-Dichlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2-Dichloroethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,2-Dichloropropane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,3,5-Trimethylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,3-Dichlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,3-Dichloropropane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,4-Dichlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
1,4-Dioxane	ug/kg	13,000	UJ	230	UJ	290	UJ	220	UJ	13,000	UJ	270	UJ	280	UJ
2,2-Dichloropropane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
2,4,4-Trimethyl-1-pentene	ug/kg	3,900	J	4.6	U	5.7	UJ	4.4	U	1,100		5.4	U	5.5	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	1,700		4.6	U	5.7	U	4.4	U	440		5.4	U	5.5	U
2-Butanone	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
2-Chlorotoluene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
2-Hexanone	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
4-Chlorotoluene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
4-iso-Propyltoluene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
4-Methyl-2-pentanone	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
Acetic acid, methyl ester	ug/kg	2,600	UJ	46	UJ	57	UJ	44	UJ	2,700	U	54	UJ	55	UJ
Acetone	ug/kg	13,000	UJ	230	UJ	290	UJ	220	UJ	13,000	UJ	270	UJ	280	UJ
Benzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Bromobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	UJ	2.7	U	2.8	U
Bromochloromethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Bromodichloromethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Bromoform	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Bromomethane	ug/kg	260	U	4.6	U	5.7	U	4.4	U	270	U	5.4	U	5.5	U
Butane, 2-methoxy-2-methyl-	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Carbon disulfide	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Carbon tetrachloride	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Chlorobenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Chlorodibromomethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	UJ	2.7	U	2.8	U
Chloroethane	ug/kg	260	U	4.6	U	5.7	U	4.4	U	270	UJ	5.4	U	5.5	U
Chloroform	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Chloromethane	ug/kg	260	U	4.6	U	5.7	U	4.4	U	270	U	5.4	U	5.5	U
Cis-1,2-Dichloroethene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
cis-1,3-Dichloropropene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Cyclohexane	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
Dibromomethane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Dichlorodifluoromethane	ug/kg	260	U	4.6	UJ	5.7	U	4.4	UJ	270	UJ	5.4	UJ	5.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-03	
	Lab Sample ID	360-24194-2		360-24194-3		360-24194-4		360-24194-6		360-24194-7		360-24194-9		360-24223-1	
	Field Sample ID	OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-415-0.0/1.0-XXX	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Diisopropylether	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Ethyl benzene	ug/kg	3,300		2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Ethyl-t-Butyl Ether	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Hexachlorobutadiene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Isopropylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Methyl cyclohexane	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Methyl Tertbutyl Ether	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Methylene chloride	ug/kg	530	UJ	9.3	U	11	U	8.7	U	540	U	11	U	11	U
n-Butylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Naphthalene	ug/kg	120	J	23	U	29	U	22	U	1,300	U	27	U	28	U
Propylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
sec-Butylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Styrene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
tert-Butylbenzene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Tetrachloroethene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Tetrahydrofuran	ug/kg	1,300	U	23	U	29	U	22	U	1,300	U	27	U	28	U
Toluene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
trans-1,2-Dichloroethene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
trans-1,3-Dichloropropene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Trichloroethene	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Trichlorofluoromethane	ug/kg	260	U	4.6	U	5.7	U	4.4	U	270	U	5.4	U	5.5	U
Vinyl chloride	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U
Xylene, m/p	ug/kg	260	U	4.6	U	5.7	U	4.4	U	270	U	5.4	U	5.5	U
Xylene, o	ug/kg	130	U	2.3	U	2.9	U	2.2	U	130	U	2.7	U	2.8	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		360-24223-10		360-24223-11		360-24223-12		360-24223-13		360-24223-15		360-24223-3		360-24223-4	
Field Sample ID		OC-SB-426-5.0/7.0-DUP		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX	
Sample Collection Date		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/19/2009	
QC Code		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	11	U	14	U	14	U	13	U	13	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
1,4-Dioxane	ug/kg	250	UJ	230	UJ	210	UJ	270	UJ	270	UJ	270	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.9	U	4.6	UJ	4.3	U	5.5	UJ	5.5	U	5.3	U	5.1	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
2-Butanone	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
2-Hexanone	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
Acetic acid, methyl ester	ug/kg	49	UJ	46	UJ	43	UJ	55	UJ	55	UJ	53	UJ	51	UJ
Acetone	ug/kg	250	UJ	230	UJ	210	UJ	270	UJ	270	UJ	270	UJ	250	UJ
Benzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Bromobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Bromoform	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Bromomethane	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Chloroethane	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
Chloroform	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Chloromethane	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Cyclohexane	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
Dibromomethane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Dichlorodifluoromethane	ug/kg	4.9	UJ	4.6	U	4.3	UJ	5.5	U	5.5	UJ	5.3	UJ	5.1	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
	Lab Sample ID	360-24223-10		360-24223-11		360-24223-12		360-24223-13		360-24223-15		360-24223-3		360-24223-4	
	Field Sample ID	OC-SB-426-5.0/7.0-DUP		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX	
	Sample Collection Date	8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/19/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Diisopropylether	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Methylene chloride	ug/kg	9.9	U	9.2	U	8.5	U	11	U	11	U	11	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Naphthalene	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
Propylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Styrene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Tetrahydrofuran	ug/kg	25	U	23	U	21	U	27	U	27	U	27	U	25	U
Toluene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Trichloroethene	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Trichlorofluoromethane	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
Vinyl chloride	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U
Xylene, m/p	ug/kg	4.9	U	4.6	U	4.3	U	5.5	U	5.5	U	5.3	U	5.1	U
Xylene, o	ug/kg	2.5	U	2.3	U	2.1	U	2.7	U	2.7	U	2.7	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03		OCRI-03		OCRI-03		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
Lab Sample ID		360-24223-6		360-24223-7		360-24223-9		360-24244-1		360-24244-10		360-24244-12		360-24244-2	
Field Sample ID		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-432-14/16-XXX	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/21/2009		8/21/2009		8/20/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1,1-Trichloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1,2,2-Tetrachloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	11	U	13	U	810	U	12	U	13	U	580	U
1,1,2-Trichloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1-Dichloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1-Dichloroethene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,1-Dichloropropene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,2,3-Trichlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	78	J
1,2,3-Trichloropropane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,2,4-Trichlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,2,4-Trimethylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	150	
1,2-Dibromo-3-chloropropane	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,200	U
1,2-Dibromoethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,2-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	
1,2-Dichloroethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,2-Dichloropropane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,3,5-Trimethylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	57	J
1,3-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,3-Dichloropropane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,4-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
1,4-Dioxane	ug/kg	270	UJ	220	UJ	260	UJ	16,000	UJ	250	UJ	270	UJ	12,000	UJ
2,2-Dichloropropane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.4	UJ	4.4	UJ	5.3	U	320	UJ	4.9	U	5.3	U	250	J
2,4,4-Trimethyl-2-Pentene	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	230	U
2-Butanone	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,200	U
2-Chlorotoluene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
2-Hexanone	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,500	
4-Chlorotoluene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
4-iso-Propyltoluene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	340	
4-Methyl-2-pentanone	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,200	U
Acetic acid, methyl ester	ug/kg	54	UJ	44	UJ	53	UJ	7,200	J	49	U	53	UJ	2,300	UJ
Acetone	ug/kg	270	UJ	220	UJ	260	UJ	16,000	UJ	250	UJ	270	UJ	12,000	UJ
Benzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Bromobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Bromochloromethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Bromodichloromethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Bromoform	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Bromomethane	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	230	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Carbon disulfide	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Carbon tetrachloride	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Chlorobenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Chlorodibromomethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Chloroethane	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	230	U
Chloroform	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Chloromethane	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	230	U
Cis-1,2-Dichloroethene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
cis-1,3-Dichloropropene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Cyclohexane	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,200	U
Dibromomethane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Dichlorodifluoromethane	ug/kg	5.4	U	4.4	U	5.3	UJ	320	U	4.9	UJ	5.3	U	230	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
	Lab Sample ID	360-24223-6		360-24223-7		360-24223-9		360-24244-1		360-24244-10		360-24244-12		360-24244-2	
	Field Sample ID	OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-432-14/16-XXX	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/21/2009		8/21/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Diisopropylether	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Ethyl benzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	4,300	
Ethyl-t-Butyl Ether	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Hexachlorobutadiene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Isopropylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Methyl cyclohexane	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Methyl Tertbutyl Ether	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Methylene chloride	ug/kg	21	U	8.8	U	11	U	650	U	9.8	U	11	U	470	U
n-Butylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Naphthalene	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	77	J
Propylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
sec-Butylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Styrene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
tert-Butylbenzene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Tetrachloroethene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Tetrahydrofuran	ug/kg	27	U	22	U	26	U	1,600	U	25	U	27	U	1,200	U
Toluene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	910	
trans-1,2-Dichloroethene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
trans-1,3-Dichloropropene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Trichloroethene	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	57	J
Trichlorofluoromethane	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	230	U
Vinyl chloride	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	120	U
Xylene, m/p	ug/kg	5.4	U	4.4	U	5.3	U	320	U	4.9	U	5.3	U	10,000	
Xylene, o	ug/kg	2.7	U	2.2	U	2.6	U	160	U	2.5	U	2.7	U	2,600	

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-05		OCRI-05	
Lab Sample ID		360-24244-3		360-24244-4		360-24244-6		360-24244-7		360-24244-9		360-24251-1		360-24251-10	
Field Sample ID		OC-SB-432-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-440-6.0/8.0-XXX	
Sample Collection Date		8/20/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/24/2009		8/24/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1,1-Trichloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1,2,2-Tetrachloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	700	U	12	U	13	U	12	U	12	U	14	U	14	U
1,1,2-Trichloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1-Dichloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1-Dichloroethene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,1-Dichloropropene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2,3-Trichlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2,3-Trichloropropane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2,4-Trichlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2,4-Trimethylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2-Dibromo-3-chloropropane	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
1,2-Dibromoethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2-Dichlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2-Dichloroethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,2-Dichloropropane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,3,5-Trimethylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,3-Dichlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,3-Dichloropropane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,4-Dichlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
1,4-Dioxane	ug/kg	14,000	UJ	240	UJ	250	UJ	240	UJ	240	UJ	270	UJ	270	UJ
2,2-Dichloropropane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
2,4,4-Trimethyl-1-pentene	ug/kg	280	UJ	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
2-Butanone	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
2-Chlorotoluene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
2-Hexanone	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
4-Chlorotoluene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
4-iso-Propyltoluene	ug/kg	550		2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
4-Methyl-2-pentanone	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
Acetic acid, methyl ester	ug/kg	2,800	UJ	49	U	51	UJ	49	U	48	UJ	55	U	54	UJ
Acetone	ug/kg	14,000	UJ	240	UJ	250	UJ	240	UJ	240	UJ	270	UJ	270	UJ
Benzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Bromobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Bromochloromethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Bromodichloromethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Bromoform	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Bromomethane	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
Butane, 2-methoxy-2-methyl-	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Carbon disulfide	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Carbon tetrachloride	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Chlorobenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Chlorodibromomethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Chloroethane	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
Chloroform	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Chloromethane	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
Cis-1,2-Dichloroethene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
cis-1,3-Dichloropropene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Cyclohexane	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
Dibromomethane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Dichlorodifluoromethane	ug/kg	280	U	4.9	UJ	5.1	U	4.9	UJ	4.8	U	5.5	UJ	5.4	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-05		OCRI-05	
	Lab Sample ID	360-24244-3		360-24244-4		360-24244-6		360-24244-7		360-24244-9		360-24251-1		360-24251-10	
	Field Sample ID	OC-SB-432-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-440-6.0/8.0-XXX	
	Sample Collection Date	8/20/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Diisopropylether	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Ethyl benzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Ethyl-t-Butyl Ether	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Hexachlorobutadiene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Isopropylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Methyl cyclohexane	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Methyl Tertbutyl Ether	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Methylene chloride	ug/kg	560	U	9.8	U	16	U	9.7	U	16	U	8.4	U	11	U
n-Butylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Naphthalene	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
Propylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
sec-Butylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Styrene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
tert-Butylbenzene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Tetrachloroethene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Tetrahydrofuran	ug/kg	1,400	U	24	U	25	U	24	U	24	U	27	U	27	U
Toluene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
trans-1,2-Dichloroethene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
trans-1,3-Dichloropropene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Trichloroethene	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Trichlorofluoromethane	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
Vinyl chloride	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U
Xylene, m/p	ug/kg	280	U	4.9	U	5.1	U	4.9	U	4.8	U	5.5	U	5.4	U
Xylene, o	ug/kg	140	U	2.4	U	2.5	U	2.4	U	2.4	U	2.7	U	2.7	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		360-24251-12		360-24251-13		360-24251-15		360-24251-16		360-24251-18		360-24251-19		360-24251-20	
Field Sample ID		OC-SB-438-5.0/7.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	12	U	12	U	13	U	13	U	14	U	13	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1-Dichloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1-Dichloroethene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,1-Dichloropropene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
1,2-Dibromoethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	UJ	2.7	UJ	2.6	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2-Dichloroethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,2-Dichloropropane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,3-Dichloropropane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
1,4-Dioxane	ug/kg	250	UJ	240	UJ	240	UJ	270	UJ	260	UJ	270	UJ	260	UJ
2,2-Dichloropropane	ug/kg	2.5	UJ	2.4	U	2.4	UJ	2.7	U	2.6	UJ	2.7	UJ	2.6	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
2-Butanone	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
2-Chlorotoluene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
2-Hexanone	ug/kg	25	U	24	U	24	U	27	U	26	UJ	27	UJ	26	U
4-Chlorotoluene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
4-Methyl-2-pentanone	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
Acetic acid, methyl ester	ug/kg	50	U	49	U	47	U	54	U	51	U	55	U	51	U
Acetone	ug/kg	250	UJ	240	UJ	240	UJ	270	UJ	260	UJ	270	UJ	260	UJ
Benzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Bromobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Bromochloromethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Bromodichloromethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Bromoform	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Bromomethane	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Carbon disulfide	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Carbon tetrachloride	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Chlorobenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Chlorodibromomethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Chloroethane	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
Chloroform	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Chloromethane	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Cyclohexane	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
Dibromomethane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Dichlorodifluoromethane	ug/kg	5	UJ	4.9	UJ	4.7	UJ	5.4	UJ	5.1	UJ	5.5	UJ	5.1	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		360-24251-12		360-24251-13		360-24251-15		360-24251-16		360-24251-18		360-24251-19		360-24251-20	
Field Sample ID		OC-SB-438-5.0/7.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Diisopropylether	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Ethyl benzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Hexachlorobutadiene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	UJ	2.7	UJ	2.6	U
Isopropylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Methyl cyclohexane	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Methylene chloride	ug/kg	10	U	9.7	U	9.4	U	11	U	10	U	11	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Naphthalene	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
Propylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
sec-Butylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Styrene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
tert-Butylbenzene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Tetrachloroethene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Tetrahydrofuran	ug/kg	25	U	24	U	24	U	27	U	26	U	27	U	26	U
Toluene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	UJ	2.7	UJ	2.6	U
Trichloroethene	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Trichlorofluoromethane	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
Vinyl chloride	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U
Xylene, m/p	ug/kg	5	U	4.9	U	4.7	U	5.4	U	5.1	U	5.5	U	5.1	U
Xylene, o	ug/kg	2.5	U	2.4	U	2.4	U	2.7	U	2.6	U	2.7	U	2.6	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		360-24251-21		360-24251-22		360-24251-23		360-24251-24		360-24251-3		360-24251-4		360-24251-5	
Field Sample ID		OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-438-0.0/1.0-XXX		OC-SB-438-20/22-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-439-0.0-1.0-XXX	
Sample Collection Date		8/25/2009		8/25/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1,1-Trichloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1,2,2-Tetrachloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	10	U	14	U	11	U	13	U	13	U	13	U
1,1,2-Trichloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1-Dichloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1-Dichloroethene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,1-Dichloropropene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2,3-Trichlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2,3-Trichloropropane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2,4-Trichlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2,4-Trimethylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2-Dibromo-3-chloropropane	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
1,2-Dibromoethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2-Dichlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2-Dichloroethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,2-Dichloropropane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,3,5-Trimethylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,3-Dichlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,3-Dichloropropane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,4-Dichlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
1,4-Dioxane	ug/kg	220	UJ	200	UJ	270	UJ	210	UJ	260	UJ	250	UJ	270	UJ
2,2-Dichloropropane	ug/kg	2.2	U	2	UJ	2.7	U	2.1	U	2.6	UJ	2.5	U	2.7	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	UJ	5.3	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
2-Butanone	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
2-Chlorotoluene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
2-Hexanone	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
4-Chlorotoluene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
4-iso-Propyltoluene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
4-Methyl-2-pentanone	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
Acetic acid, methyl ester	ug/kg	44	U	40	U	54	U	42	U	52	U	50	UJ	53	U
Acetone	ug/kg	220	UJ	200	UJ	270	UJ	210	UJ	260	UJ	250	UJ	270	UJ
Benzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Bromobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Bromochloromethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Bromodichloromethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Bromoform	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Bromomethane	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Carbon disulfide	ug/kg	2.2	U	1.3	J	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Carbon tetrachloride	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Chlorobenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Chlorodibromomethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Chloroethane	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
Chloroform	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Chloromethane	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
Cis-1,2-Dichloroethene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
cis-1,3-Dichloropropene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Cyclohexane	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
Dibromomethane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Dichlorodifluoromethane	ug/kg	4.4	UJ	4	UJ	5.4	UJ	4.2	UJ	5.2	UJ	5	UJ	5.3	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	360-24251-21		360-24251-22		360-24251-23		360-24251-24		360-24251-3		360-24251-4		360-24251-5	
	Field Sample ID	OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-438-0.0/1.0-XXX		OC-SB-438-20/22-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-439-0.0-1.0-XXX	
	Sample Collection Date	8/25/2009		8/25/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Diisopropylether	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Ethyl benzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Ethyl-t-Butyl Ether	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Hexachlorobutadiene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Isopropylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Methyl cyclohexane	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Methyl Tertbutyl Ether	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Methylene chloride	ug/kg	8.8	U	8	U	11	U	8.5	U	10	U	10	U	11	U
n-Butylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Naphthalene	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
Propylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
sec-Butylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Styrene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
tert-Butylbenzene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Tetrachloroethene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Tetrahydrofuran	ug/kg	22	U	20	U	27	U	21	U	26	U	25	U	27	U
Toluene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
trans-1,2-Dichloroethene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
trans-1,3-Dichloropropene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Trichloroethene	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Trichlorofluoromethane	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
Vinyl chloride	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U
Xylene, m/p	ug/kg	4.4	U	4	U	5.4	U	4.2	U	5.2	U	5	U	5.3	U
Xylene, o	ug/kg	2.2	U	2	U	2.7	U	2.1	U	2.6	U	2.5	U	2.7	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		360-24251-7		360-24251-8		360-24251-9		360-24309-1		360-24309-10		360-24309-11		360-24309-12	
Field Sample ID		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-23/25-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1,1-Trichloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	11	U	11	UJ	12	U	12	U	12	U	13	U
1,1,2-Trichloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1-Dichloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1-Dichloroethene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,1-Dichloropropene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2,3-Trichlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2,3-Trichloropropane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2,4-Trichlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2,4-Trimethylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2-Dibromo-3-chloropropane	ug/kg	26	U	22	U	22	UJ	23	U	25	U	23	U	26	U
1,2-Dibromoethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2-Dichloroethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,2-Dichloropropane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,3,5-Trimethylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,3-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,3-Dichloropropane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,4-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
1,4-Dioxane	ug/kg	260	UJ	220	UJ	R		R		R		230	UJ	260	UJ
2,2-Dichloropropane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	UJ	2.6	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.3	UJ	4.5	U	4.4	UJ	4.6	UJ	5	UJ	4.7	U	5.1	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	U	5	U	4.7	U	5.1	U
2-Butanone	ug/kg	26	U	22	U	22	UJ	23	UJ	25	UJ	23	U	26	U
2-Chlorotoluene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
2-Hexanone	ug/kg	26	U	22	U	22	UJ	23	U	25	U	23	U	26	U
4-Chlorotoluene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
4-iso-Propyltoluene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
4-Methyl-2-pentanone	ug/kg	26	U	22	U	22	UJ	23	U	25	U	23	U	26	U
Acetic acid, methyl ester	ug/kg	53	UJ	45	U	44	UJ	46	U	50	U	47	U	51	U
Acetone	ug/kg	260	UJ	220	UJ	220	UJ	230	UJ	250	UJ	230	UJ	260	UJ
Benzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Bromobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Bromochloromethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Bromodichloromethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Bromoform	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Bromomethane	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	U	5	U	4.7	U	5.1	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Carbon disulfide	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Carbon tetrachloride	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Chlorobenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Chlorodibromomethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Chloroethane	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	U	5	U	4.7	U	5.1	U
Chloroform	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Chloromethane	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	U	5	U	4.7	U	5.1	U
Cis-1,2-Dichloroethene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
cis-1,3-Dichloropropene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Cyclohexane	ug/kg	26	U	22	U	22	UJ	23	U	25	U	23	U	26	U
Dibromomethane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Dichlorodifluoromethane	ug/kg	5.3	UJ	4.5	UJ	4.4	UJ	4.6	UJ	5	UJ	4.7	UJ	5.1	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	360-24251-7		360-24251-8		360-24251-9		360-24309-1		360-24309-10		360-24309-11		360-24309-12	
	Field Sample ID	OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-23/25-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Diisopropylether	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Ethyl benzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Ethyl-t-Butyl Ether	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Hexachlorobutadiene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Isopropylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Methyl cyclohexane	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Methyl Tertbutyl Ether	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Methylene chloride	ug/kg	11	U	9	U	8.8	UJ	9.2	U	9.9	U	9.3	U	10	U
n-Butylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Naphthalene	ug/kg	26	U	22	U	22	UJ	23	U	25	U	23	U	26	U
Propylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
sec-Butylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Styrene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
tert-Butylbenzene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Tetrachloroethene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Tetrahydrofuran	ug/kg	26	U	22	U	22	UJ	23	UJ	25	UJ	23	U	26	U
Toluene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
trans-1,2-Dichloroethene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
trans-1,3-Dichloropropene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Trichloroethene	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Trichlorofluoromethane	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	UJ	5	UJ	4.7	U	5.1	U
Vinyl chloride	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U
Xylene, m/p	ug/kg	5.3	U	4.5	U	4.4	UJ	4.6	U	5	U	4.7	U	5.1	U
Xylene, o	ug/kg	2.6	U	2.2	U	2.2	UJ	2.3	U	2.5	U	2.3	U	2.6	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		360-24309-14		360-24309-15		360-24309-17		360-24309-19		360-24309-2		360-24309-20		360-24309-22	
Field Sample ID		OC-SB-414-6.0/8.0-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP	
Sample Collection Date		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1,1-Trichloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	11	U	13	U	12	U	12	U	14	U	11	UJ
1,1,2-Trichloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1-Dichloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1-Dichloroethene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,1-Dichloropropene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2,3-Trichlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	UJ
1,2,3-Trichloropropane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2,4-Trichlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	UJ
1,2,4-Trimethylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2-Dibromo-3-chloropropane	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
1,2-Dibromoethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2-Dichloroethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,2-Dichloropropane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,3,5-Trimethylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,3-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,3-Dichloropropane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,4-Dichlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
1,4-Dioxane	ug/kg	260	UJ	220	UJ	260	UJ	250	UJ	240	UJ	270	UJ	220	UJ
2,2-Dichloropropane	ug/kg	2.6	UJ	2.2	U	2.6	UJ	2.5	UJ	2.4	UJ	2.7	U	2.2	UJ
2,4,4-Trimethyl-1-pentene	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	UJ
2-Butanone	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
2-Chlorotoluene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
2-Hexanone	ug/kg	26	U	22	UJ	26	U	25	U	24	U	27	U	22	U
4-Chlorotoluene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
4-iso-Propyltoluene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
4-Methyl-2-pentanone	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
Acetic acid, methyl ester	ug/kg	52	U	44	UJ	52	U	50	U	49	U	54	U	43	U
Acetone	ug/kg	260	UJ	220	UJ	260	UJ	250	UJ	240	UJ	270	UJ	220	UJ
Benzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Bromobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Bromochloromethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Bromodichloromethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Bromoform	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Bromomethane	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Carbon disulfide	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Carbon tetrachloride	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Chlorobenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Chlorodibromomethane	ug/kg	2.6	U	2.2	UJ	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Chloroethane	ug/kg	5.2	U	4.4	UJ	5.2	U	5	U	4.9	U	5.4	U	4.3	U
Chloroform	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Chloromethane	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	U
Cis-1,2-Dichloroethene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
cis-1,3-Dichloropropene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Cyclohexane	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
Dibromomethane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Dichlorodifluoromethane	ug/kg	5.2	UJ	4.4	UJ	5.2	UJ	5	UJ	4.9	UJ	5.4	UJ	4.3	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	360-24309-14		360-24309-15		360-24309-17		360-24309-19		360-24309-2		360-24309-20		360-24309-22	
	Field Sample ID	OC-SB-414-6.0/8.0-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP	
	Sample Collection Date	8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Diisopropylether	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Ethyl benzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Ethyl-t-Butyl Ether	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Hexachlorobutadiene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	UJ
Isopropylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Methyl cyclohexane	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Methyl Tertbutyl Ether	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Methylene chloride	ug/kg	10	U	8.8	U	10	U	10	U	9.8	U	11	U	8.7	U
n-Butylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Naphthalene	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
Propylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
sec-Butylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Styrene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
tert-Butylbenzene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Tetrachloroethene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Tetrahydrofuran	ug/kg	26	U	22	U	26	U	25	U	24	U	27	U	22	U
Toluene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
trans-1,2-Dichloroethene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
trans-1,3-Dichloropropene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Trichloroethene	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Trichlorofluoromethane	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	U
Vinyl chloride	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U
Xylene, m/p	ug/kg	5.2	U	4.4	U	5.2	U	5	U	4.9	U	5.4	U	4.3	U
Xylene, o	ug/kg	2.6	U	2.2	U	2.6	U	2.5	U	2.4	U	2.7	U	2.2	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		360-24309-23		360-24309-3		360-24309-4		360-24309-5		360-24309-6		360-24309-7		360-24309-9	
Field Sample ID		OC-SB-430-8.0/10-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX	
Sample Collection Date		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1,1-Trichloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1,2,2-Tetrachloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	UJ	13	U	11	U	13	U	14	U	15	U	13	U
1,1,2-Trichloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1-Dichloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1-Dichloroethene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,1-Dichloropropene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2,3-Trichlorobenzene	ug/kg	2.1	UJ	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2,3-Trichloropropane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2,4-Trichlorobenzene	ug/kg	2.1	UJ	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2,4-Trimethylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2-Dibromo-3-chloropropane	ug/kg	21	U	25	U	22	U	25	U	29	U	30	U	26	U
1,2-Dibromoethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2-Dichlorobenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2-Dichloroethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,2-Dichloropropane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,3,5-Trimethylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,3-Dichlorobenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,3-Dichloropropane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,4-Dichlorobenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
1,4-Dioxane	ug/kg	210	UJ	R		220	UJ	R		290	UJ	R		260	UJ
2,2-Dichloropropane	ug/kg	2.1	U	2.5	U	2.2	UJ	2.5	U	2.9	UJ	3	U	2.6	UJ
2,4,4-Trimethyl-1-pentene	ug/kg	4.3	U	5.1	UJ	4.4	U	5	UJ	5.7	U	6	UJ	5.2	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.3	UJ	5.1	U	4.4	U	5	U	5.7	U	6	U	5.2	U
2-Butanone	ug/kg	21	U	25	UJ	22	U	25	UJ	29	U	30	UJ	26	U
2-Chlorotoluene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
2-Hexanone	ug/kg	21	U	25	U	22	U	25	U	29	U	30	U	26	U
4-Chlorotoluene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
4-iso-Propyltoluene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
4-Methyl-2-pentanone	ug/kg	21	U	25	U	22	U	25	U	29	U	30	U	26	U
Acetic acid, methyl ester	ug/kg	43	U	51	U	44	U	50	U	57	U	60	U	52	U
Acetone	ug/kg	210	UJ	250	UJ	220	UJ	250	UJ	290	UJ	300	UJ	260	UJ
Benzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Bromobenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Bromochloromethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Bromodichloromethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Bromoform	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Bromomethane	ug/kg	4.3	U	5.1	U	4.4	U	5	U	5.7	U	6	U	5.2	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Carbon disulfide	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	1.1	J
Carbon tetrachloride	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Chlorobenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Chlorodibromomethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Chloroethane	ug/kg	4.3	U	5.1	U	4.4	U	5	U	5.7	U	6	U	5.2	U
Chloroform	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Chloromethane	ug/kg	4.3	U	5.1	U	4.4	U	5	U	5.7	U	6	U	5.2	U
Cis-1,2-Dichloroethene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
cis-1,3-Dichloropropene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Cyclohexane	ug/kg	21	U	25	U	22	U	25	U	29	U	30	U	26	U
Dibromomethane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Dichlorodifluoromethane	ug/kg	4.3	UJ	5.1	UJ	4.4	UJ	5	UJ	5.7	UJ	6	UJ	5.2	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	360-24309-23		360-24309-3		360-24309-4		360-24309-5		360-24309-6		360-24309-7		360-24309-9	
	Field Sample ID	OC-SB-430-8.0/10-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Diisopropylether	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Ethyl benzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Ethyl-t-Butyl Ether	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Hexachlorobutadiene	ug/kg	2.1	UJ	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Isopropylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Methyl cyclohexane	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Methyl Tertbutyl Ether	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Methylene chloride	ug/kg	8.5	U	10	U	8.8	U	10	U	11	U	12	U	10	U
n-Butylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Naphthalene	ug/kg	21	U	25	U	22	U	25	U	29	U	30	U	26	U
Propylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
sec-Butylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Styrene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
tert-Butylbenzene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Tetrachloroethene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Tetrahydrofuran	ug/kg	21	U	25	UJ	22	U	25	UJ	29	U	30	UJ	26	U
Toluene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
trans-1,2-Dichloroethene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
trans-1,3-Dichloropropene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Trichloroethene	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Trichlorofluoromethane	ug/kg	4.3	U	5.1	UJ	4.4	U	5	UJ	5.7	U	6	UJ	5.2	U
Vinyl chloride	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U
Xylene, m/p	ug/kg	4.3	U	5.1	U	4.4	U	5	U	5.7	U	6	U	5.2	U
Xylene, o	ug/kg	2.1	U	2.5	U	2.2	U	2.5	U	2.9	U	3	U	2.6	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		360-24327-1		360-24327-11		360-24327-12		360-24327-13		360-24327-14		360-24327-15		360-24327-17	
Field Sample ID		OC-SB-403-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-8/10-XXX	
Sample Collection Date		8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1,1-Trichloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1,2,2-Tetrachloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	13	U	13	U	12	U	13	U	12	U	11	U
1,1,2-Trichloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1-Dichloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1-Dichloroethene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,1-Dichloropropene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2,3-Trichlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2,3-Trichloropropane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2,4-Trichlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2,4-Trimethylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2-Dibromo-3-chloropropane	ug/kg	23	U	26	U	26	U	24	U	27	U	25	U	23	U
1,2-Dibromoethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2-Dichloroethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,2-Dichloropropane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,3,5-Trimethylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,3-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,3-Dichloropropane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,4-Dichlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
1,4-Dioxane	ug/kg	230	UJ	260	UJ	260	UJ	240	UJ	270	UJ	250	UJ	230	UJ
2,2-Dichloropropane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
2-Butanone	ug/kg	23	UJ	26	U	26	U	24	UJ	27	U	25	UJ	23	U
2-Chlorotoluene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
2-Hexanone	ug/kg	23	UJ	26	U	26	U	24	UJ	27	U	25	UJ	23	U
4-Chlorotoluene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
4-iso-Propyltoluene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
4-Methyl-2-pentanone	ug/kg	23	U	26	U	26	U	24	U	27	U	25	U	23	U
Acetic acid, methyl ester	ug/kg	46	U	52	U	51	U	48	U	54	U	49	U	45	U
Acetone	ug/kg	230	UJ	260	UJ	260	UJ	240	UJ	270	UJ	250	UJ	230	UJ
Benzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Bromobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Bromochloromethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Bromodichloromethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Bromoform	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Bromomethane	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Carbon disulfide	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Carbon tetrachloride	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Chlorobenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Chlorodibromomethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Chloroethane	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
Chloroform	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Chloromethane	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
Cis-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
cis-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Cyclohexane	ug/kg	23	U	26	U	26	U	24	U	27	U	25	U	23	U
Dibromomethane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Dichlorodifluoromethane	ug/kg	4.6	UJ	5.2	UJ	5.1	UJ	4.8	UJ	5.4	UJ	4.9	UJ	4.5	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	360-24327-1		360-24327-11		360-24327-12		360-24327-13		360-24327-14		360-24327-15		360-24327-17	
	Field Sample ID	OC-SB-403-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-8/10-XXX	
	Sample Collection Date	8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Diisopropylether	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Ethyl benzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Ethyl-t-Butyl Ether	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Hexachlorobutadiene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Isopropylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Methyl cyclohexane	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Methyl Tertbutyl Ether	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Methylene chloride	ug/kg	9.2	U	10	U	7.4	J	4.7	J	11	U	5.5	J	9	U
n-Butylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Naphthalene	ug/kg	23	U	26	U	26	U	24	U	27	U	25	U	23	U
Propylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
sec-Butylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Styrene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
tert-Butylbenzene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Tetrachloroethene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Tetrahydrofuran	ug/kg	23	U	26	U	26	U	24	U	27	U	25	U	23	U
Toluene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
trans-1,2-Dichloroethene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
trans-1,3-Dichloropropene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Trichloroethene	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Trichlorofluoromethane	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
Vinyl chloride	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U
Xylene, m/p	ug/kg	4.6	U	5.2	U	5.1	U	4.8	U	5.4	U	4.9	U	4.5	U
Xylene, o	ug/kg	2.3	U	2.6	U	2.6	U	2.4	U	2.7	U	2.5	U	2.3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-08		OCRI-08	
Lab Sample ID		360-24327-3		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24343-1		360-24343-10	
Field Sample ID		OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-451-2.5/4.5-XXX	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/28/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1,1-Trichloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1,2,2-Tetrachloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	29	U	12	U	13	U	12	U	13	U	12	U	13	UJ
1,1,2-Trichloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1-Dichloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1-Dichloroethene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,1-Dichloropropene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,2,3-Trichlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,2,3-Trichloropropane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,2,4-Trichlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,2,4-Trimethylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,2-Dibromo-3-chloropropane	ug/kg	59	U	24	U	25	U	25	U	25	U	24	U	26	UJ
1,2-Dibromoethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,2-Dichlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,2-Dichloroethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,2-Dichloropropane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,3,5-Trimethylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,3-Dichlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,3-Dichloropropane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
1,4-Dichlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
1,4-Dioxane	ug/kg	590	UJ	240	UJ	250	UJ	250	UJ	250	UJ	240	UJ	R	
2,2-Dichloropropane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
2,4,4-Trimethyl-1-pentene	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	UJ
2-Butanone	ug/kg	33	J	24	U	25	UJ	25	U	25	UJ	24	U	26	UJ
2-Chlorotoluene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
2-Hexanone	ug/kg	59	U	24	U	25	UJ	25	U	25	UJ	24	U	26	U
4-Chlorotoluene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
4-iso-Propyltoluene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
4-Methyl-2-pentanone	ug/kg	59	U	24	U	25	U	25	U	25	U	24	U	26	U
Acetic acid, methyl ester	ug/kg	120	U	48	U	50	U	49	U	50	U	48	U	52	U
Acetone	ug/kg	590	UJ	240	UJ	250	UJ	250	UJ	250	UJ	240	UJ	260	UJ
Benzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Bromobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Bromochloromethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Bromodichloromethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Bromoform	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Bromomethane	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	U
Butane, 2-methoxy-2-methyl-	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Carbon disulfide	ug/kg	5.9	U	2.4	U	2.5	U	2.3	J	2.5	U	2.4	U	2.6	U
Carbon tetrachloride	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Chlorobenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Chlorodibromomethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Chloroethane	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	U
Chloroform	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Chloromethane	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	U
Cis-1,2-Dichloroethene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
cis-1,3-Dichloropropene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Cyclohexane	ug/kg	59	U	24	U	25	U	25	U	25	U	24	U	26	UJ
Dibromomethane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Dichlorodifluoromethane	ug/kg	12	UJ	4.8	UJ	5	UJ	4.9	UJ	5	UJ	4.8	UJ	5.2	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-08		OCRI-08	
	Lab Sample ID	360-24327-3		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24343-1		360-24343-10	
	Field Sample ID	OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-451-2.5/4.5-XXX	
	Sample Collection Date	8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/28/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Diisopropylether	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Ethyl benzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Ethyl-t-Butyl Ether	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Hexachlorobutadiene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U		R
Isopropylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Methyl cyclohexane	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Methyl Tertbutyl Ether	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Methylene chloride	ug/kg	24	U	9.6	U	10	U	9.9	U	10	U	9.5	U	10	U
n-Butylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Naphthalene	ug/kg	59	U	24	U	25	U	25	U	25	U	24	U	26	UJ
Propylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
sec-Butylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Styrene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
tert-Butylbenzene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Tetrachloroethene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
Tetrahydrofuran	ug/kg	59	U	24	U	25	U	25	U	25	U	24	U	26	UJ
Toluene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ
trans-1,2-Dichloroethene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
trans-1,3-Dichloropropene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Trichloroethene	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Trichlorofluoromethane	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	UJ
Vinyl chloride	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	U
Xylene, m/p	ug/kg	12	U	4.8	U	5	U	4.9	U	5	U	4.8	U	5.2	UJ
Xylene, o	ug/kg	5.9	U	2.4	U	2.5	U	2.5	U	2.5	U	2.4	U	2.6	UJ

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
Lab Sample ID		360-24343-11		360-24343-13		360-24343-16		360-24343-17		360-24343-2		360-24343-3		360-24343-4	
Field Sample ID		OC-SB-454-0.0/1.0-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX		OC-SB-444-12/14-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX	
Sample Collection Date		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/27/2009		8/27/2009		8/27/2009	
QC Code		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,1,1-Trichloroethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,1,2,2-Tetrachloroethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	14	U	12	U	16	UJ	16	UJ	12	U	13	U	15	U
1,1,2-Trichloroethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,1-Dichloroethane	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
1,1-Dichloroethene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,1-Dichloropropene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2,3-Trichlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2,3-Trichloropropane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2,4-Trichlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2,4-Trimethylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2-Dibromo-3-chloropropane	ug/kg	27	U	24	U	33	UJ	33	UJ	23	U	26	U	30	U
1,2-Dibromoethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2-Dichlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2-Dichloroethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,2-Dichloropropane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,3,5-Trimethylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,3-Dichlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,3-Dichloropropane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,4-Dichlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
1,4-Dioxane	ug/kg	270	UJ	240	UJ	330	UJ	R		230	UJ	260	UJ	300	UJ
2,2-Dichloropropane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
2-Butanone	ug/kg	27	U	24	U	33	U	33	UJ	65		26	U	30	U
2-Chlorotoluene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
2-Hexanone	ug/kg	27	U	24	U	33	U	33	U	23	U	26	U	30	U
4-Chlorotoluene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
4-iso-Propyltoluene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
4-Methyl-2-pentanone	ug/kg	27	U	24	U	33	U	33	U	23	U	26	U	30	U
Acetic acid, methyl ester	ug/kg	55	U	47	U	65	U	65	U	47	U	52	U	61	U
Acetone	ug/kg	270	UJ	240	UJ	330	UJ	78	J	220	J	260	UJ	300	UJ
Benzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Bromobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Bromochloromethane	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
Bromodichloromethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Bromoform	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Bromomethane	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	U	4.7	U	5.2	U	6.1	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
Carbon disulfide	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	3.4		2.6	U	3	U
Carbon tetrachloride	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Chlorobenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Chlorodibromomethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Chloroethane	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
Chloroform	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
Chloromethane	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
Cis-1,2-Dichloroethene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
cis-1,3-Dichloropropene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Cyclohexane	ug/kg	27	U	24	U	33	UJ	33	UJ	23	U	26	U	30	U
Dibromomethane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Dichlorodifluoromethane	ug/kg	5.5	UJ	4.7	UJ	6.5	UJ	6.5	UJ	4.7	UJ	5.2	UJ	6.1	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	360-24343-11		360-24343-13		360-24343-16		360-24343-17		360-24343-2		360-24343-3		360-24343-4	
	Field Sample ID	OC-SB-454-0.0/1.0-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX		OC-SB-444-12/14-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX	
	Sample Collection Date	8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/27/2009		8/27/2009		8/27/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
Diisopropylether	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Ethyl benzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Ethyl-t-Butyl Ether	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Hexachlorobutadiene	ug/kg	2.7	U	2.4	U		R		R	2.3	U	2.6	U	3	U
Isopropylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Methyl cyclohexane	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Methyl Tertbutyl Ether	ug/kg	2.7	U	2.4	U	3.3	U	3.3	U	2.3	U	2.6	U	3	U
Methylene chloride	ug/kg	11	U	9.5	U	13	U	13	U	9.3	U	10	U	12	U
n-Butylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Naphthalene	ug/kg	27	U	24	U	33	UJ	33	UJ	23	U	26	U	30	U
Propylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
sec-Butylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Styrene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
tert-Butylbenzene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Tetrachloroethene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Tetrahydrofuran	ug/kg	27	U	24	U	33	U	33	UJ	23	U	26	U	30	U
Toluene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
trans-1,2-Dichloroethene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
trans-1,3-Dichloropropene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Trichloroethene	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Trichlorofluoromethane	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
Vinyl chloride	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U
Xylene, m/p	ug/kg	5.5	U	4.7	U	6.5	UJ	6.5	UJ	4.7	U	5.2	U	6.1	U
Xylene, o	ug/kg	2.7	U	2.4	U	3.3	UJ	3.3	UJ	2.3	U	2.6	U	3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-08		OCRI-08		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		360-24343-6		360-24343-7		360-24343-9		360-24365-1		360-24365-10		360-24365-13		360-24365-15	
Field Sample ID		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-442-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-5.0/7.0-XXX	
Sample Collection Date		8/27/2009		8/28/2009		8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1,1-Trichloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	13	U	14	UJ	13	U	12	U	13	U	13	U
1,1,2-Trichloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1-Dichloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1-Dichloroethene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,1-Dichloropropene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,2,3-Trichlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,2,3-Trichloropropane	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,2,4-Trichlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,2,4-Trimethylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,2-Dibromo-3-chloropropane	ug/kg	26	U	26	U	27	UJ	26	U	25	U	26	U	27	U
1,2-Dibromoethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,2-Dichlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,2-Dichloroethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,2-Dichloropropane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,3,5-Trimethylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,3-Dichlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,3-Dichloropropane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
1,4-Dichlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
1,4-Dioxane	ug/kg	260	UJ	260	UJ	270	UJ	260	UJ	R		260	UJ	R	
2,2-Dichloropropane	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
2,4,4-Trimethyl-1-pentene	ug/kg	12	J	5.2	U	5.4	UJ	5.2	U	4.9	UJ	5.2	U	5.3	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	1.3	J	5.2	U	5.4	UJ	5.2	U	4.9	U	5.2	U	5.3	U
2-Butanone	ug/kg	26	U	26	U	27	U	26	U	25	UJ	26	U	27	UJ
2-Chlorotoluene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
2-Hexanone	ug/kg	26	U	26	U	27	U	26	U	25	U	26	U	27	U
4-Chlorotoluene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
4-iso-Propyltoluene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
4-Methyl-2-pentanone	ug/kg	26	U	26	U	27	U	26	U	25	U	26	U	27	U
Acetic acid, methyl ester	ug/kg	51	U	52	U	54	U	52	UJ	49	U	52	UJ	53	U
Acetone	ug/kg	260	UJ	260	UJ	270	UJ	260	UJ	250	UJ	260	UJ	270	UJ
Benzene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Bromobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Bromochloromethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Bromodichloromethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Bromoform	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Bromomethane	ug/kg	5.1	U	5.2	U	5.4	U	5.2	U	4.9	U	5.2	U	5.3	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Carbon disulfide	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Carbon tetrachloride	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Chlorobenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Chlorodibromomethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Chloroethane	ug/kg	5.1	U	5.2	U	5.4	U	5.2	U	4.9	U	5.2	U	5.3	U
Chloroform	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Chloromethane	ug/kg	5.1	U	5.2	U	5.4	U	5.2	U	4.9	U	5.2	U	5.3	U
Cis-1,2-Dichloroethene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
cis-1,3-Dichloropropene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Cyclohexane	ug/kg	26	U	26	U	27	UJ	26	U	25	U	26	U	27	U
Dibromomethane	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Dichlorodifluoromethane	ug/kg	5.1	UJ	5.2	UJ	5.4	UJ	5.2	UJ	4.9	UJ	5.2	UJ	5.3	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	360-24343-6		360-24343-7		360-24343-9		360-24365-1		360-24365-10		360-24365-13		360-24365-15	
	Field Sample ID	OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-442-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-5.0/7.0-XXX	
	Sample Collection Date	8/27/2009		8/28/2009		8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Diisopropylether	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Ethyl benzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Ethyl-t-Butyl Ether	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Hexachlorobutadiene	ug/kg	2.6	U	2.6	U		R	2.6	U	2.5	U	2.6	U	2.7	U
Isopropylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Methyl cyclohexane	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Methyl Tertbutyl Ether	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Methylene chloride	ug/kg	10	U	10	U	11	U	10	U	9.8	U	10	U	11	U
n-Butylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Naphthalene	ug/kg	26	U	26	U	27	UJ	26	U	25	U	26	U	27	U
Propylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
sec-Butylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Styrene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
tert-Butylbenzene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Tetrachloroethene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
Tetrahydrofuran	ug/kg	26	U	26	U	27	U	26	U	25	UJ	26	U	27	UJ
Toluene	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U
trans-1,2-Dichloroethene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
trans-1,3-Dichloropropene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Trichloroethene	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Trichlorofluoromethane	ug/kg	5.1	U	5.2	U	5.4	UJ	5.2	U	4.9	UJ	5.2	U	5.3	UJ
Vinyl chloride	ug/kg	2.6	U	2.6	U	2.7	U	2.6	U	2.5	U	2.6	U	2.7	U
Xylene, m/p	ug/kg	5.1	U	5.2	U	5.4	UJ	5.2	U	4.9	U	5.2	U	5.3	U
Xylene, o	ug/kg	2.6	U	2.6	U	2.7	UJ	2.6	U	2.5	U	2.6	U	2.7	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		360-24365-16		360-24365-18		360-24365-3		360-24365-4		360-24365-5		360-24365-6		360-24365-7	
Field Sample ID		OC-SB-460-0.0/1.0-XXX		OC-SB-460-5.5/7.5-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX	
Sample Collection Date		9/1/2009		9/1/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1,1-Trichloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1,2,2-Tetrachloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	14	U	15	U	10	U	12	U	15	U	12	U	21	U
1,1,2-Trichloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1-Dichloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1-Dichloroethene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,1-Dichloropropene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2,3-Trichlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2,3-Trichloropropane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2,4-Trichlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2,4-Trimethylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2-Dibromo-3-chloropropane	ug/kg	28	U	29	U	21	U	23	U	30	U	23	U	43	U
1,2-Dibromoethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2-Dichlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2-Dichloroethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,2-Dichloropropane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,3,5-Trimethylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,3-Dichlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,3-Dichloropropane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,4-Dichlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
1,4-Dioxane	ug/kg	280	UJ	R		R		R		300	UJ	230	UJ	R	
2,2-Dichloropropane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.5	U	5.8	UJ	4.1	UJ	4.6	UJ	6	U	4.7	U	43	
2,4,4-Trimethyl-2-Pentene	ug/kg	5.5	U	5.8	U	4.1	U	4.6	U	6	U	4.7	U	12	
2-Butanone	ug/kg	28	U	29	UJ	21	UJ	23	UJ	30	U	23	U	43	UJ
2-Chlorotoluene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
2-Hexanone	ug/kg	28	U	29	U	21	U	23	U	30	U	23	U	43	U
4-Chlorotoluene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
4-iso-Propyltoluene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
4-Methyl-2-pentanone	ug/kg	28	U	29	U	21	U	23	U	30	U	23	U	43	U
Acetic acid, methyl ester	ug/kg	55	UJ	58	U	41	U	46	U	60	UJ	47	U	86	U
Acetone	ug/kg	280	UJ	290	UJ	210	UJ	230	UJ	300	UJ	230	UJ	430	UJ
Benzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Bromobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Bromochloromethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Bromodichloromethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Bromoform	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Bromomethane	ug/kg	5.5	U	5.8	U	4.1	U	4.6	U	6	U	4.7	U	8.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Carbon disulfide	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Carbon tetrachloride	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Chlorobenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Chlorodibromomethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Chloroethane	ug/kg	5.5	U	5.8	U	4.1	U	4.6	U	6	U	4.7	U	8.6	U
Chloroform	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Chloromethane	ug/kg	5.5	U	5.8	U	4.1	U	4.6	U	6	U	4.7	U	8.6	U
Cis-1,2-Dichloroethene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
cis-1,3-Dichloropropene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Cyclohexane	ug/kg	28	U	29	U	21	U	23	U	30	U	23	U	43	U
Dibromomethane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Dichlorodifluoromethane	ug/kg	5.5	UJ	5.8	UJ	4.1	UJ	4.6	UJ	6	UJ	4.7	UJ	8.6	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	360-24365-16		360-24365-18		360-24365-3		360-24365-4		360-24365-5		360-24365-6		360-24365-7	
	Field Sample ID	OC-SB-460-0.0/1.0-XXX		OC-SB-460-5.5/7.5-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX	
	Sample Collection Date	9/1/2009		9/1/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diethyl ether	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Diisopropylether	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Ethyl benzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Ethyl-t-Butyl Ether	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Hexachlorobutadiene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	UJ
Isopropylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Methyl cyclohexane	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Methyl Tertbutyl Ether	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Methylene chloride	ug/kg	11	U	12	U	8.2	U	9.3	U	12	U	9.4	U	17	U
n-Butylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Naphthalene	ug/kg	28	U	29	U	21	U	23	U	30	U	23	U	43	U
Propylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
sec-Butylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Styrene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
tert-Butylbenzene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Tetrachloroethene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Tetrahydrofuran	ug/kg	7	J	29	UJ	21	UJ	23	UJ	30	U	23	U	43	UJ
Toluene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
trans-1,2-Dichloroethene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
trans-1,3-Dichloropropene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Trichloroethene	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	7	
Trichlorofluoromethane	ug/kg	5.5	U	5.8	UJ	4.1	UJ	4.6	UJ	6	U	4.7	U	8.6	U
Vinyl chloride	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U
Xylene, m/p	ug/kg	5.5	U	5.8	U	4.1	U	4.6	U	6	U	4.7	U	8.6	U
Xylene, o	ug/kg	2.8	U	2.9	U	2.1	U	2.3	U	3	U	2.3	U	4.3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

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TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	360-24365-8	
	Field Sample ID	OC-SB-452-0.0/1.0-XXX	
	Sample Collection Date	8/31/2009	
	QC Code	FS	
Analyte	Units	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.7	U
1,1,1-Trichloroethane	ug/kg	2.7	U
1,1,2,2-Tetrachloroethane	ug/kg	2.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	14	U
1,1,2-Trichloroethane	ug/kg	2.7	U
1,1-Dichloroethane	ug/kg	2.7	U
1,1-Dichloroethene	ug/kg	2.7	U
1,1-Dichloropropene	ug/kg	2.7	U
1,2,3-Trichlorobenzene	ug/kg	2.7	U
1,2,3-Trichloropropane	ug/kg	2.7	U
1,2,4-Trichlorobenzene	ug/kg	2.7	U
1,2,4-Trimethylbenzene	ug/kg	2.7	U
1,2-Dibromo-3-chloropropane	ug/kg	27	U
1,2-Dibromoethane	ug/kg	2.7	U
1,2-Dichlorobenzene	ug/kg	2.7	U
1,2-Dichloroethane	ug/kg	2.7	U
1,2-Dichloropropane	ug/kg	2.7	U
1,3,5-Trimethylbenzene	ug/kg	2.7	U
1,3-Dichlorobenzene	ug/kg	2.7	U
1,3-Dichloropropane	ug/kg	2.7	U
1,4-Dichlorobenzene	ug/kg	2.7	U
1,4-Dioxane	ug/kg	270	UJ
2,2-Dichloropropane	ug/kg	2.7	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5.5	U
2-Butanone	ug/kg	27	U
2-Chlorotoluene	ug/kg	2.7	U
2-Hexanone	ug/kg	27	U
4-Chlorotoluene	ug/kg	2.7	U
4-iso-Propyltoluene	ug/kg	2.7	U
4-Methyl-2-pentanone	ug/kg	27	U
Acetic acid, methyl ester	ug/kg	55	UJ
Acetone	ug/kg	270	UJ
Benzene	ug/kg	2.7	U
Bromobenzene	ug/kg	2.7	U
Bromochloromethane	ug/kg	2.7	U
Bromodichloromethane	ug/kg	2.7	U
Bromoform	ug/kg	2.7	U
Bromomethane	ug/kg	5.5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.7	U
Carbon disulfide	ug/kg	2.7	U
Carbon tetrachloride	ug/kg	2.7	U
Chlorobenzene	ug/kg	2.7	U
Chlorodibromomethane	ug/kg	2.7	U
Chloroethane	ug/kg	5.5	U
Chloroform	ug/kg	2.7	U
Chloromethane	ug/kg	5.5	U
Cis-1,2-Dichloroethene	ug/kg	2.7	U
cis-1,3-Dichloropropene	ug/kg	2.7	U
Cyclohexane	ug/kg	27	U
Dibromomethane	ug/kg	2.7	U
Dichlorodifluoromethane	ug/kg	5.5	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	360-24365-8	
	Field Sample ID	OC-SB-452-0.0/1.0-XXX	
	Sample Collection Date	8/31/2009	
	QC Code	FS	
Analyte	Units	Result	Qualifier
Diethyl ether	ug/kg	2.7	U
Diisopropylether	ug/kg	2.7	U
Ethyl benzene	ug/kg	2.7	U
Ethyl-t-Butyl Ether	ug/kg	2.7	U
Hexachlorobutadiene	ug/kg	2.7	U
Isopropylbenzene	ug/kg	2.7	U
Methyl cyclohexane	ug/kg	2.7	U
Methyl Tertbutyl Ether	ug/kg	2.7	U
Methylene chloride	ug/kg	11	U
n-Butylbenzene	ug/kg	2.7	U
Naphthalene	ug/kg	27	U
Propylbenzene	ug/kg	2.7	U
sec-Butylbenzene	ug/kg	2.7	U
Styrene	ug/kg	2.7	U
tert-Butylbenzene	ug/kg	2.7	U
Tetrachloroethene	ug/kg	2.7	U
Tetrahydrofuran	ug/kg	8.3	J
Toluene	ug/kg	2.7	U
trans-1,2-Dichloroethene	ug/kg	2.7	U
trans-1,3-Dichloropropene	ug/kg	2.7	U
Trichloroethene	ug/kg	2.7	U
Trichlorofluoromethane	ug/kg	5.5	U
Vinyl chloride	ug/kg	2.7	U
Xylene, m/p	ug/kg	5.5	U
Xylene, o	ug/kg	2.7	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 04/23/10
Checked by / Date: TLC 04/26/10

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	360-24417-1		360-24417-10		360-24417-11		360-24417-13		360-24417-14		360-24417-15		360-24417-3	
	Field Sample ID	OC-SB-463-0.0/1.0-XXX		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-463-6.0/8.0-XXX	
	Sample Collection Date	9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1,1-Trichloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1,2,2-Tetrachloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	13	U	12	U	12	U	11	U	11	U
1,1,2-Trichloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1-Dichloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1-Dichloroethene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,1-Dichloropropene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2,3-Trichlorobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2,3-Trichloropropane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2,4-Trichlorobenzene	ug/kg	2.4	U	1.6	J	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2,4-Trimethylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2-Dibromo-3-chloropropane	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
1,2-Dibromoethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2-Dichlorobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2-Dichloroethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,2-Dichloropropane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,3,5-Trimethylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,3-Dichlorobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,3-Dichloropropane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,4-Dichlorobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
1,4-Dioxane	ug/kg	240	UJ	250	UJ	260	UJ	250	UJ	250	UJ	230	UJ	230	UJ
2,2-Dichloropropane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
2-Butanone	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
2-Chlorotoluene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
2-Hexanone	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
4-Chlorotoluene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
4-iso-Propyltoluene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
4-Methyl-2-pentanone	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
Acetic acid, methyl ester	ug/kg	49	U	50	U	53	U	50	U	49	U	46	U	46	U
Acetone	ug/kg	240	UJ	250	UJ	19	J	250	UJ	250	UJ	230	UJ	230	UJ
Benzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Bromobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Bromochloromethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Bromodichloromethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Bromoform	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Bromomethane	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Carbon disulfide	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Carbon tetrachloride	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Chlorobenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Chlorodibromomethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Chloroethane	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
Chloroform	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Chloromethane	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
Cis-1,2-Dichloroethene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
cis-1,3-Dichloropropene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Cyclohexane	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
Dibromomethane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Dichlorodifluoromethane	ug/kg	4.9	UJ	5	UJ	5.3	UJ	5	UJ	4.9	UJ	4.6	UJ	4.6	UJ
Diethyl ether	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	360-24417-1		360-24417-10		360-24417-11		360-24417-13		360-24417-14		360-24417-15		360-24417-3	
	Field Sample ID	OC-SB-463-0.0/1.0-XXX		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-463-6.0/8.0-XXX	
	Sample Collection Date	9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Ethyl benzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Ethyl-t-Butyl Ether	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Hexachlorobutadiene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Isopropylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Methyl cyclohexane	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Methyl Tertbutyl Ether	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Methylene chloride	ug/kg	9.8	U	10	U	11	U	10	U	9.9	U	9.2	U	9.1	U
n-Butylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Naphthalene	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
Propylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
sec-Butylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Styrene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
tert-Butylbenzene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Tetrachloroethene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Tetrahydrofuran	ug/kg	24	U	25	U	26	U	25	U	25	U	23	U	23	U
Toluene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
trans-1,2-Dichloroethene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
trans-1,3-Dichloropropene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Trichloroethene	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Trichlorofluoromethane	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
Vinyl chloride	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U
Xylene, m/p	ug/kg	4.9	U	5	U	5.3	U	5	U	4.9	U	4.6	U	4.6	U
Xylene, o	ug/kg	2.4	U	2.5	U	2.6	U	2.5	U	2.5	U	2.3	U	2.3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-11		OCRI-11	
	Lab Sample ID	360-24417-4		360-24417-6		360-24417-7		360-24417-8		360-24417-9		360-24444-1		360-24444-12	
	Field Sample ID	OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-16/18-XXX		OC-SB-465-8.0/10-DUP		OC-SB-459-6.0/8.0-DUP		OC-SB-459-0.0/1.0-XXX	
	Sample Collection Date	9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009		9/3/2009	
	QC Code	FS		FS		FS		FS		FD		FD		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1,1-Trichloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1,2,2-Tetrachloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	12	U	14	U	13	U	11	U	670	U	630	UJ
1,1,2-Trichloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1-Dichloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1-Dichloroethene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,1-Dichloropropene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2,3-Trichlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2,3-Trichloropropane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2,4-Trichlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2,4-Trimethylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2-Dibromo-3-chloropropane	ug/kg	26	U	24	U	27	U	27	U	22	U	1,300	U	1,300	U
1,2-Dibromoethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2-Dichlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2-Dichloroethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,2-Dichloropropane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,3,5-Trimethylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,3-Dichlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,3-Dichloropropane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,4-Dichlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
1,4-Dioxane	ug/kg	260	UJ	240	UJ	270	UJ	270	UJ	220	UJ	13,000	UJ	13,000	UJ
2,2-Dichloropropane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	420	J
2,4,4-Trimethyl-2-Pentene	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	85	J	190	J
2-Butanone	ug/kg	26	U	24	U	27	U	7.9	J	22	U	1,300	U	1,300	U
2-Chlorotoluene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
2-Hexanone	ug/kg	26	U	24	U	27	U	27	U	22	U	1,300	U	1,300	U
4-Chlorotoluene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
4-iso-Propyltoluene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
4-Methyl-2-pentanone	ug/kg	26	U	24	U	27	U	27	U	22	U	1,300	U	1,300	U
Acetic acid, methyl ester	ug/kg	52	U	47	U	54	U	53	U	43	U	2,700	U	2,500	UJ
Acetone	ug/kg	260	UJ	240	UJ	270	UJ	270	UJ	220	UJ	13,000	UJ	13,000	UJ
Benzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Bromobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Bromochloromethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Bromodichloromethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Bromoform	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Bromomethane	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	250	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Carbon disulfide	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Carbon tetrachloride	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Chlorobenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Chlorodibromomethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Chloroethane	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	250	U
Chloroform	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Chloromethane	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	250	U
Cis-1,2-Dichloroethene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
cis-1,3-Dichloropropene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Cyclohexane	ug/kg	26	U	24	U	27	U	27	U	22	U	1,300	U	1,300	UJ
Dibromomethane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Dichlorodifluoromethane	ug/kg	5.2	UJ	4.7	UJ	5.4	UJ	5.3	UJ	4.3	UJ	270	UJ	250	UJ
Diethyl ether	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-11		OCRI-11	
	Lab Sample ID	360-24417-4		360-24417-6		360-24417-7		360-24417-8		360-24417-9		360-24444-1		360-24444-12	
	Field Sample ID	OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-16/18-XXX		OC-SB-465-8.0/10-DUP		OC-SB-459-6.0/8.0-DUP		OC-SB-459-0.0/1.0-XXX	
	Sample Collection Date	9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009		9/3/2009	
	QC Code	FS		FS		FS		FS		FD		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Ethyl benzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Ethyl-t-Butyl Ether	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Hexachlorobutadiene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Isopropylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Methyl cyclohexane	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	UJ
Methyl Tertbutyl Ether	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Methylene chloride	ug/kg	10	U	9.5	U	11	U	11	U	8.7	U	530	U	500	U
n-Butylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Naphthalene	ug/kg	26	U	24	U	27	U	27	U	22	U	1,300	U	1,300	U
Propylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
sec-Butylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Styrene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
tert-Butylbenzene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Tetrachloroethene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Tetrahydrofuran	ug/kg	26	U	24	U	27	U	27		22	U	1,300	U	1,300	U
Toluene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
trans-1,2-Dichloroethene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
trans-1,3-Dichloropropene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Trichloroethene	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Trichlorofluoromethane	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	250	UJ
Vinyl chloride	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U
Xylene, m/p	ug/kg	5.2	U	4.7	U	5.4	U	5.3	U	4.3	U	270	U	250	U
Xylene, o	ug/kg	2.6	U	2.4	U	2.7	U	2.7	U	2.2	U	130	U	130	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
	Lab Sample ID	360-24444-13		360-24444-2		360-24444-3		360-24444-4		360-24444-5		360-24444-7		360-24444-8	
	Field Sample ID	OC-SB-459-26/28-XXX		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-31/33-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-30/32-XXX		OC-SB-467-6.0/8.0-DUP	
	Sample Collection Date	9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1,1-Trichloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	680	U	12	U	11	U	13	U	11	UJ	12	U
1,1,2-Trichloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1-Dichloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1-Dichloroethene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,1-Dichloropropene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2,3-Trichloropropane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
1,2-Dibromoethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2-Dichlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2-Dichloroethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,2-Dichloropropane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,3-Dichlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,3-Dichloropropane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,4-Dichlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
1,4-Dioxane	ug/kg	230	UJ	14,000	UJ	230	UJ	230	UJ	260	UJ	230	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.7	U	94	J	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
2-Butanone	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
2-Chlorotoluene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
2-Hexanone	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
4-Chlorotoluene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
4-iso-Propyltoluene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
4-Methyl-2-pentanone	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
Acetic acid, methyl ester	ug/kg	47	U	2,700	U	47	U	45	U	51	U	45	UJ	50	UJ
Acetone	ug/kg	230	UJ	14,000	UJ	230	UJ	230	UJ	260	UJ	230	UJ	250	UJ
Benzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Bromobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Bromochloromethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Bromodichloromethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Bromoform	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Bromomethane	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Carbon disulfide	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Carbon tetrachloride	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Chlorobenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Chlorodibromomethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Chloroethane	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
Chloroform	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Chloromethane	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
Cis-1,2-Dichloroethene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Cyclohexane	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
Dibromomethane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Dichlorodifluoromethane	ug/kg	4.7	UJ	270	UJ	4.7	UJ	4.5	UJ	5.1	UJ	4.5	UJ	5	UJ
Diethyl ether	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
	Lab Sample ID	360-24444-13		360-24444-2		360-24444-3		360-24444-4		360-24444-5		360-24444-7		360-24444-8	
	Field Sample ID	OC-SB-459-26/28-XXX		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-31/33-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-30/32-XXX		OC-SB-467-6.0/8.0-DUP	
	Sample Collection Date	9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Ethyl benzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Hexachlorobutadiene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Isopropylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Methyl cyclohexane	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Methylene chloride	ug/kg	9.4	U	550	U	9.3	U	9	U	10	U	9.1	UJ	10	U
n-Butylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Naphthalene	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
Propylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
sec-Butylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Styrene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
tert-Butylbenzene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Tetrachloroethene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Tetrahydrofuran	ug/kg	23	U	1,400	U	23	U	23	U	26	U	23	UJ	25	U
Toluene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Trichloroethene	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Trichlorofluoromethane	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
Vinyl chloride	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U
Xylene, m/p	ug/kg	4.7	U	270	U	4.7	U	4.5	U	5.1	U	4.5	UJ	5	U
Xylene, o	ug/kg	2.3	U	140	U	2.3	U	2.3	U	2.6	U	2.3	UJ	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	360-24444-9		360-24454-2		360-24454-3		360-24454-4		360-24454-5		360-24454-6		360-24454-7	
	Field Sample ID	OC-SB-467-6.0/8.0-XXX		OC-SB-461-28/30-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-31/33-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX	
	Sample Collection Date	9/2/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1,1-Trichloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1,2,2-Tetrachloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	13	U	11	U	12	U	12	U	12	U	13	U	14	U
1,1,2-Trichloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1-Dichloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1-Dichloroethene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,1-Dichloropropene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2,3-Trichlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2,3-Trichloropropane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2,4-Trichlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2,4-Trimethylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2-Dibromo-3-chloropropane	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
1,2-Dibromoethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2-Dichloroethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,2-Dichloropropane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,3,5-Trimethylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,3-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,3-Dichloropropane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,4-Dichlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
1,4-Dioxane	ug/kg	270	UJ	220	UJ	250	UJ	250	UJ	240	UJ	260	UJ	280	UJ
2,2-Dichloropropane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
2,4,4-Trimethyl-1-pentene	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
2-Butanone	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
2-Chlorotoluene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
2-Hexanone	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
4-Chlorotoluene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
4-iso-Propyltoluene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
4-Methyl-2-pentanone	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
Acetic acid, methyl ester	ug/kg	53	UJ	44	U	49	UJ	50	U	47	U	53	UJ	56	U
Acetone	ug/kg	270	UJ	220	UJ	250	UJ	250	UJ	240	UJ	260	UJ	280	UJ
Benzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Bromobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Bromochloromethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Bromodichloromethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Bromoform	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Bromomethane	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Carbon disulfide	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Carbon tetrachloride	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Chlorobenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Chlorodibromomethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Chloroethane	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
Chloroform	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Chloromethane	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
Cis-1,2-Dichloroethene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
cis-1,3-Dichloropropene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Cyclohexane	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
Dibromomethane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Dichlorodifluoromethane	ug/kg	5.3	UJ	4.4	UJ	4.9	UJ	5	UJ	4.7	UJ	5.3	UJ	5.6	UJ
Diethyl ether	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	360-24444-9		360-24454-2		360-24454-3		360-24454-4		360-24454-5		360-24454-6		360-24454-7	
	Field Sample ID	OC-SB-467-6.0/8.0-XXX		OC-SB-461-28/30-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-31/33-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX	
	Sample Collection Date	9/2/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Ethyl benzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Ethyl-t-Butyl Ether	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Hexachlorobutadiene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Isopropylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Methyl cyclohexane	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Methyl Tertbutyl Ether	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Methylene chloride	ug/kg	11	U	8.9	U	9.9	U	9.9	U	9.5	U	11	U	11	U
n-Butylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Naphthalene	ug/kg	27	U	22	U	25	U	25	U	24	U	26	U	28	U
Propylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
sec-Butylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Styrene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
tert-Butylbenzene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Tetrachloroethene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Tetrahydrofuran	ug/kg	27	U	22	U	7	J	9	J	24	U	7.8	J	28	U
Toluene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
trans-1,2-Dichloroethene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
trans-1,3-Dichloropropene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Trichloroethene	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Trichlorofluoromethane	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
Vinyl chloride	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U
Xylene, m/p	ug/kg	5.3	U	4.4	U	4.9	U	5	U	4.7	U	5.3	U	5.6	U
Xylene, o	ug/kg	2.7	U	2.2	U	2.5	U	2.5	U	2.4	U	2.6	U	2.8	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12	OCRI-12	OCRI-13	OCRI-13	OCRI-13	OCRI-13	OCRI-13
	Lab Sample ID	360-24454-8	360-24454-9	360-24499-1	360-24499-14	360-24499-16	360-24499-17	360-24499-19
	Field Sample ID	OC-SB-472-30/32-XXX	OC-SB-472-8.0/10-XXX	OC-SB-466-6.0/8.0-XXX	OC-SB-417-0.0/1.0-XXX	OC-SB-417-8.0/10-XXX	OC-SB-434-0.0/1.0-XXX	OC-SB-434-7.0/9.0-XXX
	Sample Collection Date	9/4/2009	9/4/2009	9/8/2009	9/10/2009	9/10/2009	9/10/2009	9/10/2009
	QC Code	FS	FS	FS	FS	FS	FS	FS
Analyte	Units	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1,1-Trichloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1,2,2-Tetrachloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	9.9 U	12 U	12 U	11 U	610 U	12 U	13 U
1,1,2-Trichloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1-Dichloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1-Dichloroethene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,1-Dichloropropene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2,3-Trichlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2,3-Trichloropropane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2,4-Trichlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2,4-Trimethylbenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2-Dibromo-3-chloropropane	ug/kg	20 U	25 U	24 U	22 U	1,200 U	23 U	26 U
1,2-Dibromoethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2-Dichlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2-Dichloroethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,2-Dichloropropane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,3,5-Trimethylbenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,3-Dichlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,3-Dichloropropane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,4-Dichlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
1,4-Dioxane	ug/kg	200 UJ	250 UJ	240 UJ	220 UJ	12,000 UJ	230 UJ	260 UJ
2,2-Dichloropropane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
2,4,4-Trimethyl-1-pentene	ug/kg	4 U	4.9 U	4.7 U	4.4 U	240 U	4.7 U	5.1 U
2,4,4-Trimethyl-2-Pentene	ug/kg	4 U	4.9 U	4.7 U	4.4 U	240 U	4.7 U	5.1 U
2-Butanone	ug/kg	20 U	25 U	24 U	22 U	1,200 U	23 U	26 U
2-Chlorotoluene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
2-Hexanone	ug/kg	20 U	25 U	24 U	22 U	1,200 U	23 U	26 U
4-Chlorotoluene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
4-iso-Propyltoluene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
4-Methyl-2-pentanone	ug/kg	20 U	25 U	24 U	22 U	1,200 U	23 U	26 U
Acetic acid, methyl ester	ug/kg	40 U	49 U	47 U	44 U	2,400 U	47 U	51 U
Acetone	ug/kg	200 UJ	250 UJ	240 UJ	220 UJ	12,000 UJ	230 UJ	260 UJ
Benzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Bromobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Bromochloromethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Bromodichloromethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Bromoform	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Bromomethane	ug/kg	4 U	4.9 U	4.7 U	4.4 U	240 U	4.7 U	5.1 U
Butane, 2-methoxy-2-methyl-	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Carbon disulfide	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Carbon tetrachloride	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Chlorobenzene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Chlorodibromomethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Chloroethane	ug/kg	4 U	4.9 U	4.7 U	4.4 U	240 U	4.7 U	5.1 U
Chloroform	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Chloromethane	ug/kg	4 U	4.9 U	4.7 U	4.4 U	240 U	4.7 U	5.1 U
Cis-1,2-Dichloroethene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
cis-1,3-Dichloropropene	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Cyclohexane	ug/kg	20 U	25 UJ	24 UJ	22 UJ	1,200 U	23 UJ	26 UJ
Dibromomethane	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U
Dichlorodifluoromethane	ug/kg	4 UJ	4.9 UJ	4.7 UJ	4.4 UJ	240 UJ	4.7 UJ	5.1 UJ
Diethyl ether	ug/kg	2 U	2.5 U	2.4 U	2.2 U	120 U	2.3 U	2.6 U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	360-24454-8		360-24454-9		360-24499-1		360-24499-14		360-24499-16		360-24499-17		360-24499-19	
	Field Sample ID	OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-7.0/9.0-XXX	
	Sample Collection Date	9/4/2009		9/4/2009		9/8/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Ethyl benzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Ethyl-t-Butyl Ether	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Hexachlorobutadiene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Isopropylbenzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Methyl cyclohexane	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Methyl Tertbutyl Ether	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Methylene chloride	ug/kg	7.9	U	9.9	U	9.4	U	8.8	U	480	U	9.3	U	10	U
n-Butylbenzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Naphthalene	ug/kg	20	U	25	U	24	U	22	U	1,200	U	23	U	26	U
Propylbenzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
sec-Butylbenzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Styrene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
tert-Butylbenzene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Tetrachloroethene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Tetrahydrofuran	ug/kg	20	U	25	U	24	U	22	U	1,200	U	23	U	26	U
Toluene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	1.6	J	2.6	U
trans-1,2-Dichloroethene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
trans-1,3-Dichloropropene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Trichloroethene	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Trichlorofluoromethane	ug/kg	4	U	4.9	U	4.7	U	4.4	U	240	U	4.7	U	5.1	U
Vinyl chloride	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U
Xylene, m/p	ug/kg	4	U	4.9	U	4.7	U	4.4	U	240	U	4.7	U	5.1	U
Xylene, o	ug/kg	2	U	2.5	U	2.4	U	2.2	U	120	U	2.3	U	2.6	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	360-24499-2		360-24499-20		360-24499-22		360-24499-3		360-24499-4		360-24499-5		360-24499-6	
	Field Sample ID	OC-SB-469-0.0/1.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-469-28/30-XXX		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-466-0.0/1.0-XXX	
	Sample Collection Date	9/8/2009		9/9/2009		9/9/2009		9/9/2009		9/9/2009		9/9/2009		9/8/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	13	U	13	U	12	U	10	U	12	U	13	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	11		2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	25	U	26	U	23	U	20	U	25	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2.6		2.5	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
1,4-Dioxane	ug/kg	250	UJ	250	UJ	260	UJ	230	UJ	200	UJ	250	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
2-Butanone	ug/kg	25	U	25	U	26	U	23	U	13	J	25	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
2-Hexanone	ug/kg	25	U	25	U	26	U	23	U	5.8	J	25	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	1.8	J	2.5	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	25	U	26	U	23	U	20	U	25	U	25	U
Acetic acid, methyl ester	ug/kg	50	U	50	U	51	U	47	UJ	41	U	50	U	51	U
Acetone	ug/kg	250	UJ	250	UJ	260	UJ	230	UJ	45	J	250	UJ	250	UJ
Benzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	8.1		2.5	U	2.5	U
Bromobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Bromoform	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Bromomethane	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Chloroethane	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
Chloroform	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Chloromethane	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Cyclohexane	ug/kg	25	UJ	25	UJ	26	UJ	23	U	20	U	25	U	25	UJ
Dibromomethane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Dichlorodifluoromethane	ug/kg	5	UJ	5	UJ	5.1	UJ	4.7	UJ	4.1	UJ	5	UJ	5.1	UJ
Diethyl ether	ug/kg	2.5	U	2.5	U	2.6	U	2.3	UJ	2	U	2.5	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	360-24499-2		360-24499-20		360-24499-22		360-24499-3		360-24499-4		360-24499-5		360-24499-6	
	Field Sample ID	OC-SB-469-0.0/1.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-469-28/30-XXX		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-466-0.0/1.0-XXX	
	Sample Collection Date	9/8/2009		9/9/2009		9/9/2009		9/9/2009		9/9/2009		9/9/2009		9/8/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	11		2.5	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	0.99	J	2.5	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	0.83	J	2.5	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.5	U	2.6	U	2.3	UJ	2	U	2.5	U	2.5	U
Methylene chloride	ug/kg	9.9	U	10	U	10	U	9.4	U	8.1	U	10	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	3.6		2.5	U	2.5	U
Naphthalene	ug/kg	25	U	25	U	26	U	23	U	9.9	J	25	U	25	U
Propylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	4.2		2.5	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Styrene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Tetrahydrofuran	ug/kg	25	U	25	U	26	U	23	U	20	U	7	J	25	U
Toluene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	21		2.5	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Trichloroethene	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Trichlorofluoromethane	ug/kg	5	U	5	U	5.1	U	4.7	U	4.1	U	5	U	5.1	U
Vinyl chloride	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	2	U	2.5	U	2.5	U
Xylene, m/p	ug/kg	5	U	5	U	5.1	U	4.7	U	21		5	U	5.1	U
Xylene, o	ug/kg	2.5	U	2.5	U	2.6	U	2.3	U	13		2.5	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	360-24499-7		360-24563-1		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15	
	Field Sample ID	OC-SB-466-30/32-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX	
	Sample Collection Date	9/8/2009		9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	13	U	13	U	13	U	13	U	12	U	12	U
1,1,2-Trichloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1-Dichloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1-Dichloroethene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,1-Dichloropropene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	22	U	27	U	27	U	26	U	26	U	23	U	25	U
1,2-Dibromoethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2-Dichloroethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,2-Dichloropropane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,3-Dichloropropane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
1,4-Dioxane	ug/kg	220	UJ	270	UJ	270	UJ	260	UJ	260	UJ	230	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
2-Butanone	ug/kg	22	U	27	U	27	U	26	U	26	U	23	U	25	U
2-Chlorotoluene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
2-Hexanone	ug/kg	22	U	27	U	27	U	26	U	26	U	23	U	25	U
4-Chlorotoluene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
4-Methyl-2-pentanone	ug/kg	22	U	27	U	27	U	26	U	26	U	23	U	25	U
Acetic acid, methyl ester	ug/kg	44	U	54	U	54	U	53	U	53	U	47	U	50	U
Acetone	ug/kg	220	UJ	270	UJ	270	UJ	260	UJ	260	UJ	230	UJ	250	UJ
Benzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Bromobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Bromochloromethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Bromodichloromethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Bromoform	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Bromomethane	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Carbon disulfide	ug/kg	4.6		2.7	U	2.7	U	1.4	J	2.6	U	2.3	U	2.5	U
Carbon tetrachloride	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Chlorobenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Chlorodibromomethane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Chloroethane	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
Chloroform	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Chloromethane	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
Cis-1,2-Dichloroethene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Cyclohexane	ug/kg	22	UJ	27	U	27	U	26	U	26	U	23	U	25	U
Dibromomethane	ug/kg	1.7	J	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Dichlorodifluoromethane	ug/kg	4.4	UJ	5.4	UJ	5.4	UJ	5.3	UJ	5.3	UJ	4.7	UJ	5	UJ
Diethyl ether	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	360-24499-7		360-24563-1		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15	
	Field Sample ID	OC-SB-466-30/32-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX	
	Sample Collection Date	9/8/2009		9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Ethyl benzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Hexachlorobutadiene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Isopropylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Methyl cyclohexane	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Methylene chloride	ug/kg	8.9	U	11	U	11	U	11	U	11	U	9.3	U	9.9	U
n-Butylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Naphthalene	ug/kg	22	U	27	U	27	U	26	U	26	U	23	U	25	U
Propylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
sec-Butylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Styrene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
tert-Butylbenzene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Tetrachloroethene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Tetrahydrofuran	ug/kg	22	U	27	U	29	U	29	U	33	U	23	U	25	U
Toluene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Trichloroethene	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Trichlorofluoromethane	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
Vinyl chloride	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U
Xylene, m/p	ug/kg	4.4	U	5.4	U	5.4	U	5.3	U	5.3	U	4.7	U	5	U
Xylene, o	ug/kg	2.2	U	2.7	U	2.7	U	2.6	U	2.6	U	2.3	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	360-24563-16		360-24563-2		360-24563-3		360-24563-4		360-24563-5		360-24563-6		360-24563-7	
	Field Sample ID	OC-SB-457-8.0/10-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX	
	Sample Collection Date	9/11/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1,1-Trichloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1,2,2-Tetrachloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	11	U	6,700	UJ	13	U	14	U	13	U	11	U	13	U
1,1,2-Trichloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1-Dichloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1-Dichloroethene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,1-Dichloropropene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2,3-Trichlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	UJ	2.5	UJ	2.2	U	2.7	U
1,2,3-Trichloropropane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2,4-Trichlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2,4-Trimethylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2-Dibromo-3-chloropropane	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
1,2-Dibromoethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2-Dichlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2-Dichloroethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,2-Dichloropropane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,3,5-Trimethylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,3-Dichlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,3-Dichloropropane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,4-Dichlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
1,4-Dioxane	ug/kg	220	UJ	130,000	UJ	250	UJ	270	UJ	250	UJ	220	UJ	270	UJ
2,2-Dichloropropane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.5	U	890,000		5	U	5.5	U	5.1	U	4.4	U	5.3	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.5	U	180,000		5	U	5.5	U	5.1	U	4.4	U	5.3	U
2-Butanone	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
2-Chlorotoluene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
2-Hexanone	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
4-Chlorotoluene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
4-iso-Propyltoluene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
4-Methyl-2-pentanone	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
Acetic acid, methyl ester	ug/kg	45	U	27,000	UJ	50	UJ	55	U	51	U	44	U	53	UJ
Acetone	ug/kg	220	UJ	130,000	UJ	250	UJ	76	J	60	J	220	UJ	270	UJ
Benzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Bromobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Bromochloromethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Bromodichloromethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Bromoform	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Bromomethane	ug/kg	4.5	U	2,700	U	5	U	5.5	U	5.1	U	4.4	U	5.3	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Carbon disulfide	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Carbon tetrachloride	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Chlorobenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Chlorodibromomethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Chloroethane	ug/kg	4.5	U	2,700	UJ	5	U	5.5	U	5.1	U	4.4	U	5.3	U
Chloroform	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Chloromethane	ug/kg	4.5	U	2,700	U	5	U	5.5	U	5.1	U	4.4	U	5.3	U
Cis-1,2-Dichloroethene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
cis-1,3-Dichloropropene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Cyclohexane	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
Dibromomethane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Dichlorodifluoromethane	ug/kg	4.5	UJ	2,700	UJ	5	UJ	5.5	UJ	5.1	UJ	4.4	UJ	5.3	UJ
Diethyl ether	ug/kg	2.2	U	1,300	U	2.5	UJ	2.7	U	2.5	U	2.2	U	2.7	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	360-24563-16		360-24563-2		360-24563-3		360-24563-4		360-24563-5		360-24563-6		360-24563-7	
	Field Sample ID	OC-SB-457-8.0/10-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX	
	Sample Collection Date	9/11/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Ethyl benzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Ethyl-t-Butyl Ether	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Hexachlorobutadiene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	UJ	2.5	UJ	2.2	U	2.7	U
Isopropylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Methyl cyclohexane	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Methyl Tertbutyl Ether	ug/kg	2.2	U	1,300	U	2.5	UJ	2.7	U	2.5	U	2.2	U	2.7	UJ
Methylene chloride	ug/kg	8.9	U	5,400	U	10	U	11	U	10	U	8.7	U	11	U
n-Butylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	UJ	2.5	UJ	2.2	U	2.7	U
Naphthalene	ug/kg	22	U	13,000	U	25	U	27	U	25	U	22	U	27	U
Propylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
sec-Butylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Styrene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
tert-Butylbenzene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Tetrachloroethene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Tetrahydrofuran	ug/kg	22	U	13,000	U	25	U	27	U	25	U	26	U	27	U
Toluene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
trans-1,2-Dichloroethene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
trans-1,3-Dichloropropene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Trichloroethene	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Trichlorofluoromethane	ug/kg	4.5	U	2,700	UJ	5	U	5.5	U	5.1	U	4.4	U	5.3	U
Vinyl chloride	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U
Xylene, m/p	ug/kg	4.5	U	2,700	U	5	U	5.5	U	5.1	U	4.4	U	5.3	U
Xylene, o	ug/kg	2.2	U	1,300	U	2.5	U	2.7	U	2.5	U	2.2	U	2.7	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
Lab Sample ID		360-24563-9		360-24582-1		360-24582-10		360-24582-11		360-24582-12		360-24582-13		360-24582-14	
Field Sample ID		OC-SB-428-8.0/10-XXX		OC-SB-457-28/30-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX		OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX	
Sample Collection Date		9/10/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	10	U	12	U	19	U	19	U	12	U	12	U
1,1,2-Trichloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1-Dichloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1-Dichloroethene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,1-Dichloropropene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
1,2-Dibromoethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2-Dichloroethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,2-Dichloropropane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,3-Dichloropropane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
1,4-Dioxane	ug/kg	240	UJ	210	UJ	250	UJ	370	UJ	370	UJ	240	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
2-Butanone	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
2-Chlorotoluene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
2-Hexanone	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
4-Chlorotoluene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
4-Methyl-2-pentanone	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
Acetic acid, methyl ester	ug/kg	49	U	41	U	50	U	75	U	74	U	48	U	49	U
Acetone	ug/kg	97	J	210	UJ	250	UJ	370	UJ	370	UJ	240	UJ	250	UJ
Benzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Bromobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Bromochloromethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Bromodichloromethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Bromoform	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Bromomethane	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Carbon disulfide	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Carbon tetrachloride	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Chlorobenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Chlorodibromomethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Chloroethane	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
Chloroform	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Chloromethane	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
Cis-1,2-Dichloroethene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Cyclohexane	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
Dibromomethane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Dichlorodifluoromethane	ug/kg	4.9	UJ	4.1	UJ	5	UJ	7.5	UJ	7.4	UJ	4.8	UJ	4.9	UJ
Diethyl ether	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	360-24563-9		360-24582-1		360-24582-10		360-24582-11		360-24582-12		360-24582-13		360-24582-14	
	Field Sample ID	OC-SB-428-8.0/10-XXX		OC-SB-457-28/30-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX		OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX	
	Sample Collection Date	9/10/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Ethyl benzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Hexachlorobutadiene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Isopropylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Methyl cyclohexane	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Methylene chloride	ug/kg	9.8	U	8.3	U	10	U	15	U	15	U	9.6	U	9.9	U
n-Butylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Naphthalene	ug/kg	24	U	21	U	25	U	37	U	37	U	24	U	25	U
Propylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
sec-Butylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Styrene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
tert-Butylbenzene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Tetrachloroethene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Tetrahydrofuran	ug/kg	27	U	21	U	25	U	37	U	37	U	24	U	25	U
Toluene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Trichloroethene	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Trichlorofluoromethane	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
Vinyl chloride	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U
Xylene, m/p	ug/kg	4.9	U	4.1	U	5	U	7.5	U	7.4	U	4.8	U	4.9	U
Xylene, o	ug/kg	2.4	U	2.1	U	2.5	U	3.7	U	3.7	U	2.4	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21		360-24582-22		360-24582-5	
	Field Sample ID	OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX		OC-SS-400-0.0/1.0-XXX	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/14/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1,1-Trichloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1,2,2-Tetrachloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	50	U	13	U	13	U	39	U	13	U	13	U	24	U
1,1,2-Trichloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1-Dichloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1-Dichloroethene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,1-Dichloropropene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2,3-Trichlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	UJ	2.6	UJ	4.8	U
1,2,3-Trichloropropane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2,4-Trichlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	UJ	2.6	UJ	4.8	U
1,2,4-Trimethylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2-Dibromo-3-chloropropane	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
1,2-Dibromoethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2-Dichlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2-Dichloroethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,2-Dichloropropane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,3,5-Trimethylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,3-Dichlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,3-Dichloropropane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,4-Dichlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
1,4-Dioxane	ug/kg	990	UJ	270	UJ	260	UJ	790	UJ	270	UJ	260	UJ	480	UJ
2,2-Dichloropropane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
2,4,4-Trimethyl-1-pentene	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
2,4,4-Trimethyl-2-Pentene	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
2-Butanone	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
2-Chlorotoluene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
2-Hexanone	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
4-Chlorotoluene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
4-iso-Propyltoluene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
4-Methyl-2-pentanone	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
Acetic acid, methyl ester	ug/kg	200	U	54	U	52	U	160	U	53	U	53	U	96	U
Acetone	ug/kg	990	UJ	270	UJ	260	UJ	790	UJ	270	UJ	260	UJ	480	UJ
Benzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Bromobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Bromochloromethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Bromodichloromethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Bromoform	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Bromomethane	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Carbon disulfide	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Carbon tetrachloride	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Chlorobenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Chlorodibromomethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Chloroethane	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
Chloroform	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Chloromethane	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
Cis-1,2-Dichloroethene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
cis-1,3-Dichloropropene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Cyclohexane	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
Dibromomethane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Dichlorodifluoromethane	ug/kg	20	UJ	5.4	UJ	5.2	UJ	16	UJ	5.3	UJ	5.3	UJ	9.6	UJ
Diethyl ether	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21		360-24582-22		360-24582-5	
	Field Sample ID	OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX		OC-SS-400-0.0/1.0-XXX	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/14/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Ethyl benzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Ethyl-t-Butyl Ether	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Hexachlorobutadiene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	UJ	2.6	UJ	4.8	U
Isopropylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Methyl cyclohexane	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Methyl Tertbutyl Ether	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Methylene chloride	ug/kg	40	U	11	U	10	U	31	U	11	U	11	U	19	U
n-Butylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	UJ	2.6	UJ	4.8	U
Naphthalene	ug/kg	99	U	27	U	26	U	79	U	27	UJ	26	UJ	48	U
Propylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
sec-Butylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Styrene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
tert-Butylbenzene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Tetrachloroethene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Tetrahydrofuran	ug/kg	99	U	27	U	26	U	79	U	27	U	26	U	48	U
Toluene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
trans-1,2-Dichloroethene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
trans-1,3-Dichloropropene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Trichloroethene	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Trichlorofluoromethane	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
Vinyl chloride	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U
Xylene, m/p	ug/kg	20	U	5.4	U	5.2	U	16	U	5.3	U	5.3	U	9.6	U
Xylene, o	ug/kg	9.9	U	2.7	U	2.6	U	7.9	U	2.7	U	2.6	U	4.8	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	360-24582-6		360-24582-7		360-24582-9		360-24634-1		360-24634-10		360-24634-11		360-24634-12	
	Field Sample ID	OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-417-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX	
	Sample Collection Date	9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	26	U	13	U	12	U	12	U	17	U	12	U
1,1,2-Trichloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
1,4-Dioxane	ug/kg	250	UJ	520	UJ	270	UJ	240	UJ	240	UJ	340	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	10	U	5.4	U	2	J	4.8	U	6.9	U	4.9	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
2-Butanone	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
2-Hexanone	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
Acetic acid, methyl ester	ug/kg	50	U	100	U	54	U	48	U	48	U	69	U	49	U
Acetone	ug/kg	250	UJ	520	UJ	270	UJ	240	UJ	240	UJ	340	UJ	250	UJ
Benzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Bromobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Bromoform	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Bromomethane	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Chloroethane	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
Chloroform	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Chloromethane	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Cyclohexane	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
Dibromomethane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Dichlorodifluoromethane	ug/kg	5	UJ	10	UJ	5.4	UJ	4.8	UJ	4.8	UJ	6.9	UJ	4.9	UJ
Diethyl ether	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	360-24582-6		360-24582-7		360-24582-9		360-24634-1		360-24634-10		360-24634-11		360-24634-12	
	Field Sample ID	OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-417-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX	
	Sample Collection Date	9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Methylene chloride	ug/kg	10	U	21	U	11	U	9.6	U	9.5	U	14	U	9.9	U
n-Butylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Naphthalene	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
Propylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Styrene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Tetrahydrofuran	ug/kg	25	U	52	U	27	U	24	U	24	U	34	U	25	U
Toluene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Trichloroethene	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Trichlorofluoromethane	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
Vinyl chloride	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U
Xylene, m/p	ug/kg	5	U	10	U	5.4	U	4.8	U	4.8	U	6.9	U	4.9	U
Xylene, o	ug/kg	2.5	U	5.2	U	2.7	U	2.4	U	2.4	U	3.4	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	360-24634-13		360-24634-14		360-24634-15		360-24634-16		360-24634-2		360-24634-3		360-24634-4	
	Field Sample ID	OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1,1-Trichloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1,2,2-Tetrachloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	16	U	15	U	11	U	16	U	14	U	13	U	11	U
1,1,2-Trichloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1-Dichloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1-Dichloroethene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,1-Dichloropropene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2,3-Trichlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2,3-Trichloropropane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2,4-Trichlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2,4-Trimethylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2-Dibromo-3-chloropropane	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
1,2-Dibromoethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2-Dichlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2-Dichloroethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,2-Dichloropropane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,3,5-Trimethylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,3-Dichlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,3-Dichloropropane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,4-Dichlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
1,4-Dioxane	ug/kg	330	UJ	300	UJ	230	UJ	310	UJ	280	UJ	260	UJ	230	UJ
2,2-Dichloropropane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
2,4,4-Trimethyl-1-pentene	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
2,4,4-Trimethyl-2-Pentene	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
2-Butanone	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
2-Chlorotoluene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
2-Hexanone	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
4-Chlorotoluene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
4-iso-Propyltoluene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
4-Methyl-2-pentanone	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
Acetic acid, methyl ester	ug/kg	65	U	60	U	45	U	63	U	55	U	51	U	46	U
Acetone	ug/kg	330	UJ	300	UJ	230	UJ	310	UJ	280	UJ	260	UJ	230	UJ
Benzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Bromobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Bromochloromethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Bromodichloromethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Bromoform	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Bromomethane	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
Butane, 2-methoxy-2-methyl-	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Carbon disulfide	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Carbon tetrachloride	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Chlorobenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Chlorodibromomethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Chloroethane	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
Chloroform	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Chloromethane	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
Cis-1,2-Dichloroethene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
cis-1,3-Dichloropropene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Cyclohexane	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
Dibromomethane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Dichlorodifluoromethane	ug/kg	6.5	UJ	6	UJ	4.5	UJ	6.3	UJ	5.5	UJ	5.1	UJ	4.6	UJ
Diethyl ether	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	360-24634-13		360-24634-14		360-24634-15		360-24634-16		360-24634-2		360-24634-3		360-24634-4	
	Field Sample ID	OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Ethyl benzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Ethyl-t-Butyl Ether	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Hexachlorobutadiene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Isopropylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Methyl cyclohexane	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Methyl Tertbutyl Ether	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Methylene chloride	ug/kg	13	U	12	U	9.1	U	13	U	11	U	10	U	9.1	U
n-Butylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Naphthalene	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
Propylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
sec-Butylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Styrene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
tert-Butylbenzene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Tetrachloroethene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Tetrahydrofuran	ug/kg	33	U	30	U	23	U	31	U	28	U	26	U	23	U
Toluene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
trans-1,2-Dichloroethene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
trans-1,3-Dichloropropene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Trichloroethene	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Trichlorofluoromethane	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
Vinyl chloride	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U
Xylene, m/p	ug/kg	6.5	U	6	U	4.5	U	6.3	U	5.5	U	5.1	U	4.6	U
Xylene, o	ug/kg	3.3	U	3	U	2.3	U	3.1	U	2.8	U	2.6	U	2.3	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-17		OCRI-17	
Lab Sample ID		360-24634-5		360-24634-6		360-24634-7		360-24634-8		360-24634-9		360-24665-1		360-24665-10	
Field Sample ID		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-425-0.0/1.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX	
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1,1-Trichloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1,2,2-Tetrachloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	15	U	14	U	12	U	12	U	12	U	15	U	14	U
1,1,2-Trichloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1-Dichloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1-Dichloroethene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,1-Dichloropropene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2,3-Trichlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2,3-Trichloropropane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2,4-Trichlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2,4-Trimethylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2-Dibromo-3-chloropropane	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
1,2-Dibromoethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2-Dichlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2-Dichloroethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,2-Dichloropropane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,3,5-Trimethylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,3-Dichlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,3-Dichloropropane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,4-Dichlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
1,4-Dioxane	ug/kg	300	UJ	290	UJ	240	UJ	250	UJ	240	UJ	310	UJ	290	UJ
2,2-Dichloropropane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
2,4,4-Trimethyl-1-pentene	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
2,4,4-Trimethyl-2-Pentene	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
2-Butanone	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
2-Chlorotoluene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
2-Hexanone	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
4-Chlorotoluene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
4-iso-Propyltoluene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
4-Methyl-2-pentanone	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
Acetic acid, methyl ester	ug/kg	60	U	58	U	48	U	49	U	48	U	61	U	57	U
Acetone	ug/kg	300	UJ	290	UJ	240	UJ	250	UJ	240	UJ	310	UJ	290	UJ
Benzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Bromobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Bromochloromethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Bromodichloromethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Bromoform	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Bromomethane	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
Butane, 2-methoxy-2-methyl-	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Carbon disulfide	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Carbon tetrachloride	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Chlorobenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Chlorodibromomethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Chloroethane	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
Chloroform	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Chloromethane	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
Cis-1,2-Dichloroethene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
cis-1,3-Dichloropropene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Cyclohexane	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
Dibromomethane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Dichlorodifluoromethane	ug/kg	6	UJ	5.8	UJ	4.8	UJ	4.9	UJ	4.8	UJ	6.1	UJ	5.7	UJ
Diethyl ether	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-17		OCRI-17	
	Lab Sample ID	360-24634-5		360-24634-6		360-24634-7		360-24634-8		360-24634-9		360-24665-1		360-24665-10	
	Field Sample ID	OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-425-0.0/1.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Ethyl benzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Ethyl-t-Butyl Ether	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Hexachlorobutadiene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Isopropylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Methyl cyclohexane	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Methyl Tertbutyl Ether	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Methylene chloride	ug/kg	12	U	12	U	9.6	U	9.9	U	9.5	U	12	U	11	U
n-Butylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Naphthalene	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
Propylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
sec-Butylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Styrene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
tert-Butylbenzene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Tetrachloroethene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Tetrahydrofuran	ug/kg	30	U	29	U	24	U	25	U	24	U	31	U	29	U
Toluene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
trans-1,2-Dichloroethene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
trans-1,3-Dichloropropene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Trichloroethene	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Trichlorofluoromethane	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
Vinyl chloride	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U
Xylene, m/p	ug/kg	6	U	5.8	U	4.8	U	4.9	U	4.8	U	6.1	U	5.7	U
Xylene, o	ug/kg	3	U	2.9	U	2.4	U	2.5	U	2.4	U	3.1	U	2.9	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	360-24665-11		360-24665-12		360-24665-13		360-24665-15		360-24665-16		360-24665-17		360-24665-2	
	Field Sample ID	OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-406-0.0/1.0-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-435-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1,1-Trichloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1,2,2-Tetrachloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	15	U	16	U	29	U	11	U	23	U	13	U	970	UJ
1,1,2-Trichloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1-Dichloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1-Dichloroethene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,1-Dichloropropene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2,3-Trichlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2,3-Trichloropropane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2,4-Trichlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2,4-Trimethylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2-Dibromo-3-chloropropane	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
1,2-Dibromoethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2-Dichlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2-Dichloroethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,2-Dichloropropane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,3,5-Trimethylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,3-Dichlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,3-Dichloropropane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,4-Dichlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
1,4-Dioxane	ug/kg	300	UJ	320	UJ	590	UJ	230	UJ	460	UJ	250	UJ	19,000	UJ
2,2-Dichloropropane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	UJ
2,4,4-Trimethyl-1-pentene	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	UJ
2,4,4-Trimethyl-2-Pentene	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	U
2-Butanone	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
2-Chlorotoluene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
2-Hexanone	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
4-Chlorotoluene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
4-iso-Propyltoluene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
4-Methyl-2-pentanone	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
Acetic acid, methyl ester	ug/kg	61	U	64	U	120	U	45	U	91	U	51	U	3,900	UJ
Acetone	ug/kg	35	J	34	J	68	J	230	UJ	39	J	250	UJ	19,000	UJ
Benzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Bromobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Bromochloromethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Bromodichloromethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Bromoform	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Bromomethane	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	U
Butane, 2-methoxy-2-methyl-	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Carbon disulfide	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Carbon tetrachloride	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Chlorobenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Chlorodibromomethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Chloroethane	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	U
Chloroform	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Chloromethane	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	U
Cis-1,2-Dichloroethene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
cis-1,3-Dichloropropene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Cyclohexane	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
Dibromomethane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Dichlorodifluoromethane	ug/kg	6.1	UJ	6.4	UJ	12	UJ	4.5	UJ	9.1	UJ	5.1	UJ	390	UJ
Diethyl ether	ug/kg	3	UJ	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	360-24665-11		360-24665-12		360-24665-13		360-24665-15		360-24665-16		360-24665-17		360-24665-2	
	Field Sample ID	OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-406-0.0/1.0-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-435-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Ethyl benzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Ethyl-t-Butyl Ether	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Hexachlorobutadiene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Isopropylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Methyl cyclohexane	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Methyl Tertbutyl Ether	ug/kg	3	UJ	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Methylene chloride	ug/kg	12	U	13	U	24	U	9	U	18	U	10	U	780	U
n-Butylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Naphthalene	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
Propylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
sec-Butylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Styrene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
tert-Butylbenzene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Tetrachloroethene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Tetrahydrofuran	ug/kg	30	U	32	U	59	U	23	U	46	U	25	U	1,900	U
Toluene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
trans-1,2-Dichloroethene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
trans-1,3-Dichloropropene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Trichloroethene	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Trichlorofluoromethane	ug/kg	6.1	U	6.4	U	12	U	4.5	U	9.1	U	5.1	U	390	U
Vinyl chloride	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U
Xylene, m/p	ug/kg	6.1	U	6.4	U	12	U	0.94	J	9.1	U	5.1	U	390	U
Xylene, o	ug/kg	3	U	3.2	U	5.9	U	2.3	U	4.6	U	2.5	U	190	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8		360-24665-9	
	Field Sample ID	OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-451-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1,1-Trichloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1,2,2-Tetrachloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	16	U	17	U	21	U	30	U	18	U	19	U	15	U
1,1,2-Trichloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1-Dichloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1-Dichloroethene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,1-Dichloropropene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2,3-Trichlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2,3-Trichloropropane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2,4-Trichlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2,4-Trimethylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2-Dibromo-3-chloropropane	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
1,2-Dibromoethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2-Dichlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2-Dichloroethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,2-Dichloropropane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,3,5-Trimethylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,3-Dichlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,3-Dichloropropane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,4-Dichlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
1,4-Dioxane	ug/kg	320	UJ	340	UJ	420	UJ	600	UJ	350	UJ	370	UJ	310	UJ
2,2-Dichloropropane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
2,4,4-Trimethyl-1-pentene	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
2,4,4-Trimethyl-2-Pentene	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
2-Butanone	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
2-Chlorotoluene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
2-Hexanone	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
4-Chlorotoluene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
4-iso-Propyltoluene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
4-Methyl-2-pentanone	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
Acetic acid, methyl ester	ug/kg	63	U	68	U	85	U	120	U	71	U	74	U	62	U
Acetone	ug/kg	320	UJ	340	UJ	420	UJ	600	UJ	350	UJ	34	J	310	UJ
Benzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Bromobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Bromochloromethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Bromodichloromethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Bromoform	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Bromomethane	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
Butane, 2-methoxy-2-methyl-	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Carbon disulfide	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Carbon tetrachloride	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Chlorobenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Chlorodibromomethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Chloroethane	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
Chloroform	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Chloromethane	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
Cis-1,2-Dichloroethene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
cis-1,3-Dichloropropene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Cyclohexane	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
Dibromomethane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Dichlorodifluoromethane	ug/kg	6.3	UJ	6.8	UJ	8.5	UJ	12	UJ	7.1	UJ	7.4	UJ	6.2	UJ
Diethyl ether	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8		360-24665-9	
	Field Sample ID	OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-451-0.0/1.0-XXX	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Ethyl benzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Ethyl-t-Butyl Ether	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Hexachlorobutadiene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Isopropylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Methyl cyclohexane	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Methyl Tertbutyl Ether	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Methylene chloride	ug/kg	13	U	14	U	17	U	24	U	14	U	15	U	12	U
n-Butylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Naphthalene	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
Propylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
sec-Butylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Styrene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
tert-Butylbenzene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Tetrachloroethene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Tetrahydrofuran	ug/kg	32	U	34	U	42	U	60	U	35	U	37	U	31	U
Toluene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
trans-1,2-Dichloroethene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
trans-1,3-Dichloropropene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Trichloroethene	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Trichlorofluoromethane	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
Vinyl chloride	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U
Xylene, m/p	ug/kg	6.3	U	6.8	U	8.5	U	12	U	7.1	U	7.4	U	6.2	U
Xylene, o	ug/kg	3.2	U	3.4	U	4.2	U	6	U	3.5	U	3.7	U	3.1	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		360-24686-10		360-24686-11		360-24686-13		360-24686-14		360-24686-15		360-24686-16		360-24686-2	
Field Sample ID		OC-SS-453-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX		OC-SB-435-0.0/1.0-XXX	
Sample Collection Date		9/17/2009		9/17/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1,1-Trichloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1,2,2-Tetrachloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	19	U	13	U	16	U	18	U	17	U	18	U	99	U
1,1,2-Trichloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1-Dichloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1-Dichloroethene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,1-Dichloropropene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2,3-Trichlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2,3-Trichloropropane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2,4-Trichlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2,4-Trimethylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2-Dibromo-3-chloropropane	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
1,2-Dibromoethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2-Dichlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2-Dichloroethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,2-Dichloropropane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,3,5-Trimethylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,3-Dichlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,3-Dichloropropane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,4-Dichlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
1,4-Dioxane	ug/kg	380	UJ	260	UJ	320	UJ	360	UJ	340	UJ	360	UJ	2,000	UJ
2,2-Dichloropropane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
2,4,4-Trimethyl-1-pentene	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
2,4,4-Trimethyl-2-Pentene	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
2-Butanone	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
2-Chlorotoluene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
2-Hexanone	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
4-Chlorotoluene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
4-iso-Propyltoluene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
4-Methyl-2-pentanone	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
Acetic acid, methyl ester	ug/kg	76	U	52	U	64	U	72	U	67	U	71	U	390	U
Acetone	ug/kg	380	UJ	21	J	320	UJ	360	UJ	340	UJ	81	J	2,000	UJ
Benzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Bromobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Bromochloromethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Bromodichloromethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Bromoform	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Bromomethane	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
Butane, 2-methoxy-2-methyl-	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Carbon disulfide	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Carbon tetrachloride	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Chlorobenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Chlorodibromomethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Chloroethane	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
Chloroform	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Chloromethane	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
Cis-1,2-Dichloroethene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
cis-1,3-Dichloropropene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Cyclohexane	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
Dibromomethane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Dichlorodifluoromethane	ug/kg	7.6	UJ	5.2	UJ	6.4	UJ	7.2	UJ	6.7	UJ	7.1	UJ	39	UJ
Diethyl ether	ug/kg	3.8	UJ	2.6	UJ	3.2	U	3.6	U	3.4	U	3.6	U	20	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	360-24686-10		360-24686-11		360-24686-13		360-24686-14		360-24686-15		360-24686-16		360-24686-2	
	Field Sample ID	OC-SS-453-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX		OC-SB-435-0.0/1.0-XXX	
	Sample Collection Date	9/17/2009		9/17/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Ethyl benzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Ethyl-t-Butyl Ether	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Hexachlorobutadiene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Isopropylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Methyl cyclohexane	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Methyl Tertbutyl Ether	ug/kg	3.8	UJ	2.6	UJ	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Methylene chloride	ug/kg	15	U	10	U	13	U	14	U	13	U	14	U	79	U
n-Butylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Naphthalene	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
Propylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
sec-Butylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Styrene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
tert-Butylbenzene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Tetrachloroethene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Tetrahydrofuran	ug/kg	38	U	26	U	32	U	36	U	34	U	36	U	200	U
Toluene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
trans-1,2-Dichloroethene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
trans-1,3-Dichloropropene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Trichloroethene	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Trichlorofluoromethane	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
Vinyl chloride	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U
Xylene, m/p	ug/kg	7.6	U	5.2	U	6.4	U	7.2	U	6.7	U	7.1	U	39	U
Xylene, o	ug/kg	3.8	U	2.6	U	3.2	U	3.6	U	3.4	U	3.6	U	20	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7		360-24686-9	
	Field Sample ID	OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	11	U	95	U	13	U	18	U	12	U
1,1,2-Trichloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1-Dichloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1-Dichloroethene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,1-Dichloropropene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
1,2-Dibromoethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2-Dichloroethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,2-Dichloropropane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,3-Dichloropropane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
1,4-Dioxane	ug/kg	230	UJ	210	UJ	1,900	UJ	260	UJ	360	UJ	250	UJ
2,2-Dichloropropane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.7	U	4.3	U	38	U	4.7	J	7.3	U	5	U
2-Butanone	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
2-Chlorotoluene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
2-Hexanone	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
4-Chlorotoluene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
4-Methyl-2-pentanone	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
Acetic acid, methyl ester	ug/kg	47	U	43	U	380	U	51	U	73	U	50	U
Acetone	ug/kg	230	UJ	210	UJ	1,900	UJ	89	J	360	UJ	250	UJ
Benzene	ug/kg	2.3	U	2.1	U	19	U	24		3.6	U	2.5	U
Bromobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Bromochloromethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Bromodichloromethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Bromoform	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Bromomethane	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Carbon disulfide	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Carbon tetrachloride	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Chlorobenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Chlorodibromomethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Chloroethane	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
Chloroform	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Chloromethane	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
Cis-1,2-Dichloroethene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Cyclohexane	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
Dibromomethane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Dichlorodifluoromethane	ug/kg	4.7	UJ	4.3	UJ	38	UJ	5.1	UJ	7.3	UJ	5	UJ
Diethyl ether	ug/kg	2.3	U	2.1	U	19	UJ	2.6	UJ	3.6	UJ	2.5	UJ

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7		360-24686-9	
	Field Sample ID	OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Ethyl benzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Hexachlorobutadiene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Isopropylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Methyl cyclohexane	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.3	U	2.1	U	19	UJ	2.6	UJ	3.6	UJ	2.5	UJ
Methylene chloride	ug/kg	9.3	U	8.6	U	76	U	10	U	15	U	10	U
n-Butylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Naphthalene	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
Propylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
sec-Butylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Styrene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
tert-Butylbenzene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Tetrachloroethene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Tetrahydrofuran	ug/kg	23	U	21	U	190	U	26	U	36	U	25	U
Toluene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Trichloroethene	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Trichlorofluoromethane	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
Vinyl chloride	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U
Xylene, m/p	ug/kg	4.7	U	4.3	U	38	U	5.1	U	7.3	U	5	U
Xylene, o	ug/kg	2.3	U	2.1	U	19	U	2.6	U	3.6	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 04/23/10
Checked by / Date: TLC 04/26/10

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-11		OCRI-12	
Lab Sample ID		360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24444-16		360-24454-18	
Field Sample ID		OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-007		OC-EBK-008	
Sample Collection Date		8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/3/2009		9/8/2009	
QC Code		EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloropropene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,3-Trichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,4-Trimethylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3,5-Trimethylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dioxane	ug/l	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U
2,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2,4,4-Trimethyl-1-pentene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2,4,4-Trimethyl-2-Pentene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Chlorotoluene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Hexanone	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chlorotoluene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
4-iso-Propyltoluene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetic acid, methyl ester	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	ug/l	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U
Benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromochloromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromomethane	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Butane, 2-methoxy-2-methyl-	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbon disulfide	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorodibromomethane	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Chloroform	ug/l	0.7	J	1	U	1	U	4.1		1	U	1.3		1.5		1.4	
Chloromethane	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Cis-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Cyclohexane	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dibromomethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Diethyl ether	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-11		OCRI-12	
	Lab Sample ID	360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24444-16		360-24454-18	
	Field Sample ID	OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-007		OC-EBK-008	
	Sample Collection Date	8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/3/2009		9/8/2009	
	QC Code	EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Ethyl benzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Ethyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Methyl cyclohexane	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Methylene chloride	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Butylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Propylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
sec-Butylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
tert-Butylbenzene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrahydrofuran	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Toluene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Trichloroethene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Xylene, m/p	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Xylene, o	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
TB = trip blank,

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-15		OCRI-16		OCRI-18	
	Lab Sample ID	360-24563-23		360-24582-4		360-24634-18		360-24686-20	
	Field Sample ID	OC-EBK-009		OC-EBK-010		OC-EBK-011		OC-EBK-012	
	Sample Collection Date	9/10/2009		9/14/2009		9/16/2009		9/17/2009	
	QC Code	EB		EB		EB		EB	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
1,1-Dichloropropene	ug/l	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
1,2,3-Trichloropropane	ug/l	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
1,2,4-Trimethylbenzene	ug/l	1	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	ug/l	5	U	5	U	5	U	5	U
1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U
1,3,5-Trimethylbenzene	ug/l	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
1,3-Dichloropropane	ug/l	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
1,4-Dioxane	ug/l	50	U	50	U	50	U	50	U
2,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U
2,4,4-Trimethyl-1-pentene	ug/l	1	U	1	U	1	U	1	U
2,4,4-Trimethyl-2-Pentene	ug/l	1	U	1	U	1	U	1	U
2-Butanone	ug/l	10	U	10	U	10	U	10	U
2-Chlorotoluene	ug/l	1	U	1	U	1	U	1	U
2-Hexanone	ug/l	10	U	10	U	10	U	10	U
4-Chlorotoluene	ug/l	1	U	1	U	1	U	1	U
4-iso-Propyltoluene	ug/l	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone	ug/l	10	U	10	U	10	U	10	U
Acetic acid, methyl ester	ug/l	10	U	10	U	10	U	10	U
Acetone	ug/l	50	U	50	U	50	U	50	U
Benzene	ug/l	1	U	1	U	1	U	1	U
Bromobenzene	ug/l	1	U	1	U	1	U	1	U
Bromochloromethane	ug/l	1	U	1	U	1	U	1	U
Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U
Bromoform	ug/l	1	U	1	U	1	U	1	U
Bromomethane	ug/l	2	U	2	U	2	U	2	U
Butane, 2-methoxy-2-methyl-	ug/l	5	U	5	U	5	U	5	U
Carbon disulfide	ug/l	10	U	10	U	10	U	10	U
Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U
Chlorobenzene	ug/l	1	U	1	U	1	U	1	U
Chlorodibromomethane	ug/l	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	ug/l	2	U	2	U	2	U	2	U
Chloroform	ug/l	1.1		1	J	1	U	1.2	
Chloromethane	ug/l	2	U	2	U	2	U	2	U
Cis-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U
Cyclohexane	ug/l	10	U	10	U	10	U	10	U
Dibromomethane	ug/l	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U
Diethyl ether	ug/l	10	U	10	U	10	U	10	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-15		OCRI-16		OCRI-18	
	Lab Sample ID	360-24563-23		360-24582-4		360-24634-18		360-24686-20	
	Field Sample ID	OC-EBK-009		OC-EBK-010		OC-EBK-011		OC-EBK-012	
	Sample Collection Date	9/10/2009		9/14/2009		9/16/2009		9/17/2009	
	QC Code	EB		EB		EB		EB	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/l	10	U	10	U	10	U	10	U
Ethyl benzene	ug/l	1	U	1	U	1	U	1	U
Ethyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U
Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U
Methyl cyclohexane	ug/l	10	U	10	U	10	U	10	U
Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U
Methylene chloride	ug/l	2	U	2	U	2	U	2	U
n-Butylbenzene	ug/l	1	U	1	U	1	U	1	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U
Propylbenzene	ug/l	1	U	1	U	1	U	1	U
sec-Butylbenzene	ug/l	1	U	1	U	1	U	1	U
Styrene	ug/l	1	U	1	U	1	U	1	U
tert-Butylbenzene	ug/l	1	U	1	U	1	U	1	U
Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U
Tetrahydrofuran	ug/l	10	U	10	U	10	U	10	U
Toluene	ug/l	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	ug/l	0.4	U	0.4	U	0.4	U	0.4	U
Trichloroethene	ug/l	1	U	1	U	1	U	1	U
Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U
Vinyl chloride	ug/l	0.5	U	0.5	U	0.5	U	0.5	U
Xylene, m/p	ug/l	2	U	2	U	2	U	2	U
Xylene, o	ug/l	1	U	1	U	1	U	1	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
TB = trip blank,

Prepared by / Date: KJC 04/23/10
Checked by / Date: TLC 04/26/10

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-03		OCRI-04		OCRI-05		OCRI-05		OCRI-06		OCRI-07		OCRI-08	
	Lab Sample ID	360-24173-7		360-24194-10		360-24223-16		360-24244-13		360-24251-11		360-24251-25		360-24309-24		360-24327-18		360-24343-22	
	Field Sample ID	OC-TBK-001		OC-TBK-002		OC-TBK-004		OC-TBK-005		OC-TBK-006		OC-TBK-007		OC-TBK-008		OC-TBK-009		OC-TBK-010	
	Sample Collection Date	8/18/2009		8/19/2009		8/20/2009		8/21/2009		8/24/2009		8/25/2009		8/26/2009		8/27/2009		8/28/2009	
	QC Code	TB		TB		TB		TB		TB		TB		TB		TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	12	U	12	U	12	U	12	U	12	U	12	U	12	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dioxane	ug/kg	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U
2,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2-Hexanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Acetic acid, methyl ester	ug/kg	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U
Acetone	ug/kg	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U
Benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromoform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Cyclohexane	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Dibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-03		OCRI-04		OCRI-05		OCRI-05		OCRI-06		OCRI-07		OCRI-08	
	Lab Sample ID	360-24173-7		360-24194-10		360-24223-16		360-24244-13		360-24251-11		360-24251-25		360-24309-24		360-24327-18		360-24343-22	
	Field Sample ID	OC-TBK-001		OC-TBK-002		OC-TBK-004		OC-TBK-005		OC-TBK-006		OC-TBK-007		OC-TBK-008		OC-TBK-009		OC-TBK-010	
	Sample Collection Date	8/18/2009		8/19/2009		8/20/2009		8/21/2009		8/24/2009		8/25/2009		8/26/2009		8/27/2009		8/28/2009	
	QC Code	TB		TB		TB		TB		TB		TB		TB		TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methylene chloride	ug/kg	10	U	10	U	7.7	JB	10	U	9.3	J	10	U	10	U	10	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Naphthalene	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Propylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Styrene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrahydrofuran	ug/kg	6.6	J	25	U	25	U	25	U	25	U	25	U	5.6	J	25	U	25	U
Toluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl chloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Xylene, m/p	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Xylene, o	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in the associated method blank
QC Code:
TB = trip blank,

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-10		OCRI-11		OCRI-12		OCRI-13		OCRI-13		OCRI-14		OCRI-15		OCRI-15	
	Lab Sample ID	360-24365-11		360-24417-17		360-24444-10		360-24454-10		360-24499-23		360-24499-8		360-24563-10		360-24582-2		360-24582-23	
	Field Sample ID	OC-TBK-011		OC-TBK-012		OC-TBK-013		OC-TBK-014		OC-TBK-016		OC-TBK-015		OC-TBK-017		OC-TBK-018		OC-TBK-019	
	Sample Collection Date	8/31/2009		9/2/2009		9/3/2009		9/4/2009		9/10/2009		9/9/2009		9/11/2009		9/14/2009		9/15/2009	
	QC Code	TB		TB		TB		TB		TB		TB		TB		TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	12	U	12	U	12	U	12	U	12	U	12	U	12	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dioxane	ug/kg	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U
2,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	10	J	25	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2-Hexanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Acetic acid, methyl ester	ug/kg	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U
Acetone	ug/kg	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U
Benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromoform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Cyclohexane	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Dibromomethane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-10		OCRI-11		OCRI-12		OCRI-13		OCRI-13		OCRI-14		OCRI-15		OCRI-15	
	Lab Sample ID	360-24365-11		360-24417-17		360-24444-10		360-24454-10		360-24499-23		360-24499-8		360-24563-10		360-24582-2		360-24582-23	
	Field Sample ID	OC-TBK-011		OC-TBK-012		OC-TBK-013		OC-TBK-014		OC-TBK-016		OC-TBK-015		OC-TBK-017		OC-TBK-018		OC-TBK-019	
	Sample Collection Date	8/31/2009		9/2/2009		9/3/2009		9/4/2009		9/10/2009		9/9/2009		9/11/2009		9/14/2009		9/15/2009	
	QC Code	TB		TB		TB		TB		TB		TB		TB		TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methylene chloride	ug/kg	5.7	JB	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Naphthalene	ug/kg	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Propylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Styrene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrahydrofuran	ug/kg	13	J	6.2	J	9.1	J	25	U	25	U	25	U	33		25	U	25	U
Toluene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl chloride	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Xylene, m/p	ug/kg	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Xylene, o	ug/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in the associated method blank
QC Code:
TB = trip blank,

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-17		OCRI-18	
	Lab Sample ID	360-24634-17		360-24665-19		360-24686-12	
	Field Sample ID	OC-TBK-020		OC-TBK-021		OC-TBK-022	
	Sample Collection Date	9/16/2009		9/17/2009		9/18/2009	
	QC Code	TB		TB		TB	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,1,1-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,1,2,2-Tetrachloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U	12	U	12	U
1,1,2-Trichloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U
1,1-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,2,3-Trichloropropane	ug/kg	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	ug/kg	25	U	25	U	25	U
1,2-Dibromoethane	ug/kg	2.5	U	2.5	U	2.5	U
1,2-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	ug/kg	2.5	U	2.5	U	2.5	U
1,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,3-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
1,4-Dioxane	ug/kg	250	U	250	U	250	U
2,2-Dichloropropane	ug/kg	2.5	U	2.5	U	2.5	U
2,4,4-Trimethyl-1-pentene	ug/kg	5	U	5	U	5	U
2,4,4-Trimethyl-2-Pentene	ug/kg	5	U	5	U	5	U
2-Butanone	ug/kg	25	U	25	U	25	U
2-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U
2-Hexanone	ug/kg	25	U	25	U	25	U
4-Chlorotoluene	ug/kg	2.5	U	2.5	U	2.5	U
4-iso-Propyltoluene	ug/kg	2.5	U	2.5	U	2.5	U
4-Methyl-2-pentanone	ug/kg	25	U	25	U	25	U
Acetic acid, methyl ester	ug/kg	50	U	50	U	50	U
Acetone	ug/kg	250	U	250	U	250	U
Benzene	ug/kg	2.5	U	2.5	U	2.5	U
Bromobenzene	ug/kg	2.5	U	2.5	U	2.5	U
Bromochloromethane	ug/kg	2.5	U	2.5	U	2.5	U
Bromodichloromethane	ug/kg	2.5	U	2.5	U	2.5	U
Bromoform	ug/kg	2.5	U	2.5	U	2.5	U
Bromomethane	ug/kg	5	U	5	U	5	U
Butane, 2-methoxy-2-methyl-	ug/kg	2.5	U	2.5	U	2.5	U
Carbon disulfide	ug/kg	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	ug/kg	2.5	U	2.5	U	2.5	U
Chlorobenzene	ug/kg	2.5	U	2.5	U	2.5	U
Chlorodibromomethane	ug/kg	2.5	U	2.5	U	2.5	U
Chloroethane	ug/kg	5	U	5	U	5	U
Chloroform	ug/kg	2.5	U	2.5	U	2.5	U
Chloromethane	ug/kg	5	U	5	U	5	U
Cis-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U
cis-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U
Cyclohexane	ug/kg	25	U	25	U	25	U
Dibromomethane	ug/kg	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	ug/kg	5	U	5	U	5	U
Diethyl ether	ug/kg	2.5	U	2.5	U	2.5	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-17		OCRI-18	
	Lab Sample ID	360-24634-17		360-24665-19		360-24686-12	
	Field Sample ID	OC-TBK-020		OC-TBK-021		OC-TBK-022	
	Sample Collection Date	9/16/2009		9/17/2009		9/18/2009	
	QC Code	TB		TB		TB	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
Diisopropylether	ug/kg	2.5	U	2.5	U	2.5	U
Ethyl benzene	ug/kg	2.5	U	2.5	U	2.5	U
Ethyl-t-Butyl Ether	ug/kg	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	ug/kg	2.5	U	2.5	U	2.5	U
Isopropylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
Methyl cyclohexane	ug/kg	2.5	U	2.5	U	2.5	U
Methyl Tertbutyl Ether	ug/kg	2.5	U	2.5	U	2.5	U
Methylene chloride	ug/kg	10	U	10	U	10	U
n-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
Naphthalene	ug/kg	25	U	25	U	25	U
Propylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
Styrene	ug/kg	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	ug/kg	2.5	U	2.5	U	2.5	U
Tetrachloroethene	ug/kg	2.5	U	2.5	U	2.5	U
Tetrahydrofuran	ug/kg	25	U	25	U	25	U
Toluene	ug/kg	2.5	U	2.5	U	2.5	U
trans-1,2-Dichloroethene	ug/kg	2.5	U	2.5	U	2.5	U
trans-1,3-Dichloropropene	ug/kg	2.5	U	2.5	U	2.5	U
Trichloroethene	ug/kg	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	ug/kg	5	U	5	U	5	U
Vinyl chloride	ug/kg	2.5	U	2.5	U	2.5	U
Xylene, m/p	ug/kg	5	U	5	U	5	U
Xylene, o	ug/kg	2.5	U	2.5	U	2.5	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in the associated method blank
QC Code:
TB = trip blank,

Prepared by / Date: KJC 04/23/10
Checked by / Date: TLC 04/26/10

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	360-24365-22	
	Field Sample ID	OC-SB-PE-VS0355-VOC	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	Units	Result	Qualifier
1,1,1,2-Tetrachloroethane	ug/kg	2.4	U
1,1,1-Trichloroethane	ug/kg	26	
1,1,2,2-Tetrachloroethane	ug/kg	2.4	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	12	U
1,1,2-Trichloroethane	ug/kg	46	
1,1-Dichloroethane	ug/kg	2.4	U
1,1-Dichloroethene	ug/kg	2.4	U
1,1-Dichloropropene	ug/kg	2.4	U
1,2,3-Trichlorobenzene	ug/kg	2.4	U
1,2,3-Trichloropropane	ug/kg	2.4	U
1,2,4-Trichlorobenzene	ug/kg	95	
1,2,4-Trimethylbenzene	ug/kg	2.4	U
1,2-Dibromo-3-chloropropane	ug/kg	17	J
1,2-Dibromoethane	ug/kg	2.4	U
1,2-Dichlorobenzene	ug/kg	2.4	U
1,2-Dichloroethane	ug/kg	38	
1,2-Dichloropropane	ug/kg	82	
1,3,5-Trimethylbenzene	ug/kg	2.4	U
1,3-Dichlorobenzene	ug/kg	75	
1,3-Dichloropropane	ug/kg	2.4	U
1,4-Dichlorobenzene	ug/kg	2.4	U
1,4-Dioxane	ug/kg	400	
2,2-Dichloropropane	ug/kg	54	
2,4,4-Trimethyl-1-pentene	ug/kg	4.8	U
2,4,4-Trimethyl-2-Pentene	ug/kg	4.8	U
2-Butanone	ug/kg	24	U
2-Chlorotoluene	ug/kg	2.4	U
2-Hexanone	ug/kg	24	U
4-Chlorotoluene	ug/kg	2.4	U
4-iso-Propyltoluene	ug/kg	2.4	U
4-Methyl-2-pentanone	ug/kg	24	U
Acetic acid, methyl ester	ug/kg	48	U
Acetone	ug/kg	250	
Benzene	ug/kg	49	
Bromobenzene	ug/kg	2.4	U
Bromochloromethane	ug/kg	2.4	U
Bromodichloromethane	ug/kg	2.4	U
Bromoform	ug/kg	2.4	U
Bromomethane	ug/kg	42	
Butane, 2-methoxy-2-methyl-	ug/kg	2.4	U
Carbon disulfide	ug/kg	51	
Carbon tetrachloride	ug/kg	15	
Chlorobenzene	ug/kg	2.4	U
Chlorodibromomethane	ug/kg	38	
Chloroethane	ug/kg	23	
Chloroform	ug/kg	27	
Chloromethane	ug/kg	4.8	U
Cis-1,2-Dichloroethene	ug/kg	2.4	U
cis-1,3-Dichloropropene	ug/kg	2.4	U
Cyclohexane	ug/kg	100	
Dibromomethane	ug/kg	2.4	U
Dichlorodifluoromethane	ug/kg	4.8	U

TABLE 2.2 - VALIDATED RESULTS SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	360-24365-22	
	Field Sample ID	OC-SB-PE-VS0355-VOC	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	**Units**	Result	Qualifier
Diethyl ether	ug/kg	2.4	U
Diisopropylether	ug/kg	2.4	U
Ethyl benzene	ug/kg	42	
Ethyl-t-Butyl Ether	ug/kg	2.4	U
Hexachlorobutadiene	ug/kg	2.4	U
Isopropylbenzene	ug/kg	48	
Methyl cyclohexane	ug/kg	73	
Methyl Tertbutyl Ether	ug/kg	57	
Methylene chloride	ug/kg	51	B
n-Butylbenzene	ug/kg	2.4	U
Naphthalene	ug/kg	24	U
Propylbenzene	ug/kg	2.4	U
sec-Butylbenzene	ug/kg	2.4	U
Styrene	ug/kg	45	
tert-Butylbenzene	ug/kg	2.4	U
Tetrachloroethene	ug/kg	48	
Tetrahydrofuran	ug/kg	24	U
Toluene	ug/kg	38	
trans-1,2-Dichloroethene	ug/kg	36	
trans-1,3-Dichloropropene	ug/kg	2.4	U
Trichloroethene	ug/kg	40	
Trichlorofluoromethane	ug/kg	4.8	U
Vinyl chloride	ug/kg	42	
Xylene, m/p	ug/kg	4.8	U
Xylene, o	ug/kg	2.4	U

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in the associated method blank
QC Code:
PE = performance evaluation

Prepared by / Date: KJC 4/23/10
Checked by / Date: TLC 4/26/10

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
Lab Sample ID		OC-SB-405-0.0/1.0-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX	
Field Sample ID		360-24173-1		360-24173-3		360-24173-9		360-24173-11		360-24173-4		360-24173-6		360-24173-12	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
1,2,4-Trichlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
1,2-Dichlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
1,3-Dichlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
1,4-Dichlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
1-Methylnaphthalene	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	34	UJ
2,3,4,6-Tetrachlorophenol	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	R	
2,4,5-Trichlorophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	R	
2,4,6-Trichlorophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	R	
2,4-Dichlorophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	R	
2,4-Dimethylphenol	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	610	J
2,4-Dinitrophenol	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	R	
2,4-Dinitrotoluene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
2,6-Dinitrotoluene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
2-Chloronaphthalene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
2-Chlorophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	R	
2-Methylnaphthalene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
2-Methylphenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	3,100	
2-Nitroaniline	ug/kg	170	U	180	U	170	U	190	U	170	U	180	U	170	U
2-Nitrophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	R	
3 & 4 Methylphenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	1,500	
3,3`-Dichlorobenzidine	ug/kg	69	U	71	U	67	U	77	U	68	U	71	U	68	U
3-Nitroaniline	ug/kg	170	U	180	U	170	U	190	U	170	U	180	U	170	U
4,6-Dinitro-2-methylphenol	ug/kg	170	UJ	180	UJ	170	UJ	190	UJ	170	UJ	180	UJ	R	
4-Bromophenyl phenyl ether	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
4-Chloro-3-methylphenol	ug/kg	69	U	71	U	67	U	77	U	68	U	71	U	R	
4-Chloroaniline	ug/kg	69	U	71	U	67	U	77	U	68	U	71	U	68	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
4-Nitroaniline	ug/kg	170	U	180	U	170	U	190	U	170	U	180	U	170	U
4-Nitrophenol	ug/kg	170	U	180	U	170	U	190	U	170	U	180	U	R	
Acenaphthene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Acenaphthylene	ug/kg	35	U	35	U	34	U	14	J	34	U	35	U	34	U
Acetophenone	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Aniline	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	34	UJ
Anthracene	ug/kg	35	U	35	U	34	U	15	JEB	34	U	35	U	34	U
Atrazine	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	34	UJ
Azobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Benzaldehyde	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Benzo(a)anthracene	ug/kg	35	U	35	U	34	U	49		34	U	35	U	34	U
Benzo(a)pyrene	ug/kg	35	U	35	U	34	U	340		34	U	35	U	34	U
Benzo(b)fluoranthene	ug/kg	35	U	35	U	34	U	490		34	U	35	U	34	U
Benzo(ghi)perylene	ug/kg	35	U	35	U	34	U	490		34	U	35	U	34	U
Benzo(k)fluoranthene	ug/kg	35	U	35	U	34	U	220		34	U	35	U	34	U
Benzoic Acid	ug/kg	170	JEB	180	UJ	170	UJ	160	JEB	170	UJ	180	UJ	R	
Benzyl alcohol	ug/kg	69	U	71	U	67	U	77	U	68	U	71	U	68	U
Biphenyl	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	17	J	170	J
Bis(2-Chloroethoxy)methane	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Bis(2-Ethylhexyl)phthalate	ug/kg	35	JEB	28,000	EB	33	JEB	1,500	EB	4,500	EB	35,000	JEB	1,500	EB
Butylbenzylphthalate	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
Lab Sample ID		OC-SB-405-0.0/1.0-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX	
Field Sample ID		360-24173-1		360-24173-3		360-24173-9		360-24173-11		360-24173-4		360-24173-6		360-24173-12	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	34	UJ
Carbazole	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Chrysene	ug/kg	35	U	35	U	34	U	89		34	U	35	U	34	U
Di-n-butylphthalate	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Di-n-octylphthalate	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Dibenz(a,h)anthracene	ug/kg	35	U	35	U	34	U	150		34	U	35	U	34	U
Dibenzofuran	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Diethylphthalate	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Dimethylphthalate	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Diphenyl ether	ug/kg	35	UJ	30	J	21	J	38	UJ	34	UJ	360	J	540	J
Diphenylamine	ug/kg					6.9	J	38	U	34	U	100		410	
Diphenylmethanone	ug/kg	35	UJ	35	UJ	34	UJ	38	UJ	34	UJ	35	UJ	34	UJ
Fluoranthene	ug/kg	35	U	22	J	34	U	33	J	34	U	35	U	34	U
Fluorene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Hexachlorobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Hexachlorobutadiene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Hexachlorocyclopentadiene	ug/kg	69	U	71	U	67	U	77	U	68	U	71	U	68	U
Hexachloroethane	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	35	U	34	U	430		34	U	35	U	34	U
Isophorone	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
N-Nitrosodimethylamine	ug/kg	35	U	35	U	5.2	U	5.8	U	5.1	U	5.3	U	5.2	U
N-Nitrosodiphenylamine	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	44	EB
Naphthalene	ug/kg	83	U	85	U	81	U	92	U	82	U	12	J	140	
Nitrobenzene	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	34	U
Pentachlorophenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U		R
Phenanthrene	ug/kg	42	U	42	U	40	U	19	J	41	U	43	U	41	U
Phenol	ug/kg	35	U	35	U	34	U	38	U	34	U	35	U	32,000	J
Pyrene	ug/kg	35	U	39		34	U	18	J	34	U	35	U	34	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01A		OCRI-01A		OCRI-01A		OCRI-01A	
Lab Sample ID		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-5.0/6.0-XXX		OC-SB-405-14/15-XXX		OC-SB-412-12/13-XXX		OC-SB-416-13/14-XXX		OC-SB-420-12/14-XXX	
Field Sample ID		360-24173-14		360-24173-15		360-24173-17		360-24173-2		360-24173-10		360-24173-5		360-24173-13	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
1,2,4-Trichlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
1,2-Dichlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
1,3-Dichlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
1,4-Dichlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
1-Methylnaphthalene	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	43	J	36	UJ	36	UJ
2,3,4,6-Tetrachlorophenol	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
2,4,5-Trichlorophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2,4,6-Trichlorophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2,4-Dichlorophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2,4-Dimethylphenol	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
2,4-Dinitrophenol	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
2,4-Dinitrotoluene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2,6-Dinitrotoluene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2-Chloronaphthalene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2-Chlorophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2-Methylnaphthalene	ug/kg	35	U	35	U	35	U	36	U	64		36	U	36	U
2-Methylphenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
2-Nitroaniline	ug/kg	180	U	170	U	180	U	180	U	180	U	180	U	180	U
2-Nitrophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
3 & 4 Methylphenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
3,3`-Dichlorobenzidine	ug/kg	70	U	70	U	71	U	72	U	73	U	71	U	72	U
3-Nitroaniline	ug/kg	180	U	170	U	180	U	180	U	180	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	UJ	170	UJ	180	UJ	180	UJ	180	UJ	180	UJ	180	UJ
4-Bromophenyl phenyl ether	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
4-Chloro-3-methylphenol	ug/kg	70	U	70	U	71	U	72	U	73	U	71	U	72	U
4-Chloroaniline	ug/kg	70	U	70	U	71	U	72	U	73	U	71	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
4-Nitroaniline	ug/kg	180	U	170	U	180	U	180	U	180	U	180	U	180	U
4-Nitrophenol	ug/kg	180	U	170	U	180	U	180	U	180	U	180	U	180	U
Acenaphthene	ug/kg	35	U	35	U	35	U	36	U	22	J	36	U	36	U
Acenaphthylene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Acetophenone	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Aniline	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Anthracene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Atrazine	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Azobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzaldehyde	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzo(a)anthracene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzo(a)pyrene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzo(b)fluoranthene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzo(ghi)perylene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzo(k)fluoranthene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Benzoic Acid	ug/kg	180	UJ	170	UJ	180	UJ	140	JEB	180	UJ	180	UJ	180	UJ
Benzyl alcohol	ug/kg	70	U	70	U	71	U	72	U	73	U	71	U	72	U
Biphenyl	ug/kg	71	J	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Bis(2-Chloroethoxy)methane	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	28,000	JEB	630	EB	320	EB	360	EB	15	JEB	53	EB	74	EB
Butylbenzylphthalate	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01A		OCRI-01A		OCRI-01A		OCRI-01A	
Lab Sample ID		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-5.0/6.0-XXX		OC-SB-405-14/15-XXX		OC-SB-412-12/13-XXX		OC-SB-416-13/14-XXX		OC-SB-420-12/14-XXX	
Field Sample ID		360-24173-14		360-24173-15		360-24173-17		360-24173-2		360-24173-10		360-24173-5		360-24173-13	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Carbazole	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Chrysene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Di-n-butylphthalate	ug/kg	110	U	35	U	35	U	36	U	37	U	36	U	36	U
Di-n-octylphthalate	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Dibenz(a,h)anthracene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Dibenzofuran	ug/kg	35	U	35	U	35	U	36	U	29	J	36	U	36	U
Diethylphthalate	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Dimethylphthalate	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Diphenyl ether	ug/kg	3,100	J	18	J	35	UJ	36	UJ	37	UJ	14	J	19	J
Diphenylamine	ug/kg	38													
Diphenylmethanone	ug/kg	35	UJ	35	UJ	35	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Fluoranthene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Fluorene	ug/kg	35	U	35	U	35	U	36	U	25	J	36	U	36	U
Hexachlorobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Hexachlorobutadiene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Hexachlorocyclopentadiene	ug/kg	70	U	70	U	71	U	72	U	73	U	71	U	72	U
Hexachloroethane	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Isophorone	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
N-Nitrosodimethylamine	ug/kg	5.4	U	5.2	U	5.3	U	36	U	37	U	36	U	36	U
N-Nitrosodiphenylamine	ug/kg	18	JEB	35	U	11	JEB	36	U	37	U	45	EB	13	JEB
Naphthalene	ug/kg	84	U	84	U	85	U	87	U	130		86	U	86	U
Nitrobenzene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Pentachlorophenol	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U
Phenanthrene	ug/kg	42	U	42	U	42	U	43	U	74		43	U	43	U
Phenol	ug/kg	78		35	U	35	U	36	U	37	U	36	U	23	J
Pyrene	ug/kg	35	U	35	U	35	U	36	U	37	U	36	U	36	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01A		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02	
Lab Sample ID		OC-SB-423-13/14-XXX		OC-SB-421-0.0/1.0-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX	
Field Sample ID		360-24173-16		360-24194-1		360-24194-3		360-24194-4		360-24194-6		360-24194-7		360-24194-9	
Sample Collection Date		8/18/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
1,2,4-Trichlorobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
1,2-Dichlorobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
1,3-Dichlorobenzene	ug/kg	35	U	350	U	350	UJ	34	UJ	35	UJ	170	UJ	180	UJ
1,4-Dichlorobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
1-Methylnaphthalene	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
2,4,5-Trichlorophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2,4,6-Trichlorophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2,4-Dichlorophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2,4-Dimethylphenol	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
2,4-Dinitrophenol	ug/kg	35	UJ	350	UJ	350	UJ	34	UJ	R		R		180	UJ
2,4-Dinitrotoluene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2,6-Dinitrotoluene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2-Chloronaphthalene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2-Chlorophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2-Methylnaphthalene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2-Methylphenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
2-Nitroaniline	ug/kg	180	U	1,700	U	1,800	U	170	U	170	U	850	UJ	900	U
2-Nitrophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
3 & 4 Methylphenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
3,3`-Dichlorobenzidine	ug/kg	71	U	700	U	710	UJ	68	UJ	69	UJ	340	UJ	360	UJ
3-Nitroaniline	ug/kg	180	U	1,700	U	1,800	U	170	U	170	U	850	UJ	900	U
4,6-Dinitro-2-methylphenol	ug/kg	180	UJ	1,700	UJ	1,800	U	170	U	R		R		900	U
4-Bromophenyl phenyl ether	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
4-Chloro-3-methylphenol	ug/kg	71	U	700	U	710	U	68	U	69	U	340	UJ	360	U
4-Chloroaniline	ug/kg	71	U	700	U	710	U	68	U	69	U	340	UJ	360	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
4-Nitroaniline	ug/kg	180	U	1,700	U	1,800	U	170	U	170	U	850	UJ	900	U
4-Nitrophenol	ug/kg	180	U	1,700	U	1,800	U	170	U	170	U	850	UJ	900	U
Acenaphthene	ug/kg	35	U	120	J	350	U	34	U	35	U	170	UJ	180	U
Acenaphthylene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Acetophenone	ug/kg	35	U	350	U	350	U	34	U	34	JEB	170	UJ	180	U
Aniline	ug/kg	35	UJ	690	J	350	UJ	34	UJ	35	UJ	150	J	180	UJ
Anthracene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Atrazine	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
Azobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Benzaldehyde	ug/kg	35	U	350	U	350	U	16	J	14	J	170	UJ	180	U
Benzo(a)anthracene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Benzo(a)pyrene	ug/kg	35	U	350	U	350	U	88		35	U	170	UJ	180	U
Benzo(b)fluoranthene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Benzo(ghi)perylene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Benzo(k)fluoranthene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Benzoic Acid	ug/kg	180	UJ	1,700	UJ	1,800	UJ	130	JEB	170	UJ	850	UJ	900	UJ
Benzyl alcohol	ug/kg	71	U	700	U	710	UJ	68	U	69	U	340	UJ	360	U
Biphenyl	ug/kg	35	UJ	390	J	350	U	34	U	35	U	170	UJ	180	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	350	U	350	UJ	34	UJ	35	UJ	170	UJ	180	UJ
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Bis(2-Ethylhexyl)phthalate	ug/kg	110	EB	21,000	EB	890	JEB	31	JEB	17	JEB	4,300	JEB	180	U
Butylbenzylphthalate	ug/kg	35	U	350	U	350	U	34	U	35	UJ	170	UJ	180	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01A		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02	
Lab Sample ID		OC-SB-423-13/14-XXX		OC-SB-421-0.0/1.0-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX	
Field Sample ID		360-24173-16		360-24194-1		360-24194-3		360-24194-4		360-24194-6		360-24194-7		360-24194-9	
Sample Collection Date		8/18/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
Carbazole	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Chrysene	ug/kg	35	U	350	U	350	U	11	J	35	U	170	UJ	180	U
Di-n-butylphthalate	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Di-n-octylphthalate	ug/kg	35	U	350	U	350	U	34	U	35	UJ	170	UJ	180	U
Dibenz(a,h)anthracene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Dibenzofuran	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Diethylphthalate	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Dimethylphthalate	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Diphenyl ether	ug/kg	35	UJ	1,700	J	350	U	34	U	35	U	170	UJ	180	U
Diphenylamine	ug/kg			5,000		35	U	34	U	250		190		180	U
Diphenylmethanone	ug/kg	35	UJ	350	UJ	350	U	34	U	35	U	170	UJ	180	U
Fluoranthene	ug/kg	35	U	350	U	350	U	14	J	35	U	170	UJ	180	U
Fluorene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Hexachlorobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Hexachlorobutadiene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Hexachlorocyclopentadiene	ug/kg	71	U	700	U		R	68	U		R		R	360	U
Hexachloroethane	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Isophorone	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
N-Nitrosodimethylamine	ug/kg	35	U	260	U	5.4	U	5.2	U	5.3	U	5.1	U	5.5	U
N-Nitrosodiphenylamine	ug/kg	35	U	750	EB	35	U	34	U	170	EB	470	EB	180	U
Naphthalene	ug/kg	85	U	830	U	850	U	81	U	83	U	410	UJ	430	U
Nitrobenzene	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Pentachlorophenol	ug/kg	35	U	350	U	350	U	34	U	35	U	170	UJ	180	U
Phenanthrene	ug/kg	42	U	420	U	420	U	41	U	42	U	200	UJ	220	U
Phenol	ug/kg	35	U	130	J	350	U	34	U	35	U	170	UJ	180	U
Pyrene	ug/kg	35	U	350	U	350	U	16	J	35	U	170	UJ	180	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-02A		OCRI-02A		OCRI-02A		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		OC-SB-421-10.5/12.5-XXX		OC-SB-424-17/19-XXX		OC-SB-425-18/20-XXX		OC-SB-415-0.0/1.0-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX	
Field Sample ID		360-24194-2		360-24194-5		360-24194-8		360-24223-1		360-24223-3		360-24223-4		360-24223-6	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
1,2,4-Trichlorobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
1,2-Dichlorobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
1,3-Dichlorobenzene	ug/kg	36	U	37	UJ	35	UJ	35	U	37	U	34	U	36	U
1,4-Dichlorobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
1-Methylnaphthalene	ug/kg	58	J	37	U	35	U	35	U	37	U	34	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	UJ	37	U	35	U	35	U	37	U	34	UJ	36	U
2,4,5-Trichlorophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
2,4,6-Trichlorophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
2,4-Dichlorophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
2,4-Dimethylphenol	ug/kg	35	J	37	U	35	U	35	U	37	U	34	UJ	36	U
2,4-Dinitrophenol	ug/kg	36	UJ	37	UJ	35	UJ	35	U	37	U	34	UJ	36	U
2,4-Dinitrotoluene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
2,6-Dinitrotoluene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
2-Chloronaphthalene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
2-Chlorophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
2-Methylnaphthalene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
2-Methylphenol	ug/kg	36	U	37	U	35	U	35	UJ	37	UJ	34	UJ	36	UJ
2-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
2-Nitrophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
3 & 4 Methylphenol	ug/kg	36	U	37	U	35	U	35	UJ	37	UJ	34	UJ	36	UJ
3,3`-Dichlorobenzidine	ug/kg	72	U	74	UJ	71	UJ	69	U	74	U	68	U	72	U
3-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	UJ	180	U	180	U	170	U	180	U	170	UJ	180	U
4-Bromophenyl phenyl ether	ug/kg	36	U	11	J	35	U	35	U	37	U	34	U	36	U
4-Chloro-3-methylphenol	ug/kg	72	U	74	U	71	U	69	U	74	U	68	UJ	72	U
4-Chloroaniline	ug/kg	72	U	74	U	71	U	69	U	74	U	68	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
4-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
4-Nitrophenol	ug/kg	180	U	180	U	180	U	170	U	180	U	170	UJ	180	U
Acenaphthene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Acenaphthylene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Acetophenone	ug/kg	36	U	37	U	35	U	15	JEB	37	UJ	34	UJ	36	UJ
Aniline	ug/kg	36	UJ	37	UJ	35	UJ	35	UJ	37	UJ	34	UJ	36	UJ
Anthracene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Atrazine	ug/kg	36	UJ	37	U	35	U	35	U	37	U	34	U	36	U
Azobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzaldehyde	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzo(a)anthracene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzo(a)pyrene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzo(b)fluoranthene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzo(ghi)perylene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzo(k)fluoranthene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Benzoic Acid	ug/kg	180	UJ	56	JEB	180	UJ	170	UJ	180	UJ	170	UJ	180	UJ
Benzyl alcohol	ug/kg	72	U	74	U	71	U	69	U	74	U	68	UJ	72	U
Biphenyl	ug/kg	11,000	J	92		150		35	U	37	U	34	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	37	UJ	35	UJ	35	UJ	37	UJ	34	UJ	36	UJ
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	420,000	EB	1,100	EB	62	EB	35	U	37	U	34	U	36	U
Butylbenzylphthalate	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-02A		OCRI-02A		OCRI-02A		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		OC-SB-421-10.5/12.5-XXX		OC-SB-424-17/19-XXX		OC-SB-425-18/20-XXX		OC-SB-415-0.0/1.0-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX	
Field Sample ID		360-24194-2		360-24194-5		360-24194-8		360-24223-1		360-24223-3		360-24223-4		360-24223-6	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	UJ	37	U	35	U	35	U	37	U	34	U	36	U
Carbazole	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Chrysene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Di-n-butylphthalate	ug/kg	590		37	U	35	U	35	U	37	U	34	U	36	U
Di-n-octylphthalate	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Dibenz(a,h)anthracene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Dibenzofuran	ug/kg	38		37	U	35	U	35	U	37	U	34	U	36	U
Diethylphthalate	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Dimethylphthalate	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Diphenyl ether	ug/kg	74,000	J	69		64		35	U	37	U	34	U	36	U
Diphenylamine	ug/kg											34	U	36	U
Diphenylmethanone	ug/kg	3.5	J	37	U	35	U	35	U	37	U	34	U	36	U
Fluoranthene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Fluorene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Hexachlorobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Hexachlorobutadiene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Hexachlorocyclopentadiene	ug/kg	72	U	74	U	71	U	69	U	74	U	68	U	72	U
Hexachloroethane	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Isophorone	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	37	U	35	U	35	UJ	37	UJ	34	UJ	36	UJ
N-Nitrosodimethylamine	ug/kg	36	U	37	U	35	U	35	U	37	U	5.1	U	5.4	U
N-Nitrosodiphenylamine	ug/kg	670	EB	18	JEB	170	EB	35	U	37	U	34	U	36	U
Naphthalene	ug/kg	86	U	88	U	85	U	83	U	88	U	82	U	87	U
Nitrobenzene	ug/kg	36	U	37	U	35	U	35	U	37	U	34	U	36	U
Pentachlorophenol	ug/kg	36	U	37	U	35	U	35	U	37	U	34	UJ	36	U
Phenanthrene	ug/kg	43	U	44	U	43	U	42	U	44	U	41	U	43	U
Phenol	ug/kg	210		37	U	35	U	35	U	37	U	34	UJ	36	U
Pyrene	ug/kg	15	J	37	U	35	U	35	U	37	U	11	J	36	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-6.0/8.0-XXX	
Field Sample ID		360-24223-7		360-24223-10		360-24223-9		360-24223-11		360-24223-12		360-24223-13		360-24223-15	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
1,2,4-Trichlorobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
1,2-Dichlorobenzene	ug/kg	69	U	39	UJ	39	UJ	35	U	37	U	35	U	36	U
1,3-Dichlorobenzene	ug/kg	69	U	39	UJ	39	UJ	35	U	37	U	35	U	36	U
1,4-Dichlorobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
1-Methylnaphthalene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,4,5-Trichlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,4,6-Trichlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,4-Dichlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,4-Dimethylphenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,4-Dinitrophenol	ug/kg	69	U	39	UJ	39	UJ	35	U	37	U	35	U	36	U
2,4-Dinitrotoluene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2,6-Dinitrotoluene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2-Chloronaphthalene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2-Chlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2-Methylnaphthalene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
2-Methylphenol	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	35	UJ	36	UJ
2-Nitroaniline	ug/kg	350	U	190	U	190	U	170	U	180	U	180	U	180	U
2-Nitrophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
3 & 4 Methylphenol	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	35	UJ	36	UJ
3,3`-Dichlorobenzidine	ug/kg	140	U	77	U	77	U	70	U	73	U	70	U	71	U
3-Nitroaniline	ug/kg	350	U	190	U	190	U	170	U	180	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	350	U	190	U	190	U	170	U	180	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
4-Chloro-3-methylphenol	ug/kg	140	U	77	U	77	U	70	U	73	U	70	U	71	U
4-Chloroaniline	ug/kg	140	U	77	U	77	U	70	U	73	U	70	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
4-Nitroaniline	ug/kg	350	U	190	U	190	U	170	U	180	U	180	U	180	U
4-Nitrophenol	ug/kg	350	U	190	U	190	U	170	U	180	U	180	U	180	U
Acenaphthene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Acenaphthylene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Acetophenone	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	11	JEB	36	UJ
Aniline	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	35	UJ	36	UJ
Anthracene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Atrazine	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Azobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Benzaldehyde	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Benzo(a)anthracene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	J	36	U
Benzo(a)pyrene	ug/kg	69	U	39	U	39	U	35	U	37	U	69		36	U
Benzo(b)fluoranthene	ug/kg	69	U	39	U	39	U	35	U	37	U	36		36	U
Benzo(ghi)perylene	ug/kg	69	U	39	U	39	U	35	U	37	U	23	J	36	U
Benzo(k)fluoranthene	ug/kg	69	U	39	U	39	U	35	U	37	U	38		36	U
Benzoic Acid	ug/kg	350	UJ	190	UJ	190	UJ	170	UJ	180	UJ	180	UJ	180	UJ
Benzyl alcohol	ug/kg	140	U	77	UJ	77	UJ	70	U	73	U	70	U	71	U
Biphenyl	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	35	UJ	36	UJ
Bis(2-Chloroisopropyl)ether	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	8,300	JEB	39	U	39	U	35	U	37	U	160	U	36	U
Butylbenzylphthalate	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-6.0/8.0-XXX	
Field Sample ID		360-24223-7		360-24223-10		360-24223-9		360-24223-11		360-24223-12		360-24223-13		360-24223-15	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Carbazole	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Chrysene	ug/kg	69	U	39	U	39	U	35	U	37	U	38		36	U
Di-n-butylphthalate	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Di-n-octylphthalate	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Dibenz(a,h)anthracene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Dibenzofuran	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Diethylphthalate	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Dimethylphthalate	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Diphenyl ether	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Diphenylamine	ug/kg	6.1	J	39	U	39	U								
Diphenylmethanone	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Fluoranthene	ug/kg	69	U	39	U	39	U	35	U	37	U	51		36	U
Fluorene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Hexachlorobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Hexachlorobutadiene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Hexachlorocyclopentadiene	ug/kg	140	U	77	UJ	77	UJ	70	U	73	U	70	U	71	U
Hexachloroethane	ug/kg	69	U	39	UJ	39	UJ	35	U	37	U	35	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	69	U	39	U	39	U	35	U	37	U	20	J	36	U
Isophorone	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	69	UJ	39	UJ	39	UJ	35	UJ	37	UJ	35	UJ	36	UJ
N-Nitrosodimethylamine	ug/kg	52	U	5.8	U	5.8	U	35	U	37	U	35	U	36	U
N-Nitrosodiphenylamine	ug/kg	49	JEB	39	U	39	U	35	U	37	U	35	U	12	JEB
Naphthalene	ug/kg	170	U	93	U	93	U	84	U	88	U	84	U	85	U
Nitrobenzene	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Pentachlorophenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Phenanthrene	ug/kg	83	U	46	U	46	U	42	U	44	U	21	J	43	U
Phenol	ug/kg	69	U	39	U	39	U	35	U	37	U	35	U	36	U
Pyrene	ug/kg	69	U	39	U	39	U	35	U	37	U	65		36	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-04		OCRI-04		OCRI-04	
Lab Sample ID		OC-SB-415-16/18-XXX		OC-SB-419-17/19-XXX		OC-SB-426-13/15-XXX		OC-SB-436-13/15-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX	
Field Sample ID		360-24223-2		360-24223-5		360-24223-8		360-24223-14		360-24244-1		360-24244-2		360-24244-3	
Sample Collection Date		8/20/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
1,2,4-Trichlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
1,2-Dichlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
1,3-Dichlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
1,4-Dichlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
1-Methylnaphthalene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4,5-Trichlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4,6-Trichlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4-Dichlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4-Dimethylphenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4-Dinitrophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,4-Dinitrotoluene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2,6-Dinitrotoluene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2-Chloronaphthalene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2-Chlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2-Methylnaphthalene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
2-Methylphenol	ug/kg	35	UJ	36	UJ	38	UJ	34	UJ	350	U	350	U	380	U
2-Nitroaniline	ug/kg	170	U	180	U	190	U	170	U	1,700	U	1,800	U	1,900	U
2-Nitrophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
3 & 4 Methylphenol	ug/kg	35	UJ	36	UJ	38	UJ	34	UJ	350	U	350	U	380	U
3,3`-Dichlorobenzidine	ug/kg	70	U	72	U	77	U	69	U	700	U	710	U	760	U
3-Nitroaniline	ug/kg	170	U	180	U	190	U	170	U	1,700	U	1,800	U	1,900	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U	180	U	190	U	170	U	1,700	U	1,800	U	1,900	U
4-Bromophenyl phenyl ether	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
4-Chloro-3-methylphenol	ug/kg	70	U	72	U	77	U	69	U	700	U	710	U	760	U
4-Chloroaniline	ug/kg	70	U	72	U	77	U	69	U	700	U	710	U	760	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
4-Nitroaniline	ug/kg	170	U	180	U	190	U	170	U	1,700	U	1,800	U	1,900	U
4-Nitrophenol	ug/kg	170	U	180	U	190	U	170	U	1,700	U	1,800	U	1,900	U
Acenaphthene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Acenaphthylene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Acetophenone	ug/kg	35	UJ	7.3	JEB	38	UJ	34	UJ	350	U	350	U	380	U
Aniline	ug/kg	35	UJ	36	UJ	38	UJ	34	UJ	350	U	350	U	380	U
Anthracene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Atrazine	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Azobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzaldehyde	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzo(a)anthracene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzo(a)pyrene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzo(b)fluoranthene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzo(ghi)perylene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzo(k)fluoranthene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Benzoic Acid	ug/kg	170	UJ	180	UJ	190	UJ	170	UJ	R		R		R	
Benzyl alcohol	ug/kg	70	U	72	U	77	U	69	U	700	U	710	U	760	U
Biphenyl	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Bis(2-Chloroethyl)ether	ug/kg	35	UJ	36	UJ	38	UJ	34	UJ	350	U	350	U	380	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Bis(2-Ethylhexyl)phthalate	ug/kg	35	U	36	U	38	U	34	U	6,600	EB	600,000	EB	39,000	EB
Butylbenzylphthalate	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-04		OCRI-04		OCRI-04	
Lab Sample ID		OC-SB-415-16/18-XXX		OC-SB-419-17/19-XXX		OC-SB-426-13/15-XXX		OC-SB-436-13/15-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX	
Field Sample ID		360-24223-2		360-24223-5		360-24223-8		360-24223-14		360-24244-1		360-24244-2		360-24244-3	
Sample Collection Date		8/20/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Carbazole	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Chrysene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Di-n-butylphthalate	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Di-n-octylphthalate	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Dibenz(a,h)anthracene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Dibenzofuran	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Diethylphthalate	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Dimethylphthalate	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Diphenyl ether	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Diphenylamine	ug/kg									66		350	U	380	U
Diphenylmethanone	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Fluoranthene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Fluorene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Hexachlorobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Hexachlorobutadiene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Hexachlorocyclopentadiene	ug/kg	70	U	72	U	77	U	69	U	700	U	710	U	760	U
Hexachloroethane	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Isophorone	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
N-Nitrosodi-n-propylamine	ug/kg	35	UJ	36	UJ	38	UJ	34	UJ	350	U	350	U	380	U
N-Nitrosodimethylamine	ug/kg	35	U	36	U	38	U	34	U	350	U	54	U	140	U
N-Nitrosodiphenylamine	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Naphthalene	ug/kg	84	U	86	U	92	U	82	U	840	U	850	U	910	U
Nitrobenzene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Pentachlorophenol	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U
Phenanthrene	ug/kg	42	U	43	U	46	U	41	U	420	U	430	U	450	U
Phenol	ug/kg	35	U	36	U	38	U	34	U	260	J	350	U	380	U
Pyrene	ug/kg	35	U	36	U	38	U	34	U	350	U	350	U	380	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04A	
Lab Sample ID		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-437-21/23-XXX	
Field Sample ID		360-24244-10		360-24244-12		360-24244-4		360-24244-6		360-24244-7		360-24244-9		360-24244-11	
Sample Collection Date		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/21/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
1,2,4-Trichlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
1,2-Dichlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
1,3-Dichlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
1,4-Dichlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
1-Methylnaphthalene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	37	U	340	UJ	38	U	33	U	39	U	35	U
2,4,5-Trichlorophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,4,6-Trichlorophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,4-Dichlorophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,4-Dimethylphenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,4-Dinitrophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,4-Dinitrotoluene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2,6-Dinitrotoluene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2-Chloronaphthalene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2-Chlorophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2-Methylnaphthalene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2-Methylphenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
2-Nitroaniline	ug/kg	170	U	190	U	1,700	U	190	U	170	U	190	U	180	U
2-Nitrophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
3 & 4 Methylphenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
3,3`-Dichlorobenzidine	ug/kg	70	U	75	U	690	UJ	75	U	66	U	78	U	70	U
3-Nitroaniline	ug/kg	170	U	190	U	1,700	U	190	U	170	U	190	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U	190	U	1,700	U	190	U	170	U	190	U	180	U
4-Bromophenyl phenyl ether	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
4-Chloro-3-methylphenol	ug/kg	70	U	75	U	690	U	75	U	66	U	78	U	70	U
4-Chloroaniline	ug/kg	70	U	75	U	690	U	75	U	66	U	78	U	70	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
4-Nitroaniline	ug/kg	170	U	190	U	1,700	U	190	U	170	U	190	U	180	U
4-Nitrophenol	ug/kg	170	U	190	U	1,700	U	190	U	170	U	190	U	180	U
Acenaphthene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Acenaphthylene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Acetophenone	ug/kg	35	U	37	U	160	JEB	38	U	33	U	39	U	35	U
Aniline	ug/kg	35	U	37	U	340	UJ	38	U	33	U	39	U	35	U
Anthracene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Atrazine	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Azobenzene	ug/kg	35	U	37	U	340	UJ	38	U	33	U	39	U	35	U
Benzaldehyde	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Benzo(a)anthracene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Benzo(a)pyrene	ug/kg	78		37	U	340	U	38	U	33	U	39	U	35	U
Benzo(b)fluoranthene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Benzo(ghi)perylene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Benzo(k)fluoranthene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	70	U	75	U	690	U	75	U	66	U	78	U	70	U
Biphenyl	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	190	EB	37	U	4,800	EB	38	U	1,700	EB	39	U	35	U
Butylbenzylphthalate	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04A	
Lab Sample ID		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-437-21/23-XXX	
Field Sample ID		360-24244-10		360-24244-12		360-24244-4		360-24244-6		360-24244-7		360-24244-9		360-24244-11	
Sample Collection Date		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/21/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	37	U	340	UJ	38	U	33	U	39	U	35	U
Carbazole	ug/kg	35	U	37	U	340	UJ	38	U	33	U	39	U	35	U
Chrysene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Di-n-butylphthalate	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Di-n-octylphthalate	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Dibenz(a,h)anthracene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Dibenzofuran	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Diethylphthalate	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Dimethylphthalate	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Diphenyl ether	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Diphenylamine	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U		
Diphenylmethanone	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Fluoranthene	ug/kg	10	J	37	U	340	U	38	U	33	U	39	U	35	U
Fluorene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Hexachlorobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Hexachlorobutadiene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Hexachlorocyclopentadiene	ug/kg	70	U	75	U	690	UJ	75	U	66	U	78	U	70	U
Hexachloroethane	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	21	J	37	U	340	U	38	U	33	U	39	U	35	U
Isophorone	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
N-Nitrosodimethylamine	ug/kg	35	U	5.6	U	5.2	U	5.8	UJ	5.1	U	5.9	U	35	U
N-Nitrosodiphenylamine	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Naphthalene	ug/kg	84	U	15	J	830	U	90	U	80	U	93	U	84	U
Nitrobenzene	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Pentachlorophenol	ug/kg	35	U	37	U	340	U	38	U	33	U	39	U	35	U
Phenanthrene	ug/kg	42	U	45	U	410	U	45	U	40	U	47	U	42	U
Phenol	ug/kg	14	J	37	U	340	U	38	U	33	U	39	U	35	U
Pyrene	ug/kg	12	J	37	U	340	U	38	U	33	U	39	U	35	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-04A		OCRI-04A		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		OC-SB-443-18/20-XXX		OC-SB-445-25/27-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-438-0.0/1.0-XXX		OC-SB-438-5.0/7.0-XXX	
Field Sample ID		360-24244-5		360-24244-8		360-24251-1		360-24251-3		360-24251-4		360-24251-23		360-24251-12	
Sample Collection Date		8/20/2009		8/21/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
1,2,4-Trichlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
1,2-Dichlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
1,3-Dichlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
1,4-Dichlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
1-Methylnaphthalene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,4,5-Trichlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,4,6-Trichlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,4-Dichlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,4-Dimethylphenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,4-Dinitrophenol	ug/kg	36	U	36	U	35	UJ	39	UJ	R		35	UJ	R	
2,4-Dinitrotoluene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2,6-Dinitrotoluene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2-Chloronaphthalene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2-Chlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2-Methylnaphthalene	ug/kg	36	U	36	U	11	J	39	U	38	U	35	U	37	U
2-Methylphenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
2-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	R		180	U	R	
2-Nitrophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
3 & 4 Methylphenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
3,3`-Dichlorobenzidine	ug/kg	71	U	73	U	71	UJ	77	UJ	77	UJ	70	UJ	75	UJ
3-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	190	U	180	U	190	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	180	U	190	U	190	U	180	U	190	U
4-Bromophenyl phenyl ether	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
4-Chloro-3-methylphenol	ug/kg	71	U	73	U	71	U	77	U	77	U	70	U	75	U
4-Chloroaniline	ug/kg	71	U	73	U	71	U	77	U	77	U	70	U	75	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
4-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	190	U	180	U	190	U
4-Nitrophenol	ug/kg	180	U	180	U	180	U	190	U	190	U	180	U	190	U
Acenaphthene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Acenaphthylene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Acetophenone	ug/kg	36	U	36	U	35	U	39	U	38	U	16	JEB	37	U
Aniline	ug/kg	36	U	36	U	35	U	39	UJ	38	UJ	35	UJ	37	U
Anthracene	ug/kg	36	U	36	U	35	U	17	JEB	38	U	35	U	37	U
Atrazine	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Azobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Benzaldehyde	ug/kg	36	U	36	U	35	UJ	39	UJ	38	U	35	UJ	37	U
Benzo(a)anthracene	ug/kg	36	U	36	U	35	U	20	J	38	U	35	U	37	U
Benzo(a)pyrene	ug/kg	36	U	36	U	35	U	27	J	38	U	35	U	37	U
Benzo(b)fluoranthene	ug/kg	36	U	36	U	35	U	22	J	38	U	35	U	37	U
Benzo(ghi)perylene	ug/kg	36	U	36	U	35	U	27	J	38	U	35	U	37	U
Benzo(k)fluoranthene	ug/kg	36	U	36	U	35	U	16	J	38	U	35	U	37	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	71	U	73	U	71	U	77	U	77	U	70	U	75	U
Biphenyl	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Bis(2-Ethylhexyl)phthalate	ug/kg	34	JEB	18	JEB	470	EB	39	U	38	U	28	JEB	37	U
Butylbenzylphthalate	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04A		OCRI-04A		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-443-18/20-XXX		OC-SB-445-25/27-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-438-0.0/1.0-XXX		OC-SB-438-5.0/7.0-XXX	
	Field Sample ID	360-24244-5		360-24244-8		360-24251-1		360-24251-3		360-24251-4		360-24251-23		360-24251-12	
	Sample Collection Date	8/20/2009		8/21/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Carbazole	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Chrysene	ug/kg	36	U	36	U	35	U	21	J	38	U	35	U	37	U
Di-n-butylphthalate	ug/kg	36	U	21	J	35	U	39	U	38	U	35	U	37	U
Di-n-octylphthalate	ug/kg	36	U	36	U	35	U	39	U	21	J	35	U	37	U
Dibenz(a,h)anthracene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Dibenzofuran	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Diethylphthalate	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Dimethylphthalate	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Diphenyl ether	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Diphenylamine	ug/kg														
Diphenylmethanone	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Fluoranthene	ug/kg	36	U	36	U	35	U	25	J	38	U	35	U	37	U
Fluorene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Hexachlorobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Hexachlorobutadiene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Hexachlorocyclopentadiene	ug/kg	71	U	73	U	71	U		R		R	70	U	75	U
Hexachloroethane	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	36	U	35	U	22	J	38	U	35	U	37	U
Isophorone	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
N-Nitrosodimethylamine	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
N-Nitrosodiphenylamine	ug/kg	36	U	36	U	41	EB	39	U	38	U	35	U	37	U
Naphthalene	ug/kg	85	U	87	U	24	J	93	U	92	U	84	U	90	U
Nitrobenzene	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Pentachlorophenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Phenanthrene	ug/kg	43	U	44	U	11	J	24	J	46	U	42	U	45	U
Phenol	ug/kg	36	U	36	U	35	U	39	U	38	U	35	U	37	U
Pyrene	ug/kg	36	U	36	U	20	J	47		38	U	35	U	37	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		OC-SB-439-0.0-1.0-XXX		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-6.0/8.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX	
Field Sample ID		360-24251-5		360-24251-7		360-24251-8		360-24251-10		360-24251-13		360-24251-15		360-24251-16	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
1,2,4-Trichlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
1,2-Dichlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
1,3-Dichlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
1,4-Dichlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
1-Methylnaphthalene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,4,5-Trichlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,4,6-Trichlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,4-Dichlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,4-Dimethylphenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,4-Dinitrophenol	ug/kg	R		R		R		R		R		R		R	
2,4-Dinitrotoluene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2,6-Dinitrotoluene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2-Chloronaphthalene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2-Chlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2-Methylnaphthalene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2-Methylphenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
2-Nitroaniline	ug/kg	R		R		R		R		R		R		R	
2-Nitrophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
3 & 4 Methylphenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
3,3`-Dichlorobenzidine	ug/kg	150	UJ	83	UJ	68	UJ	72	UJ	140	UJ	74	UJ	70	UJ
3-Nitroaniline	ug/kg	380	U	210	U	170	U	180	U	340	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	380	U	210	U	170	U	180	U	340	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
4-Chloro-3-methylphenol	ug/kg	150	U	83	U	68	U	72	U	140	U	74	U	70	U
4-Chloroaniline	ug/kg	150	U	83	U	68	U	72	U	140	U	74	U	70	U
4-Chlorophenyl phenyl ether	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
4-Nitroaniline	ug/kg	380	U	210	U	170	U	180	U	340	U	180	U	180	U
4-Nitrophenol	ug/kg	380	U	210	U	170	U	180	U	340	U	180	U	180	U
Acenaphthene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Acenaphthylene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Acetophenone	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Aniline	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Anthracene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Atrazine	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Azobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Benzaldehyde	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Benzo(a)anthracene	ug/kg	75	U	41	U	17	J	36	U	57	J	37	U	17	J
Benzo(a)pyrene	ug/kg	75	U	41	U	21	J	36	U	67	J	37	U	16	J
Benzo(b)fluoranthene	ug/kg	75	U	41	U	23	J	36	U	110		37	U	35	U
Benzo(ghi)perylene	ug/kg	75	U	41	U	14	J	36	U	91		37	U	22	J
Benzo(k)fluoranthene	ug/kg	75	U	41	U	11	J	36	U	45	J	37	U	35	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	150	U	83	U	68	U	72	U	140	U	74	U	70	U
Biphenyl	ug/kg	120		41	U	34	U	36	U	35	J	37	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	53	JEB	51	EB	38	EB	55	EB	1,300	EB	13	JEB	430	EB
Butylbenzylphthalate	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		OC-SB-439-0.0-1.0-XXX		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-6.0/8.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX	
Field Sample ID		360-24251-5		360-24251-7		360-24251-8		360-24251-10		360-24251-13		360-24251-15		360-24251-16	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Carbazole	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Chrysene	ug/kg	24	J	41	U	16	J	36	U	96		37	U	22	J
Di-n-butylphthalate	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Di-n-octylphthalate	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Dibenz(a,h)anthracene	ug/kg	75	U	41	U	34	U	36	U	27	J	37	U	35	U
Dibenzofuran	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Diethylphthalate	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Dimethylphthalate	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Diphenyl ether	ug/kg	550		41	U	34	U	36	U	140		37	U	35	U
Diphenylamine	ug/kg													35	U
Diphenylmethanone	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Fluoranthene	ug/kg	24	J	41	U	28	J	36	U	100		37	U	27	J
Fluorene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Hexachlorobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	18	J
Hexachlorobutadiene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Hexachlorocyclopentadiene	ug/kg	150	U	83	U	68	U	72	U	140	U	74	U	70	U
Hexachloroethane	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	75	U	41	U	15	J	36	U	65	J	37	U	21	J
Isophorone	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
N-Nitrosodimethylamine	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	5.3	U
N-Nitrosodiphenylamine	ug/kg	75	U	41	U	34	U	36	U	38	JEB	37	U	35	U
Naphthalene	ug/kg	180	U	99	U	82	U	86	U	160	U	88	U	84	U
Nitrobenzene	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Pentachlorophenol	ug/kg	75	U	41	U	34	U	36	U	69	U	37	U	35	U
Phenanthrene	ug/kg	91	U	50	U	12	J	43	U	47	J	44	U	15	J
Phenol	ug/kg	75	U	41	U	34	U	36	U	24	J	37	U	35	U
Pyrene	ug/kg	33	J	41	U	35		36	U	140		37	U	36	

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05A		OCRI-05A	
Lab Sample ID		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-433-20/22-XXX		OC-SB-438-20/22-XXX	
Field Sample ID		360-24251-18		360-24251-19		360-24251-20		360-24251-21		360-24251-22		360-24251-2		360-24251-24	
Sample Collection Date		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/24/2009		8/24/2009	
QC Code		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
1,2,4-Trichlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
1,2-Dichlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
1,3-Dichlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
1,4-Dichlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
1-Methylnaphthalene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,4,5-Trichlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,4,6-Trichlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,4-Dichlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,4-Dimethylphenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,4-Dinitrophenol	ug/kg	R		42	UJ	35	UJ	36	UJ	38	UJ	36	UJ	35	UJ
2,4-Dinitrotoluene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2,6-Dinitrotoluene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2-Chloronaphthalene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2-Chlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2-Methylnaphthalene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2-Methylphenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
2-Nitroaniline	ug/kg	R		210	U	180	U	180	U	190	U	180	U	180	U
2-Nitrophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
3 & 4 Methylphenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
3,3`-Dichlorobenzidine	ug/kg	80	UJ	85	UJ	70	UJ	73	UJ	75	UJ	71	UJ	71	UJ
3-Nitroaniline	ug/kg	200	U	210	U	180	U	180	U	190	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	200	U	210	U	180	U	180	U	190	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
4-Chloro-3-methylphenol	ug/kg	80	U	85	U	70	U	73	U	75	U	71	U	71	U
4-Chloroaniline	ug/kg	80	U	85	U	70	U	73	U	75	U	71	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
4-Nitroaniline	ug/kg	200	U	210	U	180	U	180	U	190	U	180	U	180	U
4-Nitrophenol	ug/kg	R		R		180	U	180	U	190	U	180	U	180	U
Acenaphthene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Acenaphthylene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Acetophenone	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Aniline	ug/kg	40	U	42	UJ	35	UJ	36	UJ	38	UJ	36	U	35	UJ
Anthracene	ug/kg	40	U	42	U	35	U	36	U	12	JEB	36	U	35	U
Atrazine	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Azobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Benzaldehyde	ug/kg	40	U	42	UJ	35	UJ	36	UJ	38	UJ	36	U	35	U
Benzo(a)anthracene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Benzo(a)pyrene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Benzo(b)fluoranthene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Benzo(ghi)perylene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	UJ
Benzo(k)fluoranthene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	80	U	85	U	70	U	73	U	75	U	71	U	71	U
Biphenyl	ug/kg	40	U	42	U	23	J	36	U	110		36	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	29	JEB	21	JEB	690	EB	29	JEB	44	EB	44	EB	21	JEB
Butylbenzylphthalate	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05A		OCRI-05A	
Lab Sample ID		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-433-20/22-XXX		OC-SB-438-20/22-XXX	
Field Sample ID		360-24251-18		360-24251-19		360-24251-20		360-24251-21		360-24251-22		360-24251-2		360-24251-24	
Sample Collection Date		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/24/2009		8/24/2009	
QC Code		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Carbazole	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Chrysene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Di-n-butylphthalate	ug/kg	40	U	42	U	43	U	36	U	38	U	36	U	35	U
Di-n-octylphthalate	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Dibenz(a,h)anthracene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	UJ
Dibenzofuran	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Diethylphthalate	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Dimethylphthalate	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Diphenyl ether	ug/kg	40	U	42	U	93		36	U	130		36	U	35	U
Diphenylamine	ug/kg	40	U	42	U	63		7.6	J	47					
Diphenylmethanone	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Fluoranthene	ug/kg	40	U	42	U	11	J	36	U	15	J	36	U	35	U
Fluorene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Hexachlorobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Hexachlorobutadiene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Hexachlorocyclopentadiene	ug/kg	80	U	85	U	70	U	73	U	75	U	71	U	71	U
Hexachloroethane	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	UJ
Isophorone	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
N-Nitrosodimethylamine	ug/kg	6.1	U	6.3	U	5.3	U	5.4	U	5.6	U	36	U	35	U
N-Nitrosodiphenylamine	ug/kg	40	U	42	U	26	JEB	36	U	38	U	36	U	35	U
Naphthalene	ug/kg	95	U	100	U	84	U	87	U	90	U	86	U	85	U
Nitrobenzene	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Pentachlorophenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Phenanthrene	ug/kg	48	U	51	U	42	U	44	U	32	J	43	U	42	U
Phenol	ug/kg	40	U	42	U	35	U	36	U	38	U	36	U	35	U
Pyrene	ug/kg	40	U	42	U	18	J	36	U	28	J	36	U	35	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05A		OCRI-05A		OCRI-05A		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-440-23/25-XXX		OC-SB-441-17/19-XXX		OC-SB-446-15/17-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX	
Field Sample ID		360-24251-9		360-24251-14		360-24251-17		360-24309-1		360-24309-2		360-24309-3		360-24309-4	
Sample Collection Date		8/24/2009		8/24/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
1,2,4-Trichlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
1,2-Dichlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
1,3-Dichlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
1,4-Dichlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
1-Methylnaphthalene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,4,5-Trichlorophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,4,6-Trichlorophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,4-Dichlorophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,4-Dimethylphenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,4-Dinitrophenol	ug/kg	36	UJ	36	UJ	36	UJ	R		R		R		R	
2,4-Dinitrotoluene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2,6-Dinitrotoluene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2-Chloronaphthalene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2-Chlorophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2-Methylnaphthalene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2-Methylphenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
2-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
2-Nitrophenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
3 & 4 Methylphenol	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
3,3`-Dichlorobenzidine	ug/kg	72	U	71	UJ	71	UJ	68	U	70	U	70	U	71	U
3-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
4-Bromophenyl phenyl ether	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
4-Chloro-3-methylphenol	ug/kg	72	U	71	U	71	U	68	U	70	U	70	U	71	U
4-Chloroaniline	ug/kg	72	U	71	U	71	U	68	U	70	U	70	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
4-Nitroaniline	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
4-Nitrophenol	ug/kg	180	U	180	U	180	U	170	U	180	U	170	U	180	U
Acenaphthene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Acenaphthylene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Acetophenone	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Aniline	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Anthracene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Atrazine	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Azobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzaldehyde	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzo(a)anthracene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzo(a)pyrene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzo(b)fluoranthene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzo(ghi)perylene	ug/kg	36	U	36	UJ	36	UJ	34	U	35	U	35	U	35	U
Benzo(k)fluoranthene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	72	U	71	U	71	U	68	U	70	U	70	U	71	U
Biphenyl	ug/kg	44		36	U	32	J	34	U	35	U	35	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	23	JEB	25	JEB	24	JEB	34	U	14	JEB	12	JEB	35	U
Butylbenzylphthalate	ug/kg	36	U	36	U	36	U	34	U	35	U	140		35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05A		OCRI-05A		OCRI-05A		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-440-23/25-XXX		OC-SB-441-17/19-XXX		OC-SB-446-15/17-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX	
Field Sample ID		360-24251-9		360-24251-14		360-24251-17		360-24309-1		360-24309-2		360-24309-3		360-24309-4	
Sample Collection Date		8/24/2009		8/24/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Carbazole	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Chrysene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Di-n-butylphthalate	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Di-n-octylphthalate	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Dibenz(a,h)anthracene	ug/kg	36	U	36	UJ	36	UJ	34	U	35	U	35	U	35	U
Dibenzofuran	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Diethylphthalate	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Dimethylphthalate	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Diphenyl ether	ug/kg	130		140		130		34	U	35	U	35	U	35	U
Diphenylamine	ug/kg														
Diphenylmethanone	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Fluoranthene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Fluorene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Hexachlorobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Hexachlorobutadiene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Hexachlorocyclopentadiene	ug/kg	72	U	71	U	71	U	68	U	70	U	70	U	71	U
Hexachloroethane	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	36	UJ	36	UJ	34	U	35	U	35	U	35	U
Isophorone	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
N-Nitrosodimethylamine	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
N-Nitrosodiphenylamine	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Naphthalene	ug/kg	87	U	86	U	86	U	82	U	84	U	84	U	85	U
Nitrobenzene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U
Pentachlorophenol	ug/kg	36	U	36	U	36	U	R		R		R		R	
Phenanthrene	ug/kg	43	U	43	U	43	U	41	U	42	U	42	U	43	U
Phenol	ug/kg	29	J	36	U	13	J	34	U	35	U	35	U	35	U
Pyrene	ug/kg	36	U	36	U	36	U	34	U	35	U	35	U	35	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX	
Field Sample ID		360-24309-5		360-24309-6		360-24309-7		360-24309-9		360-24309-10		360-24309-11		360-24309-12	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
1,2,4-Trichlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
1,2-Dichlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
1,3-Dichlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
1,4-Dichlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
1-Methylnaphthalene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,4,5-Trichlorophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,4,6-Trichlorophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,4-Dichlorophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,4-Dimethylphenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,4-Dinitrophenol	ug/kg	R		36	UJ	36	UJ	40	UJ	37	UJ	38	UJ	35	UJ
2,4-Dinitrotoluene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2,6-Dinitrotoluene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2-Chloronaphthalene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2-Chlorophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2-Methylnaphthalene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2-Methylphenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
2-Nitroaniline	ug/kg	170	U	180	U	180	U	200	U	190	U	190	U	170	U
2-Nitrophenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
3 & 4 Methylphenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
3,3`-Dichlorobenzidine	ug/kg	69	U	73	U	72	U	80	U	75	UJ	77	UJ	69	UJ
3-Nitroaniline	ug/kg	170	U	180	U	180	U	200	U	190	U	190	U	170	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U	180	U	180	U	200	U	190	U	190	U	170	U
4-Bromophenyl phenyl ether	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
4-Chloro-3-methylphenol	ug/kg	69	U	73	U	72	U	80	U	75	U	77	U	69	U
4-Chloroaniline	ug/kg	69	U	73	U	72	U	80	U	75	U	77	U	69	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
4-Nitroaniline	ug/kg	170	U	180	U	180	U	200	U	190	U	190	U	170	U
4-Nitrophenol	ug/kg	170	U	180	U	180	U	200	U	190	U	190	U	170	UJ
Acenaphthene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Acenaphthylene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Acetophenone	ug/kg	35	U	36	U	43	EB	40	U	37	U	38	U	35	U
Aniline	ug/kg	35	U	36	U	36	U	40	U	37	UJ	38	UJ	35	UJ
Anthracene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Atrazine	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Azobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Benzaldehyde	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Benzo(a)anthracene	ug/kg	35	U	36	U	18	J	40	U	11	J	38	U	35	U
Benzo(a)pyrene	ug/kg	35	U	36	U	36	U	40	U	15	J	38	U	35	U
Benzo(b)fluoranthene	ug/kg	35	U	36	U	36	U	40	U	20	J	38	U	35	U
Benzo(ghi)perylene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Benzo(k)fluoranthene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Benzoic Acid	ug/kg	R		R		200	JEB	98	JEB	R		R		R	
Benzyl alcohol	ug/kg	69	U	73	U	72	U	80	U	75	U	77	U	69	U
Biphenyl	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	UJ
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	130	EB	51	EB	72	EB	40	U	11	JEB	12	JEB	35	U
Butylbenzylphthalate	ug/kg	360		53		36	U	40	U	37	U	38	U	35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX	
Field Sample ID		360-24309-5		360-24309-6		360-24309-7		360-24309-9		360-24309-10		360-24309-11		360-24309-12	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Carbazole	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Chrysene	ug/kg	35	U	36	U	21	J	40	U	16	J	38	U	35	U
Di-n-butylphthalate	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Di-n-octylphthalate	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Dibenz(a,h)anthracene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Dibenzofuran	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Diethylphthalate	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Dimethylphthalate	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Diphenyl ether	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Diphenylamine	ug/kg	35	U	36	U	2.3	J	40	U						
Diphenylmethanone	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Fluoranthene	ug/kg	11	J	36	U	39		40	U	20	J	38	U	35	U
Fluorene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Hexachlorobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Hexachlorobutadiene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Hexachlorocyclopentadiene	ug/kg	69	U	73	U	72	U	80	U	75	U	77	U	69	U
Hexachloroethane	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Isophorone	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
N-Nitrosodimethylamine	ug/kg	5.2	U	5.5	U	5.5	U	6.1	U	37	U	38	U	35	U
N-Nitrosodiphenylamine	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Naphthalene	ug/kg	83	U	87	U	86	U	96	U	90	U	92	U	83	U
Nitrobenzene	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Pentachlorophenol	ug/kg	R		36	U	36	U	40	U	37	U	38	U	35	U
Phenanthrene	ug/kg	42	U	15	J	32	J	16	J	12	J	46	U	42	U
Phenol	ug/kg	35	U	36	U	36	U	40	U	37	U	38	U	35	U
Pyrene	ug/kg	14	J	15	J	30	J	20	J	25	J	38	U	35	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-414-6.0/8.0-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP		OC-SB-430-8.0/10-XXX	
Field Sample ID		360-24309-14		360-24309-15		360-24309-17		360-24309-19		360-24309-20		360-24309-22		360-24309-23	
Sample Collection Date		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
1,2,4-Trichlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
1,2-Dichlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
1,3-Dichlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
1,4-Dichlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
1-Methylnaphthalene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,4,5-Trichlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,4,6-Trichlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,4-Dichlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,4-Dimethylphenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,4-Dinitrophenol	ug/kg	37	UJ	34	UJ	38	UJ	38	UJ	34	UJ	35	UJ	35	UJ
2,4-Dinitrotoluene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2,6-Dinitrotoluene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2-Chloronaphthalene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2-Chlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2-Methylnaphthalene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2-Methylphenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
2-Nitroaniline	ug/kg	190	U	170	U	190	U	190	U	170	U	180	U	180	U
2-Nitrophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
3 & 4 Methylphenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
3,3`-Dichlorobenzidine	ug/kg	74	UJ	69	UJ	75	UJ	76	UJ	67	UJ	70	UJ	70	UJ
3-Nitroaniline	ug/kg	190	U	170	U	190	U	190	U	170	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	190	U	170	U	190	U	190	U	170	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
4-Chloro-3-methylphenol	ug/kg	74	U	69	U	75	U	76	U	67	U	70	U	70	U
4-Chloroaniline	ug/kg	74	U	69	U	75	U	76	U	67	U	70	U	70	U
4-Chlorophenyl phenyl ether	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
4-Nitroaniline	ug/kg	190	U	170	U	190	U	190	U	170	U	180	U	180	U
4-Nitrophenol	ug/kg	190	UJ	170	UJ	190	UJ	190	UJ	170	UJ	180	UJ	180	UJ
Acenaphthene	ug/kg	15	J	34	U	38	U	38	U	34	U	35	U	35	U
Acenaphthylene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Acetophenone	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Aniline	ug/kg	37	UJ	34	UJ	38	UJ	38	UJ	34	UJ	35	UJ	35	UJ
Anthracene	ug/kg	29	JEB	34	U	38	U	38	U	34	U	35	U	35	U
Atrazine	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Azobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Benzaldehyde	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Benzo(a)anthracene	ug/kg	88		34	U	38	U	20	J	34	U	35	U	35	UJ
Benzo(a)pyrene	ug/kg	74		34	U	38	U	19	J	34	UJ	35	UJ	35	UJ
Benzo(b)fluoranthene	ug/kg	110		34	U	38	U	34	J	34	UJ	35	UJ	35	UJ
Benzo(ghi)perylene	ug/kg	49		34	U	38	U	38	U	34	UJ	35	UJ	35	UJ
Benzo(k)fluoranthene	ug/kg	35	J	34	U	38	U	13	J	34	UJ	35	UJ	35	UJ
Benzoic Acid	ug/kg		R		R		R		R		R		R		R
Benzyl alcohol	ug/kg	74	U	69	U	75	U	76	U	67	U	70	U	70	U
Biphenyl	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	37	UJ	34	UJ	38	UJ	38	UJ	34	UJ	35	UJ	35	UJ
Bis(2-Chloroisopropyl)ether	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	78	EB	48	EB	38	U	170	JEB	18	JEB	13	JEB	22	JEB
Butylbenzylphthalate	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	UJ

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-414-6.0/8.0-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP		OC-SB-430-8.0/10-XXX	
Field Sample ID		360-24309-14		360-24309-15		360-24309-17		360-24309-19		360-24309-20		360-24309-22		360-24309-23	
Sample Collection Date		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Carbazole	ug/kg	17	J	34	U	38	U	38	U	34	U	35	U	35	U
Chrysene	ug/kg	89		34	U	38	U	29	J	34	U	35	U	35	UJ
Di-n-butylphthalate	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Di-n-octylphthalate	ug/kg	37	U	34	U	38	U	38	U	34	UJ	35	UJ	35	UJ
Dibenz(a,h)anthracene	ug/kg	37	U	34	U	38	U	38	U	34	UJ	35	UJ	35	UJ
Dibenzofuran	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Diethylphthalate	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Dimethylphthalate	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Diphenyl ether	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Diphenylamine	ug/kg			34	U	38	U			34	U	35	U	35	U
Diphenylmethanone	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Fluoranthene	ug/kg	200		11	J	38	U	49		34	U	35	U	35	U
Fluorene	ug/kg	12	J	34	U	38	U	38	U	34	U	35	U	35	U
Hexachlorobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Hexachlorobutadiene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Hexachlorocyclopentadiene	ug/kg	74	U	69	U	75	U	76	U	67	UJ	70	UJ	70	U
Hexachloroethane	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	47		34	U	38	U	13	J	34	UJ	35	UJ	35	UJ
Isophorone	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
N-Nitrosodimethylamine	ug/kg	37	U	5.2	U	5.7	U	38	U	5.1	U	5.4	U	5.3	U
N-Nitrosodiphenylamine	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Naphthalene	ug/kg	89	U	82	U	91	U	91	U	81	U	85	U	84	U
Nitrobenzene	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Pentachlorophenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Phenanthrene	ug/kg	120		41	U	45	U	17	J	40	U	42	U	42	U
Phenol	ug/kg	37	U	34	U	38	U	38	U	34	U	35	U	35	U
Pyrene	ug/kg	140		34	U	38	U	47		34	U	35	U	35	UJ

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-407-26/28-XXX		OC-SB-414-20/22-XXX		OC-SB-422-13/15-XXX		OC-SB-429-16/18-XXX		OC-SB-430-19/21-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-6.0/8.0-XXX	
Field Sample ID		360-24309-8		360-24309-13		360-24309-16		360-24309-18		360-24309-21		360-24327-1		360-24327-3	
Sample Collection Date		8/26/2009		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
1,2,4-Trichlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
1,2-Dichlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
1,3-Dichlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
1,4-Dichlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
1-Methylnaphthalene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,3,4,6-Tetrachlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4,5-Trichlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4,6-Trichlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4-Dichlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4-Dimethylphenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4-Dinitrophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,4-Dinitrotoluene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2,6-Dinitrotoluene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2-Chloronaphthalene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2-Chlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2-Methylnaphthalene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2-Methylphenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
2-Nitroaniline	ug/kg	180	U	180	U	190	U	180	U	170	U	180	U	2,700	U
2-Nitrophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
3 & 4 Methylphenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
3,3`-Dichlorobenzidine	ug/kg	73	UJ	72	UJ	77	UJ	71	UJ	69	UJ	70	U	1,100	U
3-Nitroaniline	ug/kg	180	U	180	U	190	U	180	U	170	U	180	U	2,700	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	190	U	180	U	170	U	180	U	2,700	U
4-Bromophenyl phenyl ether	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
4-Chloro-3-methylphenol	ug/kg	73	U	72	U	77	U	71	U	69	U	70	U	1,100	U
4-Chloroaniline	ug/kg	73	U	72	U	77	U	71	U	69	U	70	U	1,100	U
4-Chlorophenyl phenyl ether	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
4-Nitroaniline	ug/kg	180	U	180	U	190	U	180	U	170	U	180	U	2,700	U
4-Nitrophenol	ug/kg	180	U	180	UJ	190	UJ	180	UJ	170	UJ	180	U	2,700	U
Acenaphthene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Acenaphthylene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Acetophenone	ug/kg	37	U	9	JEB	4.9	JEB	36	U	34	U	35	U	170	JEB
Aniline	ug/kg	37	UJ	36	UJ	38	UJ	36	UJ	34	UJ	35	U	540	U
Anthracene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Atrazine	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Azobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Benzaldehyde	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Benzo(a)anthracene	ug/kg	9.1	J	36	U	38	U	36	U	34	U	35	U	540	U
Benzo(a)pyrene	ug/kg	13	J	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Benzo(b)fluoranthene	ug/kg	10	J	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Benzo(ghi)perylene	ug/kg	7.2	J	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Benzo(k)fluoranthene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Benzoic Acid	ug/kg	180	U	180	U	190	U	180	U	170	U	180	U	2,700	U
Benzyl alcohol	ug/kg	73	U	72	U	77	U	71	U	69	U	70	U	1,100	U
Biphenyl	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Bis(2-Chloroethoxy)methane	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Bis(2-Chloroethyl)ether	ug/kg	37	U	36	UJ	38	UJ	36	UJ	34	UJ	35	U	540	U
Bis(2-Chloroisopropyl)ether	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Bis(2-Ethylhexyl)phthalate	ug/kg	37	U	36	U	38	U	27	JEB	17	JEB	100	EB	540	U
Butylbenzylphthalate	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-407-26/28-XXX		OC-SB-414-20/22-XXX		OC-SB-422-13/15-XXX		OC-SB-429-16/18-XXX		OC-SB-430-19/21-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-6.0/8.0-XXX	
Field Sample ID		360-24309-8		360-24309-13		360-24309-16		360-24309-18		360-24309-21		360-24327-1		360-24327-3	
Sample Collection Date		8/26/2009		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Carbazole	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Chrysene	ug/kg	8.9	J	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Di-n-butylphthalate	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Di-n-octylphthalate	ug/kg	37	U	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Dibenz(a,h)anthracene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Dibenzofuran	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Diethylphthalate	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Dimethylphthalate	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Diphenyl ether	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Diphenylamine	ug/kg											35	U	540	U
Diphenylmethanone	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Fluoranthene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Fluorene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Hexachlorobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Hexachlorobutadiene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Hexachlorocyclopentadiene	ug/kg	73	U	72	U	77	U	71	U	69	U	70	U	1,100	U
Hexachloroethane	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Indeno(1,2,3-cd)pyrene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	UJ	540	UJ
Isophorone	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
N-Nitrosodi-n-propylamine	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
N-Nitrosodimethylamine	ug/kg	37	U	36	U	38	U	36	U	34	U	5.3	U	160	U
N-Nitrosodiphenylamine	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Naphthalene	ug/kg	88	U	87	U	92	U	85	U	82	U	84	U	1,300	U
Nitrobenzene	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Pentachlorophenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Phenanthrene	ug/kg	44	U	43	U	46	U	43	U	41	U	42	U	650	U
Phenol	ug/kg	37	U	36	U	38	U	36	U	34	U	35	U	540	U
Pyrene	ug/kg	20	J	36	U	38	U	36	U	34	U	35	U	540	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX	
Field Sample ID		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24327-11		360-24327-12		360-24327-13	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
1,2,4-Trichlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
1,2-Dichlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
1,3-Dichlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
1,4-Dichlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
1-Methylnaphthalene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,4,5-Trichlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,4,6-Trichlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,4-Dichlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,4-Dimethylphenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,4-Dinitrophenol	ug/kg	38	U	34	U	R		R		R		R		R	
2,4-Dinitrotoluene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2,6-Dinitrotoluene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2-Chloronaphthalene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2-Chlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2-Methylnaphthalene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2-Methylphenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
2-Nitroaniline	ug/kg	R		R		R		R		R		R		R	
2-Nitrophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
3 & 4 Methylphenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
3,3`-Dichlorobenzidine	ug/kg	77	U	68	U	84	UJ	720	UJ	87	UJ	85	UJ	71	UJ
3-Nitroaniline	ug/kg	190	U	170	U	210	U	1,800	U	220	U	210	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	190	U	170	U	R		R		R		R		R	
4-Bromophenyl phenyl ether	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
4-Chloro-3-methylphenol	ug/kg	77	U	68	U	84	U	720	U	87	U	85	U	71	U
4-Chloroaniline	ug/kg	77	U	68	U	84	U	720	U	87	U	85	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
4-Nitroaniline	ug/kg	190	U	170	U	210	U	1,800	U	220	U	210	U	180	U
4-Nitrophenol	ug/kg	190	U	170	U	210	UJ	1,800	UJ	220	UJ	210	UJ	180	UJ
Acenaphthene	ug/kg	38	U	34	U	42	U	1,200		43	U	42	U	36	U
Acenaphthylene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Acetophenone	ug/kg	38	U	34	U	42	U	120	JEB	43	U	42	U	36	U
Aniline	ug/kg	38	U	34	U	42	UJ	360	UJ	43	UJ	42	UJ	36	UJ
Anthracene	ug/kg	38	U	34	U	42	U	5,300	EB	43	U	42	U	36	U
Atrazine	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Azobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Benzaldehyde	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Benzo(a)anthracene	ug/kg	38	U	34	U	42	U	28,000		20	J	25	J	36	U
Benzo(a)pyrene	ug/kg	38	UJ	12	J	42	U	19,000		23	J	25	J	11	J
Benzo(b)fluoranthene	ug/kg	38	UJ	34	U	42	U	23,000		23	J	29	J	36	U
Benzo(ghi)perylene	ug/kg	38	UJ	34	U	42	U	9,300		43	U	42	U	36	U
Benzo(k)fluoranthene	ug/kg	38	UJ	34	U	42	U	12,000		43	U	42	U	36	U
Benzoic Acid	ug/kg	R		R		R		R		R		R		R	
Benzyl alcohol	ug/kg	77	U	68	U	84	U	720	U	87	U	85	U	71	U
Biphenyl	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	13	JEB	110	EB	42	U	360	EB	43	U	42	U	330	EB
Butylbenzylphthalate	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX	
Field Sample ID		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24327-11		360-24327-12		360-24327-13	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Carbazole	ug/kg	38	U	34	U	42	U	2,100		43	U	42	U	36	U
Chrysene	ug/kg	38	UJ	34	U	42	U	26,000		20	J	23	J	36	U
Di-n-butylphthalate	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Di-n-octylphthalate	ug/kg	38	UJ	34	U	42	U	360	U	43	U	42	U	36	U
Dibenz(a,h)anthracene	ug/kg	38	UJ	34	U	42	UJ	4,800	J	43	UJ	42	UJ	36	UJ
Dibenzofuran	ug/kg	38	U	34	U	42	U	430		43	U	42	U	36	U
Diethylphthalate	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Dimethylphthalate	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Diphenyl ether	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Diphenylamine	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Diphenylmethanone	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Fluoranthene	ug/kg	38	U	34	U	42	U	42,000		27	J	41	J	36	U
Fluorene	ug/kg	38	U	34	U	42	U	1,400		43	U	42	U	36	U
Hexachlorobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Hexachlorobutadiene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Hexachlorocyclopentadiene	ug/kg	77	U	68	U	84	U	720	U	87	U	85	U	71	U
Hexachloroethane	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	38	UJ	34	U	42	U	10,000		43	U	13	J	36	U
Isophorone	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
N-Nitrosodimethylamine	ug/kg	5.8	U	5.2	U	6.3	U	56	U	6.6	U	6.5	U	5.3	U
N-Nitrosodiphenylamine	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Naphthalene	ug/kg	92	U	82	U	100	U	870	U	100	U	100	U	86	U
Nitrobenzene	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Pentachlorophenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Phenanthrene	ug/kg	46	U	41	U	50	U	15,000		52	U	17	J	43	U
Phenol	ug/kg	38	U	34	U	42	U	360	U	43	U	42	U	36	U
Pyrene	ug/kg	38	U	34	U	42	U	29,000		21	J	29	J	36	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07A		OCRI-07A		OCRI-07A		OCRI-07A	
Lab Sample ID		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-8/10-XXX		OC-SB-403-13/15-XXX		OC-SB-404-13/15-XXX		OC-SB-409-15/17-XXX		OC-SB-410-17/19-XXX	
Field Sample ID		360-24327-14		360-24327-15		360-24327-17		360-24327-2		360-24327-4		360-24327-7		360-24327-10	
Sample Collection Date		8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
1,2,4-Trichlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
1,2-Dichlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
1,3-Dichlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
1,4-Dichlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
1-Methylnaphthalene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,4,5-Trichlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,4,6-Trichlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,4-Dichlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,4-Dimethylphenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,4-Dinitrophenol	ug/kg	R		R		R		42	U	R		R		R	
2,4-Dinitrotoluene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2,6-Dinitrotoluene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2-Chloronaphthalene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2-Chlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2-Methylnaphthalene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2-Methylphenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
2-Nitroaniline	ug/kg	R		R		R		210	U	R		R		R	
2-Nitrophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
3 & 4 Methylphenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
3,3`-Dichlorobenzidine	ug/kg	68	UJ	72	UJ	73	UJ	84	UJ	71	UJ	74	UJ	72	UJ
3-Nitroaniline	ug/kg	170	U	180	U	180	U	210	U	180	U	190	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	R		R		R		210	U	180	U	R		R	
4-Bromophenyl phenyl ether	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
4-Chloro-3-methylphenol	ug/kg	68	U	72	U	73	U	84	U	71	U	74	U	72	U
4-Chloroaniline	ug/kg	68	U	72	U	73	U	84	U	71	U	74	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
4-Nitroaniline	ug/kg	170	U	180	U	180	U	210	U	180	U	190	U	180	U
4-Nitrophenol	ug/kg	170	UJ	180	UJ	180	UJ	210	UJ	180	U	190	UJ	180	UJ
Acenaphthene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Acenaphthylene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Acetophenone	ug/kg	34	U	36	U	36	U	42	U	35	U	5.6	JEB	36	U
Aniline	ug/kg	34	UJ	36	UJ	36	UJ	42	UJ	35	UJ	37	UJ	36	UJ
Anthracene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Atrazine	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Azobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Benzaldehyde	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Benzo(a)anthracene	ug/kg	34	U	35	J	36	U	42	U	35	U	37	U	9	J
Benzo(a)pyrene	ug/kg	34	U	41		36	U	42	U	35	U	37	U	12	J
Benzo(b)fluoranthene	ug/kg	34	U	40		36	U	42	U	35	U	37	U	12	J
Benzo(ghi)perylene	ug/kg	34	U	36		36	U	42	U	35	U	37	U	36	U
Benzo(k)fluoranthene	ug/kg	34	U	23	J	36	U	42	U	35	U	37	U	36	U
Benzoic Acid	ug/kg	R		R		R		210	U	R		R		R	
Benzyl alcohol	ug/kg	68	U	72	U	73	U	84	U	71	U	74	U	72	U
Biphenyl	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	34	U	36	U	36	U	42	UJ	35	UJ	37	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	670	EB	270	EB	36	U	42	U	35	U	37	U	36	U
Butylbenzylphthalate	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07A		OCRI-07A		OCRI-07A		OCRI-07A	
	Lab Sample ID	OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-8/10-XXX		OC-SB-403-13/15-XXX		OC-SB-404-13/15-XXX		OC-SB-409-15/17-XXX		OC-SB-410-17/19-XXX	
	Field Sample ID	360-24327-14		360-24327-15		360-24327-17		360-24327-2		360-24327-4		360-24327-7		360-24327-10	
	Sample Collection Date	8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Carbazole	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Chrysene	ug/kg	34	U	30	J	36	U	42	U	35	U	37	U	8.1	J
Di-n-butylphthalate	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Di-n-octylphthalate	ug/kg	34	U	36	U	36	U	42	U	35	U	20	J	36	U
Dibenz(a,h)anthracene	ug/kg	34	UJ	15	J	36	UJ	42	U	35	U	37	UJ	36	UJ
Dibenzofuran	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Diethylphthalate	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Dimethylphthalate	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Diphenyl ether	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Diphenylamine	ug/kg	34	U												
Diphenylmethanone	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Fluoranthene	ug/kg	34	U	52		36	U	42	U	35	U	37	U	36	U
Fluorene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Hexachlorobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Hexachlorobutadiene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Hexachlorocyclopentadiene	ug/kg	68	U	72	U	73	U	84	U	71	U	74	U	72	U
Hexachloroethane	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	34	U	25	J	36	U	42	U	35	U	37	U	36	U
Isophorone	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
N-Nitrosodimethylamine	ug/kg	5.3	U	36	U	36	U	42	U	35	U	37	U	36	U
N-Nitrosodiphenylamine	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Naphthalene	ug/kg	82	U	86	U	87	U	100	U	85	U	89	U	86	U
Nitrobenzene	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Pentachlorophenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Phenanthrene	ug/kg	41	U	15	J	44	U	50	U	42	U	45	U	43	U
Phenol	ug/kg	34	U	36	U	36	U	42	U	35	U	37	U	36	U
Pyrene	ug/kg	34	U	48		36	U	42	U	35	U	37	U	36	U

Notes:

Samples analyzed by SW-846 Method
8270C - Low Level

Units: ug/kg = micrograms per kilogram

Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected

QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07A		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
Lab Sample ID		OC-SB-418-15/17-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP	
Field Sample ID		360-24327-16		360-24343-1		360-24343-3		360-24343-4		360-24343-6		360-24343-7		360-24343-9	
Sample Collection Date		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009	
QC Code		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
1,2,4-Trichlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
1,2-Dichlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
1,3-Dichlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
1,4-Dichlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
1-Methylnaphthalene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,4,5-Trichlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,4,6-Trichlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,4-Dichlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,4-Dimethylphenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,4-Dinitrophenol	ug/kg	R		R		R		R		R		R		35	U
2,4-Dinitrotoluene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2,6-Dinitrotoluene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2-Chloronaphthalene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2-Chlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2-Methylnaphthalene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2-Methylphenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
2-Nitroaniline	ug/kg	R		R		R		R		R		R		180	U
2-Nitrophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
3 & 4 Methylphenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
3,3`-Dichlorobenzidine	ug/kg	74	UJ	690	UJ	74	UJ	71	UJ	79	UJ	680	UJ	70	UJ
3-Nitroaniline	ug/kg	180	U	1,700	U	180	U	180	U	200	U	1,700	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	R		R		R		R		R		R		180	U
4-Bromophenyl phenyl ether	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
4-Chloro-3-methylphenol	ug/kg	74	U	690	U	74	U	71	U	79	U	680	U	70	U
4-Chloroaniline	ug/kg	74	U	690	U	74	U	71	U	79	U	680	U	70	UJ
4-Chlorophenyl phenyl ether	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
4-Nitroaniline	ug/kg	180	U	1,700	U	180	U	180	U	200	U	1,700	U	180	U
4-Nitrophenol	ug/kg	180	UJ	1,700	UJ	180	UJ	180	UJ	200	UJ	1,700	UJ	180	U
Acenaphthene	ug/kg	37	U	340	U	37	U	35	U	40	U	160	J	35	U
Acenaphthylene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Acetophenone	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Aniline	ug/kg	37	UJ	340	UJ	37	UJ	35	UJ	40	UJ	340	UJ	35	UJ
Anthracene	ug/kg	37	U	340	U	37	U	35	U	40	U	480	EB	35	U
Atrazine	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Azobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Benzaldehyde	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Benzo(a)anthracene	ug/kg	37	U	340	U	37	U	35	U	40	U	1,500		35	U
Benzo(a)pyrene	ug/kg	37	U	340	U	37	U	35	U	40	U	1,300		35	UJ
Benzo(b)fluoranthene	ug/kg	37	U	340	U	37	U	35	U	40	U	1,500		35	UJ
Benzo(ghi)perylene	ug/kg	37	U	340	U	37	U	35	U	40	U	830		35	UJ
Benzo(k)fluoranthene	ug/kg	37	U	340	U	37	U	35	U	40	U	870		35	UJ
Benzoic Acid	ug/kg	R		R		R		R		R		R		180	UJ
Benzyl alcohol	ug/kg	74	U	690	U	74	U	71	U	79	U	680	U	70	U
Biphenyl	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	37	U	4,300	EB	37	U	22	JEB	39	JEB	200	JEB	150	EB
Butylbenzylphthalate	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07A		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-418-15/17-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP	
	Field Sample ID	360-24327-16		360-24343-1		360-24343-3		360-24343-4		360-24343-6		360-24343-7		360-24343-9	
	Sample Collection Date	8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Carbazole	ug/kg	37	U	340	U	37	U	35	U	40	U	240	J	35	U
Chrysene	ug/kg	37	U	340	U	37	U	35	U	40	U	1,300		11	J
Di-n-butylphthalate	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Di-n-octylphthalate	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	UJ
Dibenz(a,h)anthracene	ug/kg	37	UJ	340	UJ	37	UJ	35	UJ	40	UJ	290	J	35	UJ
Dibenzofuran	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Diethylphthalate	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Dimethylphthalate	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Diphenyl ether	ug/kg	37	U	340	U	37	U	35	U	40	U	230	J	35	U
Diphenylamine	ug/kg			340	U	37	U	35	U			340	U	35	U
Diphenylmethanone	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Fluoranthene	ug/kg	37	U	340	U	37	U	35	U	40	U	3,300		19	J
Fluorene	ug/kg	37	U	340	U	37	U	35	U	40	U	150	J	35	U
Hexachlorobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Hexachlorobutadiene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Hexachlorocyclopentadiene	ug/kg	74	U	690	U	74	U	71	U	79	U	680	U	70	UJ
Hexachloroethane	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	37	U	340	U	37	U	35	U	40	U	850		13	J
Isophorone	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
N-Nitrosodimethylamine	ug/kg	37	U	100	U	5.6	U	5.4	U	40	U	5.1	U	35	U
N-Nitrosodiphenylamine	ug/kg	37	U	340	U	37	U	35	U	13	JEB	340	U	35	U
Naphthalene	ug/kg	89	U	820	U	88	U	85	U	95	U	810	U	84	U
Nitrobenzene	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Pentachlorophenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Phenanthrene	ug/kg	44	U	410	U	44	U	43	U	48	U	1,800		11	J
Phenol	ug/kg	37	U	340	U	37	U	35	U	40	U	340	U	35	U
Pyrene	ug/kg	37	U	340	U	37	U	35	U	40	U	2,800		23	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08A		OCRI-08A	
Lab Sample ID		OC-SB-451-2.5/4.5-XXX		OC-SB-454-0.0/1.0-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX		OC-SB-444-12/14-XXX		OC-SB-449-11/13-XXX	
Field Sample ID		360-24343-10		360-24343-11		360-24343-13		360-24343-16		360-24343-17		360-24343-2		360-24343-5	
Sample Collection Date		8/28/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/27/2009		8/27/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
1,2,4-Trichlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
1,2-Dichlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
1,3-Dichlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
1,4-Dichlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
1-Methylnaphthalene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,3,4,6-Tetrachlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,4,5-Trichlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,4,6-Trichlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,4-Dichlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,4-Dimethylphenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,4-Dinitrophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	R		R	
2,4-Dinitrotoluene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2,6-Dinitrotoluene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2-Chloronaphthalene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2-Chlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2-Methylnaphthalene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
2-Methylphenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	15	J
2-Nitroaniline	ug/kg	170	U	170	U	190	U	210	UJ	220	UJ	R		R	
2-Nitrophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
3 & 4 Methylphenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
3,3`-Dichlorobenzidine	ug/kg	68	UJ	69	UJ	77	UJ	85	UJ	87	UJ	70	UJ	75	UJ
3-Nitroaniline	ug/kg	170	U	170	U	190	U	210	UJ	220	UJ	180	U	190	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U	170	U	190	U	210	UJ	220	UJ	R		R	
4-Bromophenyl phenyl ether	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
4-Chloro-3-methylphenol	ug/kg	68	U	69	U	77	U	85	UJ	87	UJ	70	U	75	U
4-Chloroaniline	ug/kg	68	UJ	69	U	77	U	85	UJ	87	UJ	70	U	75	U
4-Chlorophenyl phenyl ether	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
4-Nitroaniline	ug/kg	170	U	170	U	190	U	210	UJ	220	UJ	180	U	190	U
4-Nitrophenol	ug/kg	170	U	170	U	190	U	210	UJ	220	UJ	180	UJ	190	UJ
Acenaphthene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Acenaphthylene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Acetophenone	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	4.1	JEB	4.4	JEB
Aniline	ug/kg	34	UJ	34	UJ	39	UJ	43	UJ	43	UJ	35	UJ	37	UJ
Anthracene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Atrazine	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Azobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzaldehyde	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzo(a)anthracene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzo(a)pyrene	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzo(b)fluoranthene	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzo(ghi)perylene	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzo(k)fluoranthene	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Benzoic Acid	ug/kg	170	UJ	170	UJ	190	UJ	210	UJ	220	UJ	R		R	
Benzyl alcohol	ug/kg	68	U	69	U	77	U	85	UJ	87	UJ	70	U	75	U
Biphenyl	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Bis(2-Chloroethoxy)methane	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Bis(2-Chloroethyl)ether	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Bis(2-Chloroisopropyl)ether	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Bis(2-Ethylhexyl)phthalate	ug/kg	150	EB	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Butylbenzylphthalate	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08A		OCRI-08A	
Lab Sample ID		OC-SB-451-2.5/4.5-XXX		OC-SB-454-0.0/1.0-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX		OC-SB-444-12/14-XXX		OC-SB-449-11/13-XXX	
Field Sample ID		360-24343-10		360-24343-11		360-24343-13		360-24343-16		360-24343-17		360-24343-2		360-24343-5	
Sample Collection Date		8/28/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/27/2009		8/27/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Carbazole	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Chrysene	ug/kg	12	J	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Di-n-butylphthalate	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Di-n-octylphthalate	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Dibenz(a,h)anthracene	ug/kg	34	UJ	34	U	39	U	43	UJ	43	UJ	35	UJ	37	UJ
Dibenzofuran	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Diethylphthalate	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Dimethylphthalate	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Diphenyl ether	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Diphenylamine	ug/kg	34	U												
Diphenylmethanone	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Fluoranthene	ug/kg	15	J	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Fluorene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Hexachlorobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Hexachlorobutadiene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Hexachlorocyclopentadiene	ug/kg	68	UJ	69	U	77	U	85	UJ	87	UJ	70	U	75	U
Hexachloroethane	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Indeno(1,2,3-cd)pyrene	ug/kg	12	J	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Isophorone	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
N-Nitrosodi-n-propylamine	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
N-Nitrosodimethylamine	ug/kg	5.2	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
N-Nitrosodiphenylamine	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	26	JEB	37	U
Naphthalene	ug/kg	82	U	82	U	93	U	100	UJ	100	UJ	84	U	90	U
Nitrobenzene	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Pentachlorophenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Phenanthrene	ug/kg	41	U	41	U	46	U	51	UJ	52	UJ	42	U	45	U
Phenol	ug/kg	34	U	34	U	39	U	43	UJ	43	UJ	35	U	37	U
Pyrene	ug/kg	27	J	34	U	39	U	43	UJ	43	UJ	35	U	37	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08A		OCRI-08A		OCRI-08A		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		OC-SB-451-18/20-XXX		OC-SB-454-18/20-XXX		OC-SB-455-28/30-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX	
Field Sample ID		360-24343-8		360-24343-12		360-24343-15		360-24365-1		360-24365-3		360-24365-4		360-24365-5	
Sample Collection Date		8/28/2009		8/27/2009		8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
1,2,4-Trichlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
1,2-Dichlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
1,3-Dichlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
1,4-Dichlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
1-Methylnaphthalene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	620	
2,3,4,6-Tetrachlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4,5-Trichlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4,6-Trichlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4-Dichlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4-Dimethylphenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4-Dinitrophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,4-Dinitrotoluene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2,6-Dinitrotoluene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2-Chloronaphthalene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2-Chlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2-Methylnaphthalene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	710	
2-Methylphenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
2-Nitroaniline	ug/kg	190	U	180	U	180	U	1,800	U	190	U	190	U	1,900	U
2-Nitrophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
3 & 4 Methylphenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
3,3`-Dichlorobenzidine	ug/kg	74	UJ	70	UJ	71	UJ	700	UJ	74	UJ	76	U	780	UJ
3-Nitroaniline	ug/kg	190	U	180	U	180	U	1,800	U	190	U	190	U	1,900	U
4,6-Dinitro-2-methylphenol	ug/kg	190	U	180	U	180	U	1,800	U	190	U	190	U	1,900	U
4-Bromophenyl phenyl ether	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
4-Chloro-3-methylphenol	ug/kg	74	U	70	U	71	U	700	U	74	U	76	U	780	U
4-Chloroaniline	ug/kg	74	U	70	U	71	U	700	U	74	U	76	U	780	U
4-Chlorophenyl phenyl ether	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
4-Nitroaniline	ug/kg	190	U	180	U	180	U	1,800	U	190	U	190	U	1,900	U
4-Nitrophenol	ug/kg	190	U	180	U	180	U	1,800	U	190	U	190	U	1,900	U
Acenaphthene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	4,800	
Acenaphthylene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	210	J
Acetophenone	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Aniline	ug/kg	37	UJ	35	UJ	35	UJ	350	UJ	37	UJ	38	UJ	390	UJ
Anthracene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	9,100	EB
Atrazine	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Azobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Benzaldehyde	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Benzo(a)anthracene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	28,000	J
Benzo(a)pyrene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	21,000	J
Benzo(b)fluoranthene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	29,000	J
Benzo(ghi)perylene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	16,000	J
Benzo(k)fluoranthene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	11,000	J
Benzoic Acid	ug/kg	190	UJ	180	UJ	180	UJ	1,800	UJ	190	UJ	190	UJ	1,900	UJ
Benzyl alcohol	ug/kg	74	U	70	U	71	U	700	U	74	U	76	U	780	U
Biphenyl	ug/kg	32	J	35	U	35	U	350	U	37	U	38	U	570	
Bis(2-Chloroethoxy)methane	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Bis(2-Chloroethyl)ether	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Bis(2-Chloroisopropyl)ether	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Bis(2-Ethylhexyl)phthalate	ug/kg	37	U	35	U	35	U	2,100	EB	37	U	13	JEB	2,000	JEB
Butylbenzylphthalate	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	UJ

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08A		OCRI-08A		OCRI-08A		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		OC-SB-451-18/20-XXX		OC-SB-454-18/20-XXX		OC-SB-455-28/30-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX	
Field Sample ID		360-24343-8		360-24343-12		360-24343-15		360-24365-1		360-24365-3		360-24365-4		360-24365-5	
Sample Collection Date		8/28/2009		8/27/2009		8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Carbazole	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	5,400	
Chrysene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	26,000	J
Di-n-butylphthalate	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Di-n-octylphthalate	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	UJ
Dibenz(a,h)anthracene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	4,400	J
Dibenzofuran	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	1,700	
Diethylphthalate	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Dimethylphthalate	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Diphenyl ether	ug/kg	94		35	U	35	U	190	J	37	U	38	U	1,700	
Diphenylamine	ug/kg							260	J	37	U	38	U		
Diphenylmethanone	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Fluoranthene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	73,000	
Fluorene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	3,500	
Hexachlorobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Hexachlorobutadiene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Hexachlorocyclopentadiene	ug/kg	74	U	70	U	71	U	700	U	74	U	76	UJ	780	U
Hexachloroethane	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Indeno(1,2,3-cd)pyrene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	14,000	J
Isophorone	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
N-Nitrosodi-n-propylamine	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
N-Nitrosodimethylamine	ug/kg	37	U	35	U	35	U	110	U	5.7	U	5.7	U	390	U
N-Nitrosodiphenylamine	ug/kg	37	U	35	U	35	U	250	JEB	37	U	38	U	390	U
Naphthalene	ug/kg	89	U	84	U	85	U	840	U	89	U	91	U	960	
Nitrobenzene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Pentachlorophenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Phenanthrene	ug/kg	44	U	42	U	42	U	420	U	45	U	46	U	35,000	
Phenol	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	390	U
Pyrene	ug/kg	37	U	35	U	35	U	350	U	37	U	38	U	3,900	UJ

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		OC-SB-447-3.0/5.0-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-5.0/7.0-XXX		OC-SB-460-0.0/1.0-XXX		OC-SB-460-5.5/7.5-XXX	
Field Sample ID		360-24365-7		360-24365-8		360-24365-10		360-24365-13		360-24365-15		360-24365-16		360-24365-18	
Sample Collection Date		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
1,2,4-Trichlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
1,2-Dichlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
1,3-Dichlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
1,4-Dichlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
1-Methylnaphthalene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	31	J
2,3,4,6-Tetrachlorophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4,5-Trichlorophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4,6-Trichlorophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4-Dichlorophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4-Dimethylphenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4-Dinitrophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2,4-Dinitrotoluene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
2,6-Dinitrotoluene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
2-Chloronaphthalene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
2-Chlorophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2-Methylnaphthalene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	49	
2-Methylphenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
2-Nitroaniline	ug/kg	1,900	UJ	170	U	200	U	180	U	200	U	180	U	200	U
2-Nitrophenol	ug/kg	370	U	34	U	40	U	36	U	40	U	36	U	41	U
3 & 4 Methylphenol	ug/kg	130	J	34	U	40	U	36	U	40	U	36	U	41	U
3,3`-Dichlorobenzidine	ug/kg	750	UJ	68	UJ	79	U	72	U	79	U	72	U	81	U
3-Nitroaniline	ug/kg	1,900	UJ	170	U	200	U	180	U	200	U	180	U	200	U
4,6-Dinitro-2-methylphenol	ug/kg	1,900	U	170	U	200	U	180	U	200	U	180	U	200	U
4-Bromophenyl phenyl ether	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
4-Chloro-3-methylphenol	ug/kg	750	U	68	U	79	U	72	U	79	U	72	U	81	U
4-Chloroaniline	ug/kg	750	UJ	68	U	79	U	72	U	79	U	72	U	81	U
4-Chlorophenyl phenyl ether	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
4-Nitroaniline	ug/kg	1,900	UJ	170	U	200	U	180	U	200	U	180	U	200	U
4-Nitrophenol	ug/kg	1,900	U	170	U	200	U	180	U	200	U	180	U	200	U
Acenaphthene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	14	J
Acenaphthylene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Acetophenone	ug/kg	1,500	JEB	23	JEB	40	U	36	U	40	U	36	U	41	U
Aniline	ug/kg	370	UJ	34	UJ	40	U	36	U	40	UJ	36	U	41	U
Anthracene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Atrazine	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Azobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Benzaldehyde	ug/kg	370	UJ	34	U	40	U	21	J	40	U	23	J	41	U
Benzo(a)anthracene	ug/kg	370	UJ	27	J	40	U	36	U	40	U	15	J	41	U
Benzo(a)pyrene	ug/kg	370	UJ	19	J	40	U	36	U	40	U	15	J	41	U
Benzo(b)fluoranthene	ug/kg	370	UJ	27	J	40	U	36	U	40	U	21	J	41	U
Benzo(ghi)perylene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Benzo(k)fluoranthene	ug/kg	370	UJ	14	J	40	U	36	U	40	U	36	U	41	U
Benzoic Acid	ug/kg	1,900	UJ	170	UJ	200	U	180	U	200	U	180	U	200	U
Benzyl alcohol	ug/kg	750	UJ	68	U	79	U	72	U	79	U	72	U	81	U
Biphenyl	ug/kg	770	J	34	U	40	U	36	U	40	U	36	U	41	U
Bis(2-Chloroethoxy)methane	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Bis(2-Chloroethyl)ether	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Bis(2-Chloroisopropyl)ether	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Bis(2-Ethylhexyl)phthalate	ug/kg	4,600	JEB	260	JEB	40	U	310	EB	40	U	860	EB	19	JEB
Butylbenzylphthalate	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		OC-SB-447-3.0/5.0-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-5.0/7.0-XXX		OC-SB-460-0.0/1.0-XXX		OC-SB-460-5.5/7.5-XXX	
Field Sample ID		360-24365-7		360-24365-8		360-24365-10		360-24365-13		360-24365-15		360-24365-16		360-24365-18	
Sample Collection Date		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Carbazole	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Chrysene	ug/kg	370	UJ	34	J	40	U	14	J	40	U	23	J	41	U
Di-n-butylphthalate	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Di-n-octylphthalate	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Dibenz(a,h)anthracene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Dibenzofuran	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	22	J
Diethylphthalate	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Dimethylphthalate	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Diphenyl ether	ug/kg	3,800	J	11	J	40	U	63		40	U	36	U	41	U
Diphenylamine	ug/kg			48	J	40	U	36	U	40	U				
Diphenylmethanone	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Fluoranthene	ug/kg	370	UJ	56	J	40	U	20	J	40	U	35	J	41	U
Fluorene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	16	J
Hexachlorobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Hexachlorobutadiene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Hexachlorocyclopentadiene	ug/kg	750	UJ	68	U	79	U	72	U	79	U	72	U	81	U
Hexachloroethane	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Indeno(1,2,3-cd)pyrene	ug/kg	370	UJ	11	J	40	U	36	U	40	U	36	U	41	U
Isophorone	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
N-Nitrosodi-n-propylamine	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
N-Nitrosodimethylamine	ug/kg	370	UJ	5.1	U	6	U	5.4	U	6	U	36	U	41	U
N-Nitrosodiphenylamine	ug/kg	280	JEB	15	JEB	40	U	36	U	40	U	36	U	41	U
Naphthalene	ug/kg	900	UJ	82	U	95	U	86	U	95	U	86	U	130	
Nitrobenzene	ug/kg	370	UJ	34	U	40	U	36	U	40	U	36	U	41	U
Pentachlorophenol	ug/kg	370	U	45		40	U	36	U	40	U	36	U	41	U
Phenanthrene	ug/kg	450	UJ	25	J	48	U	12	J	48	U	22	J	52	
Phenol	ug/kg	1,200		34	U	40	U	36	U	40	U	66		41	U
Pyrene	ug/kg	370	UJ	47	J	40	U	22	J	40	U	33	J	41	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-10		OCRI-10	
Lab Sample ID		OC-SB-442-20/22-XXX		OC-SB-447-18/20-XXX		OC-SB-452-13/15-XXX		OC-SB-458-22/24-XXX		OC-SB-460-30/32-XXX		OC-SB-463-0.0/1.0-XXX		OC-SB-463-6.0/8.0-XXX	
Field Sample ID		360-24365-2		360-24365-6		360-24365-9		360-24365-14		360-24365-17		360-24417-1		360-24417-3	
Sample Collection Date		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009		9/1/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
1,2,4-Trichlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
1,2-Dichlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
1,3-Dichlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
1,4-Dichlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
1-Methylnaphthalene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,4,5-Trichlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,4,6-Trichlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,4-Dichlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,4-Dimethylphenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,4-Dinitrophenol	ug/kg	36	U	37	UJ	36	U	36	U	37	U	34	U	39	U
2,4-Dinitrotoluene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2,6-Dinitrotoluene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2-Chloronaphthalene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2-Chlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2-Methylnaphthalene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2-Methylphenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
2-Nitroaniline	ug/kg	180	U	180	U	180	U	180	U	180	U	170	U	190	U
2-Nitrophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
3 & 4 Methylphenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
3,3`-Dichlorobenzidine	ug/kg	71	UJ	73	UJ	72	U	71	U	73	U	68	U	78	U
3-Nitroaniline	ug/kg	180	U	180	U	180	U	180	U	180	U	170	U	190	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	180	U	180	U	180	U	170	U	190	U
4-Bromophenyl phenyl ether	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
4-Chloro-3-methylphenol	ug/kg	71	U	73	U	72	U	71	U	73	U	68	U	78	U
4-Chloroaniline	ug/kg	71	U	73	U	72	U	71	U	73	U	68	U	78	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
4-Nitroaniline	ug/kg	180	U	180	U	180	U	180	U	180	U	170	U	190	U
4-Nitrophenol	ug/kg	180	U	180	U	180	U	180	U	180	U	170	U	190	U
Acenaphthene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Acenaphthylene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Acetophenone	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Aniline	ug/kg	36	UJ	37	UJ	36	UJ	36	UJ	37	UJ	34	UJ	39	UJ
Anthracene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Atrazine	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Azobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzaldehyde	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzo(a)anthracene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzo(a)pyrene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzo(b)fluoranthene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzo(ghi)perylene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzo(k)fluoranthene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Benzoic Acid	ug/kg	180	UJ		R	180	U	180	U	180	U	170	U	190	U
Benzyl alcohol	ug/kg	71	U	73	U	72	U	71	U	73	U	68	U	78	U
Biphenyl	ug/kg	36	U	330		36	U	36	U	37	U	34	U	39	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Bis(2-Ethylhexyl)phthalate	ug/kg	36	U	22	JEB	23	JEB	36	U	22	JEB	50	EB	39	U
Butylbenzylphthalate	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-442-20/22-XXX		OC-SB-447-18/20-XXX		OC-SB-452-13/15-XXX		OC-SB-458-22/24-XXX		OC-SB-460-30/32-XXX		OC-SB-463-0.0/1.0-XXX		OC-SB-463-6.0/8.0-XXX	
	Field Sample ID	360-24365-2		360-24365-6		360-24365-9		360-24365-14		360-24365-17		360-24417-1		360-24417-3	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Carbazole	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Chrysene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Di-n-butylphthalate	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Di-n-octylphthalate	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Dibenz(a,h)anthracene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Dibenzofuran	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Diethylphthalate	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Dimethylphthalate	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Diphenyl ether	ug/kg	36	U	1,100		36	U	36	U	17	J	34	U	85	
Diphenylamine	ug/kg														
Diphenylmethanone	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Fluoranthene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Fluorene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Hexachlorobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Hexachlorobutadiene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Hexachlorocyclopentadiene	ug/kg	71	U	73	U	72	U	71	U	73	U	68	U	78	U
Hexachloroethane	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Isophorone	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
N-Nitrosodimethylamine	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
N-Nitrosodiphenylamine	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Naphthalene	ug/kg	85	U	88	U	87	U	86	U	88	U	82	U	93	U
Nitrobenzene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Pentachlorophenol	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U
Phenanthrene	ug/kg	43	U	44	U	43	U	43	U	44	U	41	U	47	U
Phenol	ug/kg	36	U	18	J	36	U	36	U	37	U	34	U	39	U
Pyrene	ug/kg	36	U	37	U	36	U	36	U	37	U	34	U	39	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
Lab Sample ID		OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-8.0/10-XXX	
Field Sample ID		360-24417-4		360-24417-6		360-24417-7		360-24417-9		360-24417-10		360-24417-11		360-24417-13	
Sample Collection Date		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
1,2,4-Trichlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
1,2-Dichlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
1,3-Dichlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
1,4-Dichlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
1-Methylnaphthalene	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
2,4,5-Trichlorophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2,4,6-Trichlorophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2,4-Dichlorophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2,4-Dimethylphenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2,4-Dinitrophenol	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
2,4-Dinitrotoluene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2,6-Dinitrotoluene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2-Chloronaphthalene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2-Chlorophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2-Methylnaphthalene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2-Methylphenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
2-Nitroaniline	ug/kg	170	U	190	U	170	U	190	U	190	U	190	U	190	U
2-Nitrophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
3 & 4 Methylphenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
3,3`-Dichlorobenzidine	ug/kg	70	U	75	U	70	U	75	U	75	U	77	U	75	U
3-Nitroaniline	ug/kg	170	U	190	U	170	U	190	U	190	U	190	U	190	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U	190	U	170	U	190	UJ	190	UJ	190	U	190	U
4-Bromophenyl phenyl ether	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
4-Chloro-3-methylphenol	ug/kg	70	U	75	U	70	U	75	U	75	U	77	U	75	U
4-Chloroaniline	ug/kg	70	U	75	U	70	U	75	U	75	U	77	U	75	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
4-Nitroaniline	ug/kg	170	U	190	U	170	U	190	U	190	U	190	U	190	U
4-Nitrophenol	ug/kg	170	U	190	U	170	U	190	U	190	U	190	U	190	U
Acenaphthene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Acenaphthylene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Acetophenone	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Aniline	ug/kg	35	UJ	37	UJ	35	U	37	UJ	38	UJ	38	UJ	37	U
Anthracene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Atrazine	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
Azobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzaldehyde	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzo(a)anthracene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzo(a)pyrene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzo(b)fluoranthene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzo(ghi)perylene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzo(k)fluoranthene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Benzoic Acid	ug/kg	170	U	190	U	170	U	190	UJ	190	UJ	190	U	190	U
Benzyl alcohol	ug/kg	70	U	75	U	70	U	75	U	75	U	77	U	75	U
Biphenyl	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Bis(2-Ethylhexyl)phthalate	ug/kg	87	EB	200	EB	110	U	48	U	38	U	86	EB	55	U
Butylbenzylphthalate	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
Lab Sample ID		OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-8.0/10-XXX	
Field Sample ID		360-24417-4		360-24417-6		360-24417-7		360-24417-9		360-24417-10		360-24417-11		360-24417-13	
Sample Collection Date		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
Carbazole	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Chrysene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Di-n-butylphthalate	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Di-n-octylphthalate	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Dibenz(a,h)anthracene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Dibenzofuran	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Diethylphthalate	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Dimethylphthalate	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Diphenyl ether	ug/kg	35	U	37	U	260		37	UJ	38	UJ	38	U	37	U
Diphenylamine	ug/kg	35	U	37	U	35	U	37	U	38	U	19	J	37	U
Diphenylmethanone	ug/kg	35	U	37	U	35	U	37	UJ	38	UJ	38	U	37	U
Fluoranthene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Fluorene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Hexachlorobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Hexachlorobutadiene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Hexachlorocyclopentadiene	ug/kg	70	U	75	U	70	U	75	UJ	75	UJ	77	U	75	U
Hexachloroethane	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Isophorone	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
N-Nitrosodimethylamine	ug/kg	5.3	U	5.7	U	5.3	U	5.6	U	5.6	U	5.8	U	5.7	U
N-Nitrosodiphenylamine	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Naphthalene	ug/kg	84	U	90	U	84	U	90	U	90	U	92	U	90	U
Nitrobenzene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Pentachlorophenol	ug/kg	35	U	37	U	35	U	37	U	38	U	32	J	37	U
Phenanthrene	ug/kg	42	U	45	U	42	U	45	U	45	U	46	U	45	U
Phenol	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U
Pyrene	ug/kg	35	U	37	U	35	U	37	U	38	U	38	U	37	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A	
Lab Sample ID		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-463-28/30-XXX		OC-SB-464-26/28-XXX		OC-SB-465-16/18-XXX		OC-SB-468-31/33-XXX		OC-SB-471-26/28-XXX	
Field Sample ID		360-24417-14		360-24417-15		360-24417-2		360-24417-5		360-24417-8		360-24417-12		360-24417-16	
Sample Collection Date		9/2/2009		9/2/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
1,2,4-Trichlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
1,2-Dichlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
1,3-Dichlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
1,4-Dichlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
1-Methylnaphthalene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4,5-Trichlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4,6-Trichlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4-Dichlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4-Dimethylphenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4-Dinitrophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,4-Dinitrotoluene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2,6-Dinitrotoluene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2-Chloronaphthalene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2-Chlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2-Methylnaphthalene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2-Methylphenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
2-Nitroaniline	ug/kg	180	U	210	U	R		R		180	U	R		180	U
2-Nitrophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
3 & 4 Methylphenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
3,3`-Dichlorobenzidine	ug/kg	71	U	82	U	72	U	72	U	73	U	71	U	72	U
3-Nitroaniline	ug/kg	180	U	210	U	180	U	180	U	180	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	210	U	180	U	180	U	180	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
4-Chloro-3-methylphenol	ug/kg	71	U	82	U	72	U	72	U	73	U	71	U	72	U
4-Chloroaniline	ug/kg	71	U	82	U	72	U	72	U	73	U	71	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
4-Nitroaniline	ug/kg	180	U	210	U	180	U	180	U	180	U	180	U	180	U
4-Nitrophenol	ug/kg	180	U	210	U	180	U	180	U	180	U	180	U	180	U
Acenaphthene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Acenaphthylene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Acetophenone	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Aniline	ug/kg	35	U	41	U	36	UJ	36	UJ	37	UJ	36	UJ	36	UJ
Anthracene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Atrazine	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Azobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzaldehyde	ug/kg	17	J	41	U	36	U	36	U	37	U	36	U	36	U
Benzo(a)anthracene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzo(a)pyrene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzo(b)fluoranthene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzo(ghi)perylene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzo(k)fluoranthene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Benzoic Acid	ug/kg	35	JEB	210	U	180	UJ	180	UJ	180	U	180	UJ	180	U
Benzyl alcohol	ug/kg	71	U	82	U	72	U	72	U	73	U	71	U	72	U
Biphenyl	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	180	U	290	EB	36	U	36	U	41	U	36	U	83	U
Butylbenzylphthalate	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A	
Lab Sample ID		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-463-28/30-XXX		OC-SB-464-26/28-XXX		OC-SB-465-16/18-XXX		OC-SB-468-31/33-XXX		OC-SB-471-26/28-XXX	
Field Sample ID		360-24417-14		360-24417-15		360-24417-2		360-24417-5		360-24417-8		360-24417-12		360-24417-16	
Sample Collection Date		9/2/2009		9/2/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Carbazole	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Chrysene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Di-n-butylphthalate	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Di-n-octylphthalate	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Dibenz(a,h)anthracene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Dibenzofuran	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Diethylphthalate	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Dimethylphthalate	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Diphenyl ether	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Diphenylamine	ug/kg	35	U	41	U										
Diphenylmethanone	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Fluoranthene	ug/kg	13	J	41	U	36	U	36	U	37	U	36	U	36	U
Fluorene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Hexachlorobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Hexachlorobutadiene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Hexachlorocyclopentadiene	ug/kg	71	U	82	U	72	U	72	U	73	U	71	U	72	U
Hexachloroethane	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Isophorone	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
N-Nitrosodimethylamine	ug/kg	5.4	U	6.1	U	36	U	36	U	37	U	36	U	36	U
N-Nitrosodiphenylamine	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Naphthalene	ug/kg	85	U	98	U	86	U	86	U	88	U	86	U	15	J
Nitrobenzene	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Pentachlorophenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Phenanthrene	ug/kg	43	U	49	U	43	U	43	U	44	U	43	U	43	U
Phenol	ug/kg	35	U	41	U	36	U	36	U	37	U	36	U	36	U
Pyrene	ug/kg	11	J	41	U	36	U	36	U	37	U	36	U	36	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
Lab Sample ID		OC-SB-459-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX	
Field Sample ID		360-24444-12		360-24444-1		360-24444-2		360-24444-3		360-24444-5		360-24444-8		360-24444-9	
Sample Collection Date		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009		9/2/2009	
QC Code		FS		FD		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
1,2,4-Trichlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
1,2-Dichlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
1,3-Dichlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
1,4-Dichlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
1-Methylnaphthalene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,3,4,6-Tetrachlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4,5-Trichlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4,6-Trichlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4-Dichlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4-Dimethylphenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4-Dinitrophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,4-Dinitrotoluene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2,6-Dinitrotoluene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2-Chloronaphthalene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2-Chlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2-Methylnaphthalene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2-Methylphenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
2-Nitroaniline	ug/kg	R		R		R		R		R		R		R	
2-Nitrophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
3 & 4 Methylphenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
3,3`-Dichlorobenzidine	ug/kg	R		R		R		68	U	770	U	78	U	79	U
3-Nitroaniline	ug/kg	R		1,900	U	1,900	U	170	U	1,900	U	200	U	200	U
4,6-Dinitro-2-methylphenol	ug/kg	R		1,900	U	1,900	U	170	U	1,900	U	200	U	200	U
4-Bromophenyl phenyl ether	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
4-Chloro-3-methylphenol	ug/kg	R		760	U	760	U	68	U	770	U	78	U	79	U
4-Chloroaniline	ug/kg	R		760	U	760	U	68	U	770	U	78	U	79	U
4-Chlorophenyl phenyl ether	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
4-Nitroaniline	ug/kg	R		1,900	U	1,900	U	170	U	1,900	U	200	U	200	U
4-Nitrophenol	ug/kg	R		1,900	U	1,900	U	170	U	1,900	U	200	U	200	U
Acenaphthene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Acenaphthylene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Acetophenone	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Aniline	ug/kg	R		380	UJ	380	UJ	34	UJ	390	UJ	39	UJ	40	UJ
Anthracene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Atrazine	ug/kg	R		R		R		34	U	390	U	39	U	40	U
Azobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Benzaldehyde	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Benzo(a)anthracene	ug/kg	R		380	UJ	380	UJ	34	U	390	U	39	U	40	U
Benzo(a)pyrene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Benzo(b)fluoranthene	ug/kg	R		R		R		34	U	390	U	39	U	40	U
Benzo(ghi)perylene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Benzo(k)fluoranthene	ug/kg	R		R		R		34	U	390	U	39	U	40	U
Benzoic Acid	ug/kg	R		1,900	UJ	1,900	UJ	170	UJ	1,900	UJ	200	UJ	200	UJ
Benzyl alcohol	ug/kg	R		760	U	760	U	68	U	770	U	78	U	79	U
Biphenyl	ug/kg	R		380	U	380	U	34	U	340	J	39	U	40	U
Bis(2-Chloroethoxy)methane	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Bis(2-Chloroethyl)ether	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Bis(2-Chloroisopropyl)ether	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Bis(2-Ethylhexyl)phthalate	ug/kg	8,300	JEB	900,000	EB	720,000	EB	210	EB	7,200	EB	430	JEB	520	JEB
Butylbenzylphthalate	ug/kg	R		380	UJ	380	UJ	34	U	390	U	39	U	40	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
Lab Sample ID		OC-SB-459-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX	
Field Sample ID		360-24444-12		360-24444-1		360-24444-2		360-24444-3		360-24444-5		360-24444-8		360-24444-9	
Sample Collection Date		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009		9/2/2009	
QC Code		FS		FD		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Carbazole	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Chrysene	ug/kg	R		380	UJ	380	UJ	34	U	390	U	39	U	40	U
Di-n-butylphthalate	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Di-n-octylphthalate	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Dibenz(a,h)anthracene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Dibenzofuran	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Diethylphthalate	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Dimethylphthalate	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Diphenyl ether	ug/kg	R		380	U	380	U	34	U	1,500		39	U	40	U
Diphenylamine	ug/kg	R		120	J	140	J								
Diphenylmethanone	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Fluoranthene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Fluorene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Hexachlorobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Hexachlorobutadiene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Hexachlorocyclopentadiene	ug/kg	R		R		R		68	U	770	U	78	UJ	79	UJ
Hexachloroethane	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Indeno(1,2,3-cd)pyrene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Isophorone	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
N-Nitrosodi-n-propylamine	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
N-Nitrosodimethylamine	ug/kg	5.3	U	57	UJ	57	UJ	34	U	390	U	39	U	40	U
N-Nitrosodiphenylamine	ug/kg	R		380	U	120	JEB	34	U	390	U	39	U	40	U
Naphthalene	ug/kg	R		910	U	910	U	82	U	930	U	94	U	95	U
Nitrobenzene	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Pentachlorophenol	ug/kg	R		380	U	380	U	34	U	390	U	39	U	40	U
Phenanthrene	ug/kg	R		460	U	460	U	41	U	460	U	47	U	48	U
Phenol	ug/kg	R		380	U	380	U	34	U	1,500		39	U	40	U
Pyrene	ug/kg	R		380	UJ	380	UJ	34	U	390	U	39	U	40	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-11A		OCRI-11A		OCRI-11A		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
Lab Sample ID		OC-SB-459-26/28-XXX		OC-SB-462-31/33-XXX		OC-SB-467-30/32-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX	
Field Sample ID		360-24444-13		360-24444-4		360-24444-7		360-24454-3		360-24454-4		360-24454-6		360-24454-7	
Sample Collection Date		9/3/2009		9/3/2009		9/2/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
1,2,4-Trichlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
1,2-Dichlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
1,3-Dichlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
1,4-Dichlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
1-Methylnaphthalene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,3,4,6-Tetrachlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4,5-Trichlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4,6-Trichlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4-Dichlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4-Dimethylphenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4-Dinitrophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,4-Dinitrotoluene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2,6-Dinitrotoluene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2-Chloronaphthalene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2-Chlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2-Methylnaphthalene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2-Methylphenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
2-Nitroaniline	ug/kg	180	U	R		R		190	U	180	U	170	U	180	U
2-Nitrophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
3 & 4 Methylphenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
3,3`-Dichlorobenzidine	ug/kg	73	U	73	U	74	U	76	U	74	U	68	U	71	UJ
3-Nitroaniline	ug/kg	180	U	180	U	190	U	190	U	180	U	170	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	190	U	190	U	180	U	170	U	180	U
4-Bromophenyl phenyl ether	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
4-Chloro-3-methylphenol	ug/kg	73	U	73	U	74	U	76	U	74	U	68	U	71	U
4-Chloroaniline	ug/kg	73	U	73	U	74	U	76	U	74	U	68	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
4-Nitroaniline	ug/kg	180	U	180	U	190	U	190	U	180	U	170	U	180	U
4-Nitrophenol	ug/kg	180	U	180	U	190	U	190	U	180	U	170	U	180	U
Acenaphthene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Acenaphthylene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Acetophenone	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Aniline	ug/kg	37	UJ	36	UJ	37	UJ	38	UJ	37	UJ	34	UJ	35	UJ
Anthracene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Atrazine	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Azobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Benzaldehyde	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Benzo(a)anthracene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	16	J
Benzo(a)pyrene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	16	J
Benzo(b)fluoranthene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	38	J
Benzo(ghi)perylene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	15	J
Benzo(k)fluoranthene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	13	J
Benzoic Acid	ug/kg	180	U	180	UJ	190	UJ	190	U	180	U	170	U	180	U
Benzyl alcohol	ug/kg	73	U	73	U	74	U	76	U	74	U	68	U	71	U
Biphenyl	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Bis(2-Chloroethoxy)methane	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Bis(2-Chloroethyl)ether	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Bis(2-Chloroisopropyl)ether	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Bis(2-Ethylhexyl)phthalate	ug/kg	110	U	110	U	75	U	140	U	130	U	78	U	110	UJ
Butylbenzylphthalate	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	UJ

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11A		OCRI-11A		OCRI-11A		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	OC-SB-459-26/28-XXX		OC-SB-462-31/33-XXX		OC-SB-467-30/32-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX	
	Field Sample ID	360-24444-13		360-24444-4		360-24444-7		360-24454-3		360-24454-4		360-24454-6		360-24454-7	
	Sample Collection Date	9/3/2009		9/3/2009		9/2/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Carbazole	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Chrysene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	21	J
Di-n-butylphthalate	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Di-n-octylphthalate	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	UJ
Dibenz(a,h)anthracene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	UJ
Dibenzofuran	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Diethylphthalate	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Dimethylphthalate	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Diphenyl ether	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Diphenylamine	ug/kg													35	U
Diphenylmethanone	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Fluoranthene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	22	J
Fluorene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Hexachlorobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Hexachlorobutadiene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Hexachlorocyclopentadiene	ug/kg	73	U	73	U	74	U	76	U	74	U	68	U	71	U
Hexachloroethane	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Indeno(1,2,3-cd)pyrene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	15	J
Isophorone	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
N-Nitrosodi-n-propylamine	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
N-Nitrosodimethylamine	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	5.4	U
N-Nitrosodiphenylamine	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Naphthalene	ug/kg	88	U	87	U	89	U	92	U	88	U	82	U	85	U
Nitrobenzene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Pentachlorophenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Phenanthrene	ug/kg	44	U	44	U	45	U	46	U	44	U	41	U	42	U
Phenol	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	35	U
Pyrene	ug/kg	37	U	36	U	37	U	38	U	37	U	34	U	20	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-12		OCRI-12		OCRI-12A		OCRI-12A		OCRI-13		OCRI-13		OCRI-13	
Lab Sample ID		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-461-28/30-XXX		OC-SB-470-31/33-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX	
Field Sample ID		360-24454-8		360-24454-9		360-24454-2		360-24454-5		360-24499-14		360-24499-16		360-24499-17	
Sample Collection Date		9/4/2009		9/4/2009		9/3/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
1,2,4-Trichlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
1,2-Dichlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
1,3-Dichlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
1,4-Dichlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
1-Methylnaphthalene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,4,5-Trichlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,4,6-Trichlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,4-Dichlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,4-Dimethylphenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,4-Dinitrophenol	ug/kg	36	U	39	U	35	U	36	U	16	J	33	U	350	U
2,4-Dinitrotoluene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2,6-Dinitrotoluene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2-Chloronaphthalene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2-Chlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2-Methylnaphthalene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2-Methylphenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
2-Nitroaniline	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
2-Nitrophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
3 & 4 Methylphenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
3,3`-Dichlorobenzidine	ug/kg	72	U	77	U	71	U	73	U	67	U	66	U	690	U
3-Nitroaniline	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
4-Bromophenyl phenyl ether	ug/kg	36	U	39	U	17	J	36	U	33	U	33	U	350	U
4-Chloro-3-methylphenol	ug/kg	72	U	77	U	71	U	73	U	67	U	66	U	690	U
4-Chloroaniline	ug/kg	72	U	77	U	71	U	73	U	67	U	66	U	690	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
4-Nitroaniline	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
4-Nitrophenol	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
Acenaphthene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Acenaphthylene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Acetophenone	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Aniline	ug/kg	36	UJ	39	UJ	35	UJ	36	UJ	33	UJ	33	UJ	120	J
Anthracene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Atrazine	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Azobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Benzaldehyde	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Benzo(a)anthracene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	120	J
Benzo(a)pyrene	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	170	J
Benzo(b)fluoranthene	ug/kg	36	UJ	39	U	35	U	36	U	13	J	33	U	240	J
Benzo(ghi)perylene	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	120	J
Benzo(k)fluoranthene	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	350	U
Benzoic Acid	ug/kg	180	U	190	U	180	U	180	U	170	U	170	U	1,700	U
Benzyl alcohol	ug/kg	72	U	77	U	71	U	73	U	67	U	66	U	690	U
Biphenyl	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Bis(2-Ethylhexyl)phthalate	ug/kg	110	U	170	U	140	U	87	U	360	U	340	U	9,100	U
Butylbenzylphthalate	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-12A		OCRI-12A		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-461-28/30-XXX		OC-SB-470-31/33-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX	
	Field Sample ID	360-24454-8		360-24454-9		360-24454-2		360-24454-5		360-24499-14		360-24499-16		360-24499-17	
	Sample Collection Date	9/4/2009		9/4/2009		9/3/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Carbazole	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Chrysene	ug/kg	36	U	39	U	35	U	36	U	14	J	33	U	250	J
Di-n-butylphthalate	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Di-n-octylphthalate	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	350	U
Dibenz(a,h)anthracene	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	350	U
Dibenzofuran	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Diethylphthalate	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Dimethylphthalate	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Diphenyl ether	ug/kg	36	U	39	U	50		18	J	33	U	33	U	350	U
Diphenylamine	ug/kg	36	U	39	U									250	J
Diphenylmethanone	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Fluoranthene	ug/kg	36	U	39	U	35	U	36	U	20	J	33	U	510	
Fluorene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Hexachlorobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Hexachlorobutadiene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Hexachlorocyclopentadiene	ug/kg	72	U	77	U	71	U	73	U	67	U	66	U	690	U
Hexachloroethane	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	UJ	39	U	35	U	36	U	33	U	33	U	140	J
Isophorone	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
N-Nitrosodimethylamine	ug/kg	5.5	U	5.9	U	35	U	36	U	33	U	33	U	110	U
N-Nitrosodiphenylamine	ug/kg	36	U	39	U	35	U	36	U	25	JEB	33	U	300	JEB
Naphthalene	ug/kg	86	U	93	U	85	U	87	U	80	U	80	U	830	U
Nitrobenzene	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Pentachlorophenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Phenanthrene	ug/kg	43	U	46	U	42	U	44	U	40	U	40	U	340	J
Phenol	ug/kg	36	U	39	U	35	U	36	U	33	U	33	U	350	U
Pyrene	ug/kg	36	U	39	U	35	U	36	U	17	J	33	U	420	

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
Lab Sample ID		OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX	
Field Sample ID		360-24499-19		360-24499-20		360-24499-22		360-24499-6		360-24499-7		360-24499-1		360-24499-2	
Sample Collection Date		9/10/2009		9/9/2009		9/9/2009		9/8/2009		9/8/2009		9/8/2009		9/8/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
1,2,4-Trichlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
1,2-Dichlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
1,3-Dichlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
1,4-Dichlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
1-Methylnaphthalene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4,5-Trichlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4,6-Trichlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4-Dichlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4-Dimethylphenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4-Dinitrophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,4-Dinitrotoluene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2,6-Dinitrotoluene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2-Chloronaphthalene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2-Chlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2-Methylnaphthalene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2-Methylphenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
2-Nitroaniline	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
2-Nitrophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
3 & 4 Methylphenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
3,3`-Dichlorobenzidine	ug/kg	70	U	700	U	76	U	680	U	72	U	71	U	690	U
3-Nitroaniline	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
4-Bromophenyl phenyl ether	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
4-Chloro-3-methylphenol	ug/kg	70	U	700	U	76	U	680	U	72	U	71	U	690	U
4-Chloroaniline	ug/kg	70	U	700	U	76	U	680	U	72	U	71	U	690	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
4-Nitroaniline	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
4-Nitrophenol	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
Acenaphthene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Acenaphthylene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Acetophenone	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Aniline	ug/kg	35	UJ	350	UJ	38	UJ	340	UJ	36	UJ	36	UJ	350	UJ
Anthracene	ug/kg	35	U	230	JEB	38	U	340	U	36	U	36	U	350	U
Atrazine	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Azobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Benzaldehyde	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Benzo(a)anthracene	ug/kg	35	U	800		38	U	340	U	36	U	36	U	350	U
Benzo(a)pyrene	ug/kg	35	U	740		38	U	340	U	36	U	36	U	350	U
Benzo(b)fluoranthene	ug/kg	35	U	980		38	U	340	U	36	U	36	U	350	U
Benzo(ghi)perylene	ug/kg	35	U	420		38	U	340	U	36	U	36	U	350	U
Benzo(k)fluoranthene	ug/kg	35	U	430		38	U	340	U	36	U	36	U	350	U
Benzoic Acid	ug/kg	180	U	1,700	U	190	U	1,700	U	180	U	180	U	1,700	U
Benzyl alcohol	ug/kg	70	U	700	U	76	U	680	U	72	U	71	U	690	U
Biphenyl	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Bis(2-Chloroethoxy)methane	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Bis(2-Ethylhexyl)phthalate	ug/kg	380	U	480	U	300	U	960	U	190	U	190	U	1,700	U
Butylbenzylphthalate	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
Lab Sample ID		OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX	
Field Sample ID		360-24499-19		360-24499-20		360-24499-22		360-24499-6		360-24499-7		360-24499-1		360-24499-2	
Sample Collection Date		9/10/2009		9/9/2009		9/9/2009		9/8/2009		9/8/2009		9/8/2009		9/8/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Carbazole	ug/kg	35	U	110	J	38	U	340	U	36	U	36	U	350	U
Chrysene	ug/kg	35	U	850		38	U	340	U	36	U	36	U	350	U
Di-n-butylphthalate	ug/kg	35	U	380	U	38	U	340	U	36	U	36	U	350	U
Di-n-octylphthalate	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Dibenz(a,h)anthracene	ug/kg	35	U	150	J	38	U	340	U	36	U	36	U	350	U
Dibenzofuran	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Diethylphthalate	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Dimethylphthalate	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Diphenyl ether	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Diphenylamine	ug/kg	35	U	350	U	38	U			36	U	36	U		
Diphenylmethanone	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Fluoranthene	ug/kg	35	U	1,700		38	U	340	U	36	U	36	U	350	U
Fluorene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Hexachlorobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Hexachlorobutadiene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Hexachlorocyclopentadiene	ug/kg	70	U	700	U	76	U	680	U	72	U	71	U	690	U
Hexachloroethane	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	430		38	U	340	U	36	U	36	U	350	U
Isophorone	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
N-Nitrosodimethylamine	ug/kg	5.3	U	53	U	5.7	U	340	U	5.4	U	5.4	U	350	U
N-Nitrosodiphenylamine	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Naphthalene	ug/kg	84	U	840	U	91	U	820	U	87	U	85	U	830	U
Nitrobenzene	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Pentachlorophenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Phenanthrene	ug/kg	42	U	870		46	U	410	U	43	U	43	U	420	U
Phenol	ug/kg	35	U	350	U	38	U	340	U	36	U	36	U	350	U
Pyrene	ug/kg	35	U	1,500		38	U	340	U	36	U	36	U	350	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-13		OCRI-13		OCRI-13A		OCRI-13A		OCRI-13A		OCRI-13A		OCRI-14	
Lab Sample ID		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-417-20/22-XXX		OC-SB-434-15/16-XXX		OC-SB-450-33/35-XXX		OC-SB-469-28/30-XXX		OC-SB-427-0.0/1.0-XXX	
Field Sample ID		360-24499-4		360-24499-5		360-24499-15		360-24499-18		360-24499-21		360-24499-3		360-24563-1	
Sample Collection Date		9/9/2009		9/9/2009		9/10/2009		9/10/2009		9/9/2009		9/9/2009		9/10/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
1,2,4-Trichlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
1,2-Dichlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
1,3-Dichlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
1,4-Dichlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
1-Methylnaphthalene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4,5-Trichlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4,6-Trichlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4-Dichlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4-Dimethylphenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4-Dinitrophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,4-Dinitrotoluene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2,6-Dinitrotoluene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2-Chloronaphthalene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2-Chlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2-Methylnaphthalene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2-Methylphenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
2-Nitroaniline	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
2-Nitrophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
3 & 4 Methylphenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
3,3`-Dichlorobenzidine	ug/kg	71	U	68	U	81	U	76	U	72	U	72	U	72	U
3-Nitroaniline	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
4-Chloro-3-methylphenol	ug/kg	71	U	68	U	81	U	76	U	72	U	72	U	72	U
4-Chloroaniline	ug/kg	71	U	68	U	81	U	76	U	72	U	72	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
4-Nitroaniline	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
4-Nitrophenol	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
Acenaphthene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Acenaphthylene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Acetophenone	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Aniline	ug/kg	35	UJ	34	UJ	41	UJ	38	UJ	36	UJ	36	UJ	16	J
Anthracene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Atrazine	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Azobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Benzaldehyde	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	15	J
Benzo(a)anthracene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Benzo(a)pyrene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	12	J
Benzo(b)fluoranthene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	18	J
Benzo(ghi)perylene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Benzo(k)fluoranthene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Benzoic Acid	ug/kg	180	U	170	U	200	U	190	U	180	U	180	U	180	U
Benzyl alcohol	ug/kg	71	U	68	U	81	U	76	U	72	U	72	U	72	U
Biphenyl	ug/kg	35	U	34	U	41	U	18	J	36	U	36	U	23	J
Bis(2-Chloroethoxy)methane	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	160	U	160	U	390	U	380	U	340	U	230	U	13,000	JEB
Butylbenzylphthalate	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-13		OCRI-13		OCRI-13A		OCRI-13A		OCRI-13A		OCRI-13A		OCRI-14	
Lab Sample ID		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-417-20/22-XXX		OC-SB-434-15/16-XXX		OC-SB-450-33/35-XXX		OC-SB-469-28/30-XXX		OC-SB-427-0.0/1.0-XXX	
Field Sample ID		360-24499-4		360-24499-5		360-24499-15		360-24499-18		360-24499-21		360-24499-3		360-24563-1	
Sample Collection Date		9/9/2009		9/9/2009		9/10/2009		9/10/2009		9/9/2009		9/9/2009		9/10/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Carbazole	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Chrysene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	22	J
Di-n-butylphthalate	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Di-n-octylphthalate	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Dibenz(a,h)anthracene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Dibenzofuran	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Diethylphthalate	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Dimethylphthalate	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Diphenyl ether	ug/kg	35	U	34	U	41	U	29	J	36	U	36	U	51	
Diphenylamine	ug/kg													49	
Diphenylmethanone	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Fluoranthene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	33	J
Fluorene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Hexachlorobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Hexachlorobutadiene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Hexachlorocyclopentadiene	ug/kg	71	U	68	U	81	U	76	U	72	U	72	U	72	U
Hexachloroethane	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Isophorone	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
N-Nitrosodimethylamine	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	5.4	U
N-Nitrosodiphenylamine	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	180	EB
Naphthalene	ug/kg	85	U	81	U	97	U	91	U	86	U	87	U	86	U
Nitrobenzene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Pentachlorophenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Phenanthrene	ug/kg	43	U	41	U	49	U	46	U	43	U	43	U	22	J
Phenol	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	36	U
Pyrene	ug/kg	35	U	34	U	41	U	38	U	36	U	36	U	30	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
Lab Sample ID		OC-SB-427-12/14-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX	
Field Sample ID		360-24563-2		360-24563-4		360-24563-5		360-24563-6		360-24563-9		360-24563-11		360-24563-12	
Sample Collection Date		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/11/2009		9/11/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
1,2,4-Trichlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
1,2-Dichlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
1,3-Dichlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
1,4-Dichlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
1-Methylnaphthalene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,4,5-Trichlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,4,6-Trichlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,4-Dichlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,4-Dimethylphenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,4-Dinitrophenol	ug/kg	740	U	35	UJ	34	UJ	350	U	350	U	34	U	36	U
2,4-Dinitrotoluene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2,6-Dinitrotoluene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2-Chloronaphthalene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2-Chlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2-Methylnaphthalene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2-Methylphenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
2-Nitroaniline	ug/kg	3,700	U	170	UJ	170	UJ	1,700	U	1,800	U	170	U	180	U
2-Nitrophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
3 & 4 Methylphenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
3,3`-Dichlorobenzidine	ug/kg	1,500	U	69	UJ	69	UJ	690	U	710	U	67	U	72	U
3-Nitroaniline	ug/kg	3,700	U	170	UJ	170	UJ	1,700	U	1,800	U	170	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	3,700	U	170	UJ	170	UJ	1,700	U	1,800	U	170	U	180	U
4-Bromophenyl phenyl ether	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
4-Chloro-3-methylphenol	ug/kg	1,500	U	69	U	69	U	690	U	710	U	67	U	72	U
4-Chloroaniline	ug/kg	1,500	U	R		R		690	U	710	U	67	U	72	U
4-Chlorophenyl phenyl ether	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
4-Nitroaniline	ug/kg	3,700	U	170	U	170	U	1,700	U	1,800	U	170	U	180	U
4-Nitrophenol	ug/kg	3,700	U	R		R		1,700	U	1,800	U	170	U	180	U
Acenaphthene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Acenaphthylene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Acetophenone	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Aniline	ug/kg	740	UJ	92	J	86	J	350	UJ	350	UJ	34	UJ	36	UJ
Anthracene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Atrazine	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Azobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Benzaldehyde	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Benzo(a)anthracene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Benzo(a)pyrene	ug/kg	740	U	35	UJ	34	UJ	130	J	350	U	34	U	36	U
Benzo(b)fluoranthene	ug/kg	740	U	35	UJ	34	U	220	J	350	U	34	U	36	U
Benzo(ghi)perylene	ug/kg	740	U	35	UJ	34	U	140	J	350	U	34	U	36	U
Benzo(k)fluoranthene	ug/kg	740	U	35	UJ	34	U	350	U	350	U	34	U	36	U
Benzoic Acid	ug/kg	3,700	U	170	U	170	U	1,700	U	1,800	U	170	U	180	U
Benzyl alcohol	ug/kg	1,500	U	69	U	69	U	690	U	710	U	67	U	72	U
Biphenyl	ug/kg	1,200		35	U	34	U	350	U	350	U	34	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	10,000,000	JEB	26,000	JEB	19,000	JEB	4,700	JEB	1,100	JEB	2,700	JEB	340	U
Butylbenzylphthalate	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
Lab Sample ID		OC-SB-427-12/14-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX	
Field Sample ID		360-24563-2		360-24563-4		360-24563-5		360-24563-6		360-24563-9		360-24563-11		360-24563-12	
Sample Collection Date		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/11/2009		9/11/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Carbazole	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Chrysene	ug/kg	740	U	35	U	34	U	210	J	350	U	34	U	36	U
Di-n-butylphthalate	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Di-n-octylphthalate	ug/kg	740	U	35	UJ	34	U	350	U	350	U	34	U	36	U
Dibenz(a,h)anthracene	ug/kg	740	U	35	UJ	34	U	350	U	350	U	34	U	36	U
Dibenzofuran	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Diethylphthalate	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Dimethylphthalate	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Diphenyl ether	ug/kg	6,900		35	U	34	U	350	U	350	U	34	U	36	U
Diphenylamine	ug/kg	340,000		23	J	22	J	260	J	350	U	26	J	36	U
Diphenylmethanone	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Fluoranthene	ug/kg	740	U	35	U	34	U	350		350	U	34	U	36	U
Fluorene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Hexachlorobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Hexachlorobutadiene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Hexachlorocyclopentadiene	ug/kg	1,500	U		R		R	690	U	710	U	67	U	72	U
Hexachloroethane	ug/kg	740	U	35	UJ	34	UJ	350	U	350	U	34	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	740	U	35	UJ	34	U	120	J	350	U	34	U	36	U
Isophorone	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
N-Nitrosodimethylamine	ug/kg	280	U	5.2	U	5.2	U	110	U	5.3	U	5.1	U	5.5	U
N-Nitrosodiphenylamine	ug/kg	160,000	EB	240	JEB	320	JEB	1,000	EB	350	U	57	JEB	36	U
Naphthalene	ug/kg	1,800	U	83	U	82	U	830	U	850	U	81	U	86	U
Nitrobenzene	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Pentachlorophenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Phenanthrene	ug/kg	380	J	42	U	41	U	230	J	430	U	40	U	43	U
Phenol	ug/kg	740	U	35	U	34	U	350	U	350	U	34	U	36	U
Pyrene	ug/kg	740	U	35	U	34	U	310	J	350	U	34	U	36	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14A		OCRI-14A		OCRI-15	
Lab Sample ID		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX		OC-SB-427-17/19-XXX		OC-SB-428-23/25-XXX		OC-SB-457-28/30-XXX	
Field Sample ID		360-24563-13		360-24563-14		360-24563-15		360-24563-16		360-24563-3		360-24563-7		360-24582-1	
Sample Collection Date		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/10/2009		9/10/2009		9/14/2009	
QC Code		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
1,2,4-Trichlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
1,2-Dichlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
1,3-Dichlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
1,4-Dichlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
1-Methylnaphthalene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4,5-Trichlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4,6-Trichlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4-Dichlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4-Dimethylphenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4-Dinitrophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,4-Dinitrotoluene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2,6-Dinitrotoluene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2-Chloronaphthalene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2-Chlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2-Methylnaphthalene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2-Methylphenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
2-Nitroaniline	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
2-Nitrophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
3 & 4 Methylphenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
3,3`-Dichlorobenzidine	ug/kg	71	U	72	U	690	U	72	U	72	U	75	U	85	U
3-Nitroaniline	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
4-Bromophenyl phenyl ether	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
4-Chloro-3-methylphenol	ug/kg	71	U	72	U	690	U	72	U	72	U	75	U	85	U
4-Chloroaniline	ug/kg	71	U	72	U	690	U	72	U	72	U	75	U	85	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
4-Nitroaniline	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
4-Nitrophenol	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
Acenaphthene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Acenaphthylene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Acetophenone	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Aniline	ug/kg	36	UJ	36	UJ	340	UJ	36	UJ	36	U	37	U	42	UJ
Anthracene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Atrazine	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Azobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzaldehyde	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzo(a)anthracene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzo(a)pyrene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzo(b)fluoranthene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzo(ghi)perylene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzo(k)fluoranthene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Benzoic Acid	ug/kg	180	U	180	U	1,700	U	180	U	180	U	190	U	210	U
Benzyl alcohol	ug/kg	71	U	72	U	690	U	72	U	72	U	75	U	85	U
Biphenyl	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Bis(2-Ethylhexyl)phthalate	ug/kg	66	UJ	72	UJ	390	EB	65	U	13,000	JEB	420	U	75	U
Butylbenzylphthalate	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14A		OCRI-14A		OCRI-15	
Lab Sample ID		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX		OC-SB-427-17/19-XXX		OC-SB-428-23/25-XXX		OC-SB-457-28/30-XXX	
Field Sample ID		360-24563-13		360-24563-14		360-24563-15		360-24563-16		360-24563-3		360-24563-7		360-24582-1	
Sample Collection Date		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/10/2009		9/10/2009		9/14/2009	
QC Code		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Carbazole	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Chrysene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Di-n-butylphthalate	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Di-n-octylphthalate	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Dibenz(a,h)anthracene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Dibenzofuran	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Diethylphthalate	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Dimethylphthalate	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Diphenyl ether	ug/kg	36	U	36	U	340	U	36	U	36	U	44		42	U
Diphenylamine	ug/kg	36	U	36	U	340	U	36	U	37				42	U
Diphenylmethanone	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Fluoranthene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Fluorene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Hexachlorobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Hexachlorobutadiene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Hexachlorocyclopentadiene	ug/kg	71	U	72	U	690	U	72	U	72	U	75	U	85	U
Hexachloroethane	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Isophorone	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
N-Nitrosodimethylamine	ug/kg	5.4	U	5.4	U	5.2	U	5.5	U	36	U	37	U	6.4	U
N-Nitrosodiphenylamine	ug/kg	36	U	36	U	340	U	36	U	110	EB	37	U	42	U
Naphthalene	ug/kg	85	U	86	U	830	U	86	U	86	U	90	U	100	U
Nitrobenzene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Pentachlorophenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Phenanthrene	ug/kg	43	U	43	U	410	U	43	U	43	U	45	U	51	U
Phenol	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U
Pyrene	ug/kg	36	U	36	U	340	U	36	U	36	U	37	U	42	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
Lab Sample ID		OC-SS-400-0.0/1.0-XXX		OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX	
Field Sample ID		360-24582-5		360-24582-6		360-24582-7		360-24582-9		360-24582-10		360-24582-11		360-24582-12	
Sample Collection Date		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
1,2,4-Trichlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
1,2-Dichlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
1,3-Dichlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
1,4-Dichlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
1-Methylnaphthalene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,3,4,6-Tetrachlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4,5-Trichlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4,6-Trichlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4-Dichlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4-Dimethylphenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4-Dinitrophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,4-Dinitrotoluene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2,6-Dinitrotoluene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2-Chloronaphthalene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2-Chlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2-Methylnaphthalene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2-Methylphenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
2-Nitroaniline	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
2-Nitrophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
3 & 4 Methylphenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
3,3`-Dichlorobenzidine	ug/kg	870	U	710	U	880	U	710	U	700	U	890	U	740	U
3-Nitroaniline	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
4,6-Dinitro-2-methylphenol	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
4-Bromophenyl phenyl ether	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
4-Chloro-3-methylphenol	ug/kg	870	U	710	U	880	U	710	U	700	U	890	U	740	U
4-Chloroaniline	ug/kg	870	U	710	U	880	U	710	U	700	U	890	U	740	U
4-Chlorophenyl phenyl ether	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
4-Nitroaniline	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
4-Nitrophenol	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
Acenaphthene	ug/kg	430	U	350	U	440	U	220	J	350	U	440	U	370	U
Acenaphthylene	ug/kg	430	U	160	J	440	U	350	U	350	U	440	U	370	U
Acetophenone	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Aniline	ug/kg	430	UJ	350	UJ	440	UJ	350	UJ	350	UJ	440	UJ	370	UJ
Anthracene	ug/kg	430	U	350	U	440	U	280	JEB	350	U	440	U	370	U
Atrazine	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Azobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Benzaldehyde	ug/kg	430	U	350	U	290	J	350	U	350	U	410	J	370	U
Benzo(a)anthracene	ug/kg	130	J	540		440	U	1,000		350	U	440	U	370	U
Benzo(a)pyrene	ug/kg	170	J	940		440	U	960		350	U	440	U	370	U
Benzo(b)fluoranthene	ug/kg	190	J	570		150	J	740		350	U	440	U	110	J
Benzo(ghi)perylene	ug/kg	170	J	770		440	U	670		350	U	440	U	370	U
Benzo(k)fluoranthene	ug/kg	190	J	660		440	U	1,000		350	U	440	U	370	U
Benzoic Acid	ug/kg	2,200	U	1,800	U	2,200	U	1,800	U	1,700	U	2,200	U	1,800	U
Benzyl alcohol	ug/kg	870	U	710	U	880	U	710	U	700	U	890	U	740	U
Biphenyl	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Bis(2-Chloroethoxy)methane	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Bis(2-Chloroethyl)ether	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Bis(2-Chloroisopropyl)ether	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Bis(2-Ethylhexyl)phthalate	ug/kg	430	U	350	U	440	U	2,400	EB	580	U	440	U	1,400	U
Butylbenzylphthalate	ug/kg	430	U	350	U	440	U	130	J	350	U	440	U	370	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SS-400-0.0/1.0-XXX		OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX	
	Field Sample ID	360-24582-5		360-24582-6		360-24582-7		360-24582-9		360-24582-10		360-24582-11		360-24582-12	
	Sample Collection Date	9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Carbazole	ug/kg	430	U	350	U	440	U	320	J	350	U	440	U	370	U
Chrysene	ug/kg	240	J	730		160	J	1,100		350	U	150	J	140	J
Di-n-butylphthalate	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Di-n-octylphthalate	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Dibenz(a,h)anthracene	ug/kg	310	J	500		440	U	390		350	U	280	J	370	U
Dibenzofuran	ug/kg	430	U	350	U	440	U	140	J	350	U	440	U	370	U
Diethylphthalate	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Dimethylphthalate	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Diphenyl ether	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Diphenylamine	ug/kg														
Diphenylmethanone	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Fluoranthene	ug/kg	390	J	920		270	J	2,700		350	U	230	J	210	J
Fluorene	ug/kg	430	U	350	U	440	U	190	J	350	U	440	U	370	U
Hexachlorobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Hexachlorobutadiene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Hexachlorocyclopentadiene	ug/kg	870	U	710	U	880	U	710	U	700	U	890	U	740	U
Hexachloroethane	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Indeno(1,2,3-cd)pyrene	ug/kg	170	J	730	J	440	U	650	J	350	U	440	U	370	U
Isophorone	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
N-Nitrosodi-n-propylamine	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
N-Nitrosodimethylamine	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
N-Nitrosodiphenylamine	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Naphthalene	ug/kg	1,000	U	850	U	1,100	U	130	J	830	U	1,100	U	880	U
Nitrobenzene	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Pentachlorophenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Phenanthrene	ug/kg	280	J	640		180	J	2,600		420	U	160	J	440	U
Phenol	ug/kg	430	U	350	U	440	U	350	U	350	U	440	U	370	U
Pyrene	ug/kg	380	J	1,200		210	J	2,500		350	U	190	J	190	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
Lab Sample ID		OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP	
Field Sample ID		360-24582-13		360-24582-14		360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21	
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
1,2,4-Trichlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
1,2-Dichlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
1,3-Dichlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
1,4-Dichlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
1-Methylnaphthalene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,3,4,6-Tetrachlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4,5-Trichlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4,6-Trichlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4-Dichlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4-Dimethylphenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4-Dinitrophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,4-Dinitrotoluene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2,6-Dinitrotoluene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2-Chloronaphthalene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2-Chlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2-Methylnaphthalene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2-Methylphenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
2-Nitroaniline	ug/kg	2,000	U	1,700	U	20,000	U	1,800	U	1,800	U	7,800	U		R
2-Nitrophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
3 & 4 Methylphenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
3,3`-Dichlorobenzidine	ug/kg	790	U	680	U	8,100	U	710	U	710	U	3,100	UJ		R
3-Nitroaniline	ug/kg	2,000	U	1,700	U	20,000	U	1,800	U	1,800	U	7,800	U	1,800	UJ
4,6-Dinitro-2-methylphenol	ug/kg	2,000	U	1,700	U	20,000	U	1,800	U	1,800	U	7,800	U	1,800	U
4-Bromophenyl phenyl ether	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
4-Chloro-3-methylphenol	ug/kg	790	U	680	U	8,100	U	710	U	710	U	3,100	U	720	U
4-Chloroaniline	ug/kg	790	U	680	U	8,100	U	710	U	710	U	3,100	U		R
4-Chlorophenyl phenyl ether	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
4-Nitroaniline	ug/kg	2,000	U	1,700	U	20,000	U	1,800	U	1,800	U	7,800	U	1,800	U
4-Nitrophenol	ug/kg	2,000	U	1,700	U	20,000	U	1,800	U	1,800	U	7,800	U	1,800	U
Acenaphthene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Acenaphthylene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Acetophenone	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Aniline	ug/kg	390	UJ	340	UJ	4,000	UJ	360	UJ	350	UJ	1,600	UJ		R
Anthracene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Atrazine	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Azobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Benzaldehyde	ug/kg	390	U	340	U	4,000	U	250	J	350	U	1,600	U	360	U
Benzo(a)anthracene	ug/kg	120	J	340	U	4,000	U	540		350	U	1,600	UJ	410	J
Benzo(a)pyrene	ug/kg	130	J	340	U	4,000	U	570		350	U	1,600	U	480	J
Benzo(b)fluoranthene	ug/kg	120	J	340	U	4,000	U	470		350	U	1,600	U	640	J
Benzo(ghi)perylene	ug/kg	150	J	340	U	4,000	U	420		350	U	1,600	U	240	J
Benzo(k)fluoranthene	ug/kg	140	J	340	U	4,000	U	480		350	U	1,600	U	310	J
Benzoic Acid	ug/kg	2,000	U	1,700	U	5,500	JEB	1,800	U	1,800	U	2,000	JEB	1,800	U
Benzyl alcohol	ug/kg	790	U	680	U	8,100	U	710	U	710	U	3,100	U		R
Biphenyl	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Bis(2-Chloroethoxy)methane	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Bis(2-Chloroethyl)ether	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Bis(2-Chloroisopropyl)ether	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Bis(2-Ethylhexyl)phthalate	ug/kg	2,500	EB	2,200	EB	4,000	U	880	U	2,100	EB	2,900	JEB	500	JEB
Butylbenzylphthalate	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	UJ	360	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP	
	Field Sample ID	360-24582-13		360-24582-14		360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Caprolactum	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Carbazole	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Chrysene	ug/kg	170	J	340	U	4,000	U	1,000		350	U	1,600	UJ	620	J
Di-n-butylphthalate	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	R	
Di-n-octylphthalate	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Dibenz(a,h)anthracene	ug/kg	390	U	210	J	4,000	U	320	J	350	U	1,600	U	360	U
Dibenzofuran	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Diethylphthalate	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Dimethylphthalate	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Diphenyl ether	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Diphenylamine	ug/kg														
Diphenylmethanone	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Fluoranthene	ug/kg	240	J	340	U	4,000	U	960		120	J	1,600	U	790	J
Fluorene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	210	J
Hexachlorobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Hexachlorobutadiene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Hexachlorocyclopentadiene	ug/kg	790	U	680	U	8,100	U	710	U	710	U	3,100	U	720	U
Hexachloroethane	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Indeno(1,2,3-cd)pyrene	ug/kg	160	J	340	U	4,000	U	320	J	350	U	1,600	U	260	J
Isophorone	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
N-Nitrosodi-n-propylamine	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
N-Nitrosodimethylamine	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
N-Nitrosodiphenylamine	ug/kg	390	JEB	330	JEB	4,000	U	360	U	350	U	1,600	U	360	U
Naphthalene	ug/kg	950	U	820	U	9,700	U	860	U	850	U	3,700	U	860	U
Nitrobenzene	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Pentachlorophenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Phenanthrene	ug/kg	160	J	410	U	4,800	U	410	J	420	U	1,900	U	210	J
Phenol	ug/kg	390	U	340	U	4,000	U	360	U	350	U	1,600	U	360	U
Pyrene	ug/kg	260	J	340	U	4,000	U	1,400		140	J	1,600	UJ	530	

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15	
	Lab Sample ID	OC-SS-416-0.0/1.0-XXX	
	Field Sample ID	360-24582-22	
	Sample Collection Date	9/15/2009	
	QC Code	FS	
Analyte	Units	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	360	U
1,2,4-Trichlorobenzene	ug/kg	360	U
1,2-Dichlorobenzene	ug/kg	360	U
1,3-Dichlorobenzene	ug/kg	360	U
1,4-Dichlorobenzene	ug/kg	360	U
1-Methylnaphthalene	ug/kg	360	U
2,3,4,6-Tetrachlorophenol	ug/kg	360	U
2,4,5-Trichlorophenol	ug/kg	360	U
2,4,6-Trichlorophenol	ug/kg	360	U
2,4-Dichlorophenol	ug/kg	360	U
2,4-Dimethylphenol	ug/kg	360	U
2,4-Dinitrophenol	ug/kg	360	U
2,4-Dinitrotoluene	ug/kg	360	U
2,6-Dinitrotoluene	ug/kg	360	U
2-Chloronaphthalene	ug/kg	360	U
2-Chlorophenol	ug/kg	360	U
2-Methylnaphthalene	ug/kg	360	U
2-Methylphenol	ug/kg	360	U
2-Nitroaniline	ug/kg		R
2-Nitrophenol	ug/kg	360	U
3 & 4 Methylphenol	ug/kg	360	U
3,3`-Dichlorobenzidine	ug/kg		R
3-Nitroaniline	ug/kg	1,800	UJ
4,6-Dinitro-2-methylphenol	ug/kg	1,800	U
4-Bromophenyl phenyl ether	ug/kg	360	U
4-Chloro-3-methylphenol	ug/kg	720	U
4-Chloroaniline	ug/kg		R
4-Chlorophenyl phenyl ether	ug/kg	360	U
4-Nitroaniline	ug/kg	1,800	U
4-Nitrophenol	ug/kg	1,800	U
Acenaphthene	ug/kg	360	U
Acenaphthylene	ug/kg	360	U
Acetophenone	ug/kg	360	U
Aniline	ug/kg		R
Anthracene	ug/kg	360	U
Atrazine	ug/kg	360	U
Azobenzene	ug/kg	360	U
Benzaldehyde	ug/kg	360	U
Benzo(a)anthracene	ug/kg	130	J
Benzo(a)pyrene	ug/kg	170	J
Benzo(b)fluoranthene	ug/kg	310	J
Benzo(ghi)perylene	ug/kg	160	J
Benzo(k)fluoranthene	ug/kg	360	U
Benzoic Acid	ug/kg	1,800	U
Benzyl alcohol	ug/kg		R
Biphenyl	ug/kg	360	U
Bis(2-Chloroethoxy)methane	ug/kg	360	U
Bis(2-Chloroethyl)ether	ug/kg	360	U
Bis(2-Chloroisopropyl)ether	ug/kg	360	U
Bis(2-Ethylhexyl)phthalate	ug/kg	550	JEB
Butylbenzylphthalate	ug/kg	360	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15	
	Lab Sample ID	OC-SS-416-0.0/1.0-XXX	
	Field Sample ID	360-24582-22	
	Sample Collection Date	9/15/2009	
	QC Code	FS	
Analyte	Units	Result	Qualifier
Caprolactum	ug/kg	360	U
Carbazole	ug/kg	360	U
Chrysene	ug/kg	300	J
Di-n-butylphthalate	ug/kg		R
Di-n-octylphthalate	ug/kg	360	U
Dibenz(a,h)anthracene	ug/kg	360	U
Dibenzofuran	ug/kg	360	U
Diethylphthalate	ug/kg	360	U
Dimethylphthalate	ug/kg	360	U
Diphenyl ether	ug/kg	360	U
Diphenylamine	ug/kg		
Diphenylmethanone	ug/kg	360	U
Fluoranthene	ug/kg	430	J
Fluorene	ug/kg	210	J
Hexachlorobenzene	ug/kg	360	U
Hexachlorobutadiene	ug/kg	360	U
Hexachlorocyclopentadiene	ug/kg	720	U
Hexachloroethane	ug/kg	360	U
Indeno(1,2,3-cd)pyrene	ug/kg	130	J
Isophorone	ug/kg	360	U
N-Nitrosodi-n-propylamine	ug/kg	360	U
N-Nitrosodimethylamine	ug/kg	360	U
N-Nitrosodiphenylamine	ug/kg	360	U
Naphthalene	ug/kg	870	U
Nitrobenzene	ug/kg	360	U
Pentachlorophenol	ug/kg	360	U
Phenanthrene	ug/kg	150	J
Phenol	ug/kg	360	U
Pyrene	ug/kg	340	J

Notes:
Samples analyzed by SW-846 Method 8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
R = rejected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SS-417-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX	
Field Sample ID		360-24634-1		360-24634-2		360-24634-3		360-24634-4		360-24634-5		360-24634-6		360-24634-7	
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
1,2,4-Trichlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
1,2-Dichlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
1,3-Dichlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
1,4-Dichlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
1-Methylnaphthalene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,3,4,6-Tetrachlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4,5-Trichlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4,6-Trichlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4-Dichlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4-Dimethylphenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4-Dinitrophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,4-Dinitrotoluene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2,6-Dinitrotoluene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2-Chloronaphthalene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2-Chlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2-Methylnaphthalene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2-Methylphenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
2-Nitroaniline	ug/kg	1,700	U	180	U	180	U	180	U	210	U	190	U	200	U
2-Nitrophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
3 & 4 Methylphenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
3,3`-Dichlorobenzidine	ug/kg	680	U	73	U	72	U	74	U	84	U	78	U	78	U
3-Nitroaniline	ug/kg	1,700	U	180	U	180	U	180	U	210	U	190	U	200	U
4,6-Dinitro-2-methylphenol	ug/kg	1,700	U	180	U	180	U	180	U	210	U	190	U	200	U
4-Bromophenyl phenyl ether	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
4-Chloro-3-methylphenol	ug/kg	680	U	73	U	72	U	74	U	84	U	78	U	78	U
4-Chloroaniline	ug/kg	680	U	73	U	72	U	74	U	84	U	78	U	78	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
4-Nitroaniline	ug/kg	1,700	U	180	U	180	U	180	U	210	U	190	U	200	U
4-Nitrophenol	ug/kg	1,700	U	180	U	180	U	180	U	210	U	190	U	200	U
Acenaphthene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Acenaphthylene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Acetophenone	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Aniline	ug/kg	340	UJ	36	UJ	36	UJ	37	UJ	42	UJ	39	UJ	39	UJ
Anthracene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Atrazine	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Azobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Benzaldehyde	ug/kg	340	U	23	J	36	U	15	J	42	U	39	U	17	J
Benzo(a)anthracene	ug/kg	340	U	36	U	33	J	37	U	42	U	39	U	39	U
Benzo(a)pyrene	ug/kg	340	U	36	U	38		11	J	42	U	39	U	39	U
Benzo(b)fluoranthene	ug/kg	340	U	36	U	62		37	U	42	U	39	U	39	U
Benzo(ghi)perylene	ug/kg	340	U	36	U	24	J	37	U	42	U	39	U	39	U
Benzo(k)fluoranthene	ug/kg	340	U	36	U	19	J	37	U	42	U	39	U	39	U
Benzoic Acid	ug/kg	1,700	U	240	U	210	U	180	U	210	U	190	U	200	U
Benzyl alcohol	ug/kg	680	U	73	U	72	U	74	U	84	U	78	U	78	U
Biphenyl	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Bis(2-Chloroethoxy)methane	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Bis(2-Chloroethyl)ether	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Bis(2-Chloroisopropyl)ether	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Bis(2-Ethylhexyl)phthalate	ug/kg	1,100	EB	20	JEB	210	EB	520	EB	1,600	EB	410	EB	450	EB
Butylbenzylphthalate	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Caprolactum	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SS-417-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX	
	Field Sample ID	360-24634-1		360-24634-2		360-24634-3		360-24634-4		360-24634-5		360-24634-6		360-24634-7	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Chrysene	ug/kg	340	U	13	J	47		37	U	42	U	12	J	39	U
Di-n-butylphthalate	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Di-n-octylphthalate	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Dibenz(a,h)anthracene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Dibenzofuran	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Diethylphthalate	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Dimethylphthalate	ug/kg	110	J	36	U	36	U	37	U	42	U	39	U	39	U
Diphenyl ether	ug/kg	340	U	36	U	36	U	37	U	15	J	39	U	39	U
Diphenylamine	ug/kg							14	J			39	U		
Diphenylmethanone	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Fluoranthene	ug/kg	340	U	16	J	90		12	J	20	J	16	J	39	U
Fluorene	ug/kg	340	U	36	U	22	J	37	U	42	U	39	U	39	U
Hexachlorobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Hexachlorobutadiene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Hexachlorocyclopentadiene	ug/kg	680	U	73	U	72	U	74	U	84	U	78	U	78	U
Hexachloroethane	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Indeno(1,2,3-cd)pyrene	ug/kg	340	U	36	U	23	J	37	U	42	U	39	U	39	U
Isophorone	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
N-Nitrosodi-n-propylamine	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
N-Nitrosodimethylamine	ug/kg	340	U	36	U	36	U	5.6	U	42	U	5.9	U	39	U
N-Nitrosodiphenylamine	ug/kg	450	EB	36	U	36	U	13	JEB	33	JEB	39	U	21	JEB
Naphthalene	ug/kg	810	U	88	U	13	J	89	U	100	U	93	U	94	U
Nitrobenzene	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Pentachlorophenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Phenanthrene	ug/kg	410	U	44	U	34	J	44	U	50	U	47	U	47	U
Phenol	ug/kg	340	U	36	U	36	U	37	U	42	U	39	U	39	U
Pyrene	ug/kg	340	U	17	J	73		13	J	16	J	14	J	39	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SS-424-0.0/1.0-XXX		OC-SS-425-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX	
Field Sample ID		360-24634-8		360-24634-9		360-24634-10		360-24634-11		360-24634-12		360-24634-13		360-24634-14	
Sample Collection Date		9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
1,2,4-Trichlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
1,2-Dichlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
1,3-Dichlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
1,4-Dichlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
1-Methylnaphthalene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,3,4,6-Tetrachlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4,5-Trichlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4,6-Trichlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4-Dichlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4-Dimethylphenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4-Dinitrophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,4-Dinitrotoluene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2,6-Dinitrotoluene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2-Chloronaphthalene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2-Chlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2-Methylnaphthalene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2-Methylphenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
2-Nitroaniline	ug/kg	190	U	200	U	180	U	200	U	200	U	200	U	220	U
2-Nitrophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
3 & 4 Methylphenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
3,3`-Dichlorobenzidine	ug/kg	76	U	79	U	72	U	79	U	79	U	79	U	88	U
3-Nitroaniline	ug/kg	190	U	200	U	180	U	200	U	200	U	200	U	220	U
4,6-Dinitro-2-methylphenol	ug/kg	190	U	200	U	180	U	200	U	200	U	200	U	220	U
4-Bromophenyl phenyl ether	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
4-Chloro-3-methylphenol	ug/kg	76	U	79	U	72	U	79	U	79	U	79	U	88	U
4-Chloroaniline	ug/kg	76	U	79	U	72	U	79	U	79	U	79	U	88	U
4-Chlorophenyl phenyl ether	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
4-Nitroaniline	ug/kg	190	U	200	U	180	U	200	U	200	U	200	U	220	U
4-Nitrophenol	ug/kg	190	U	200	U	180	U	200	U	200	U	200	U	220	U
Acenaphthene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Acenaphthylene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Acetophenone	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Aniline	ug/kg	38	UJ	40	UJ	36	UJ	39	UJ	39	UJ	39	UJ	44	UJ
Anthracene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Atrazine	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Azobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Benzaldehyde	ug/kg	38	U	40	U	36	U	85		27	J	39	U	60	
Benzo(a)anthracene	ug/kg	38	U	40	U	36	U	39	U	39	U	19	J	17	J
Benzo(a)pyrene	ug/kg	38	U	40	U	36	U	39	U	12	J	14	J	17	J
Benzo(b)fluoranthene	ug/kg	38	U	40	U	36	U	39	U	21	J	23	J	27	J
Benzo(ghi)perylene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Benzo(k)fluoranthene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Benzoic Acid	ug/kg	190	U	200	U	180	U	300	U	200	U	200	U	220	U
Benzyl alcohol	ug/kg	76	U	79	U	72	U	79	U	79	U	79	U	88	U
Biphenyl	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Bis(2-Chloroethoxy)methane	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Bis(2-Chloroethyl)ether	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Bis(2-Chloroisopropyl)ether	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Bis(2-Ethylhexyl)phthalate	ug/kg	380	EB	660	EB	620	EB	14	JEB	390	EB	330	EB	400	EB
Butylbenzylphthalate	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Caprolactum	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SS-424-0.0/1.0-XXX		OC-SS-425-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX	
	Field Sample ID	360-24634-8		360-24634-9		360-24634-10		360-24634-11		360-24634-12		360-24634-13		360-24634-14	
	Sample Collection Date	9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Chrysene	ug/kg	38	U	40	U	36	U	15	J	18	J	21	J	21	J
Di-n-butylphthalate	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Di-n-octylphthalate	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Dibenz(a,h)anthracene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Dibenzofuran	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Diethylphthalate	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Dimethylphthalate	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Diphenyl ether	ug/kg	38	U	15	J	36	U	39	U	26	J	39	U	44	U
Diphenylamine	ug/kg	38	U					39	U			39	U		
Diphenylmethanone	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Fluoranthene	ug/kg	38	U	40	U	12	J	18	J	27	J	42		41	J
Fluorene	ug/kg	38	U	40	U	20	J	39	U	39	U	39	U	44	U
Hexachlorobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Hexachlorobutadiene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Hexachlorocyclopentadiene	ug/kg	76	U	79	U	72	U	79	U	79	U	79	U	88	U
Hexachloroethane	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Indeno(1,2,3-cd)pyrene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Isophorone	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
N-Nitrosodi-n-propylamine	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
N-Nitrosodimethylamine	ug/kg	5.7	U	40	U	36	U	6	U	39	U	6	U	44	U
N-Nitrosodiphenylamine	ug/kg	38	U	36	JEB	14	JEB	39	U	37	JEB	12	JEB	55	EB
Naphthalene	ug/kg	91	U	95	U	86	U	94	U	94	U	95	U	110	U
Nitrobenzene	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Pentachlorophenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Phenanthrene	ug/kg	46	U	48	U	43	U	47	U	12	J	47	U	15	J
Phenol	ug/kg	38	U	40	U	36	U	39	U	39	U	39	U	44	U
Pyrene	ug/kg	38	U	40	U	36	U	18	J	26	J	47		32	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
Lab Sample ID		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX		OC-SB-406-0.0/1.0-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-434-0.0/1.0-XXX	
Field Sample ID		360-24634-15		360-24634-16		360-24665-13		360-24665-15		360-24665-16		360-24665-17		360-24665-1	
Sample Collection Date		9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
1,2,4-Trichlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
1,2-Dichlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
1,3-Dichlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
1,4-Dichlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
1-Methylnaphthalene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,3,4,6-Tetrachlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4,5-Trichlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4,6-Trichlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4-Dichlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4-Dimethylphenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4-Dinitrophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,4-Dinitrotoluene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2,6-Dinitrotoluene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2-Chloronaphthalene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2-Chlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2-Methylnaphthalene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2-Methylphenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
2-Nitroaniline	ug/kg	190	U	200	U	380	U	190	U	230	U	180	U	200	UJ
2-Nitrophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
3 & 4 Methylphenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
3,3`-Dichlorobenzidine	ug/kg	76	U	78	U	150	U	78	U	91	U	74	U		R
3-Nitroaniline	ug/kg	190	U	200	U	380	U	190	U	230	U	180	U		R
4,6-Dinitro-2-methylphenol	ug/kg	190	U	200	U	380	U	190	U	230	U	180	U	200	U
4-Bromophenyl phenyl ether	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
4-Chloro-3-methylphenol	ug/kg	76	U	78	U	150	U	78	U	91	U	74	U	80	U
4-Chloroaniline	ug/kg	76	U	78	U	150	U	78	U	91	U	74	U		R
4-Chlorophenyl phenyl ether	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
4-Nitroaniline	ug/kg	190	U	200	U	380	U	190	U	230	U	180	U	200	U
4-Nitrophenol	ug/kg	190	U	200	U	380	U	190	U	230	U	180	U	200	U
Acenaphthene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Acenaphthylene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Acetophenone	ug/kg	38	U	13	JEB	38	JEB	39	U	46	U	37	U	40	U
Aniline	ug/kg	38	UJ	39	UJ	77	U	39	UJ	46	UJ	37	UJ		R
Anthracene	ug/kg	38	U	20	JEB	77	U	39	U	46	U	37	U	40	U
Atrazine	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Azobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	UJ
Benzaldehyde	ug/kg	38	U	180		220		39	U	86		37	U	51	
Benzo(a)anthracene	ug/kg	38	U	140		77	U	39	U	15	J	37	U	40	U
Benzo(a)pyrene	ug/kg	38	U	150		77	U	39	U	21	J	37	U	40	U
Benzo(b)fluoranthene	ug/kg	14	J	240		77	U	39	U	28	J	37	U	40	U
Benzo(ghi)perylene	ug/kg	38	U	74		77	U	39	U	24	J	37	U	40	U
Benzo(k)fluoranthene	ug/kg	38	U	89		77	U	39	U	46	U	37	U	40	U
Benzoic Acid	ug/kg	190	U	390	U	420	UJ	190	UJ	230	UJ	180	UJ	200	UJ
Benzyl alcohol	ug/kg	76	U	78	U	150	U	78	U	91	U	74	U	80	U
Biphenyl	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Bis(2-Chloroethoxy)methane	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Bis(2-Chloroethyl)ether	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Bis(2-Chloroisopropyl)ether	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Bis(2-Ethylhexyl)phthalate	ug/kg	1,500	EB	180	EB	36	JEB	39	U	22	JEB	17	JEB	40	U
Butylbenzylphthalate	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Caprolactum	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX		OC-SB-406-0.0/1.0-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-434-0.0/1.0-XXX	
	Field Sample ID	360-24634-15		360-24634-16		360-24665-13		360-24665-15		360-24665-16		360-24665-17		360-24665-1	
	Sample Collection Date	9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	38	U	20	J	77	U	39	U	46	U	37	U	40	U
Chrysene	ug/kg	38	U	180		31	J	39	U	24	J	37	U	40	U
Di-n-butylphthalate	ug/kg	38	U	39	U	77	U	39	U	46	U	39	U	40	U
Di-n-octylphthalate	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Dibenz(a,h)anthracene	ug/kg	38	U	28	J	77	U	39	U	46	U	37	U	40	U
Dibenzofuran	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Diethylphthalate	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Dimethylphthalate	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Diphenyl ether	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Diphenylamine	ug/kg	20	J							46	U	37	U	40	U
Diphenylmethanone	ug/kg	38	U	39	U	77	UJ	39	U	46	U	37	U	40	U
Fluoranthene	ug/kg	12	J	460		43	J	39	U	37	J	37	U	40	U
Fluorene	ug/kg	22	J	28	J	77	U	39	U	46	U	37	U	40	U
Hexachlorobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Hexachlorobutadiene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Hexachlorocyclopentadiene	ug/kg	76	U	78	U	150	U	78	U	91	U	74	U	80	UJ
Hexachloroethane	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	UJ
Indeno(1,2,3-cd)pyrene	ug/kg	38	U	79		38	J	39	U	32	J	37	U	40	UJ
Isophorone	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
N-Nitrosodi-n-propylamine	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
N-Nitrosodimethylamine	ug/kg	5.7	U	39	U	77	U	39	U	6.8	U	5.6	U	6	U
N-Nitrosodiphenylamine	ug/kg	36	JEB	39	U	77	U	39	U	46	U	37	U	40	UJ
Naphthalene	ug/kg	91	U	94	U	180	U	94	U	110	U	88	U	96	U
Nitrobenzene	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Pentachlorophenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Phenanthrene	ug/kg	46	U	160		32	J	47	U	26	J	44	U	48	U
Phenol	ug/kg	38	U	39	U	77	U	39	U	46	U	37	U	40	U
Pyrene	ug/kg	38	U	330		42	J	39	U	43	J	37	U	40	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
Lab Sample ID		OC-SS-435-0.0/1.0-XXX		OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX	
Field Sample ID		360-24665-2		360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8	
Sample Collection Date		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
1,2,4-Trichlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
1,2-Dichlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
1,3-Dichlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
1,4-Dichlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
1-Methylnaphthalene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,3,4,6-Tetrachlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4,5-Trichlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4,6-Trichlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4-Dichlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4-Dimethylphenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4-Dinitrophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,4-Dinitrotoluene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2,6-Dinitrotoluene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2-Chloronaphthalene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2-Chlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2-Methylnaphthalene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2-Methylphenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
2-Nitroaniline	ug/kg	200	U	220	U	230	U	300	U	310	U	240	U	250	U
2-Nitrophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
3 & 4 Methylphenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
3,3`-Dichlorobenzidine	ug/kg	78	U	86	U	91	U	120	U	120	U	95	U	99	U
3-Nitroaniline	ug/kg	200	U	220	U	230	U	300	U	310	U	240	U	250	U
4,6-Dinitro-2-methylphenol	ug/kg	200	U	220	U	230	U	300	U	310	U	240	U	250	U
4-Bromophenyl phenyl ether	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
4-Chloro-3-methylphenol	ug/kg	78	U	86	U	91	U	120	U	120	U	95	U	99	U
4-Chloroaniline	ug/kg	78	U	86	U	91	U	120	U	120	U	95	U	99	U
4-Chlorophenyl phenyl ether	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
4-Nitroaniline	ug/kg	200	U	220	U	230	U	300	U	310	U	240	U	250	U
4-Nitrophenol	ug/kg	200	U	220	U	230	U	300	U	310	U	240	U	250	U
Acenaphthene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Acenaphthylene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Acetophenone	ug/kg	39	U	43	U	45	U	61	U	21	JEB	48	U	50	U
Aniline	ug/kg	39	UJ	43	UJ	45	UJ	61	UJ	62	UJ	48	UJ	50	UJ
Anthracene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Atrazine	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Azobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Benzaldehyde	ug/kg	36	J	75		50		61		170		58		85	
Benzo(a)anthracene	ug/kg	39	U	43	U	45	U	61	U	22	J	48	U	17	J
Benzo(a)pyrene	ug/kg	39	U	43	U	16	J	61	U	26	J	48	U	22	J
Benzo(b)fluoranthene	ug/kg	39	U	43	U	18	J	61	U	40	J	48	U	19	J
Benzo(ghi)perylene	ug/kg	39	U	43	U	18	J	61	U	23	J	48	U	21	J
Benzo(k)fluoranthene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Benzoic Acid	ug/kg	200	UJ	220	UJ	230	UJ	300	UJ	440	UJ	240	UJ	250	UJ
Benzyl alcohol	ug/kg	78	U	86	U	91	U	120	U	120	U	95	U	99	U
Biphenyl	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Bis(2-Chloroethoxy)methane	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Bis(2-Chloroethyl)ether	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Bis(2-Chloroisopropyl)ether	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Bis(2-Ethylhexyl)phthalate	ug/kg	12	JEB	43	U	27	JEB	22	JEB	31	JEB	31	JEB	16	JEB
Butylbenzylphthalate	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Caprolactum	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SS-435-0.0/1.0-XXX		OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX	
	Field Sample ID	360-24665-2		360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Chrysene	ug/kg	15	J	43	U	19	J	61	U	38	J	48	U	27	J
Di-n-butylphthalate	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Di-n-octylphthalate	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Dibenz(a,h)anthracene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Dibenzofuran	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Diethylphthalate	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Dimethylphthalate	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Diphenyl ether	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Diphenylamine	ug/kg							61	U					50	U
Diphenylmethanone	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Fluoranthene	ug/kg	22	J	14	J	32	J	61	U	55	J	19	J	43	J
Fluorene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Hexachlorobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Hexachlorobutadiene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Hexachlorocyclopentadiene	ug/kg	78	U	86	U	91	U	120	U	120	U	95	U	99	U
Hexachloroethane	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Indeno(1,2,3-cd)pyrene	ug/kg	15	J	43	U	22	J	61	U	36	J	17	J	30	J
Isophorone	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
N-Nitrosodi-n-propylamine	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
N-Nitrosodimethylamine	ug/kg	39	U	43	U	45	U	9.1	U	62	U	48	U	7.6	U
N-Nitrosodiphenylamine	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Naphthalene	ug/kg	94	U	100	U	110	U	150	U	20	J	110	U	120	U
Nitrobenzene	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Pentachlorophenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Phenanthrene	ug/kg	14	J	52	U	19	J	73	U	42	J	57	U	35	J
Phenol	ug/kg	39	U	43	U	45	U	61	U	62	U	48	U	50	U
Pyrene	ug/kg	20	J	13	J	32	J	61	U	64		17	J	49	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17A		OCRI-17A		OCRI-18	
Lab Sample ID		OC-SS-451-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-406-13/15-XXX		OC-SB-413-10/12-XXX		OC-SB-435-0.0/1.0-XXX	
Field Sample ID		360-24665-9		360-24665-10		360-24665-11		360-24665-12		360-24665-14		360-24665-18		360-24686-2	
Sample Collection Date		9/16/2009		9/17/2009		9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
1,2,4-Trichlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
1,2-Dichlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
1,3-Dichlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
1,4-Dichlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
1-Methylnaphthalene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,3,4,6-Tetrachlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4,5-Trichlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4,6-Trichlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4-Dichlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4-Dimethylphenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4-Dinitrophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,4-Dinitrotoluene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2,6-Dinitrotoluene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2-Chloronaphthalene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2-Chlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2-Methylnaphthalene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2-Methylphenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
2-Nitroaniline	ug/kg	210	U	190	U	190	U	200	U	180	U	180	U	9,400	U
2-Nitrophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
3 & 4 Methylphenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
3,3`-Dichlorobenzidine	ug/kg	86	U	77	U	78	U	79	U	74	U	72	U	3,800	U
3-Nitroaniline	ug/kg	210	U	190	U	190	U	200	U	180	U	180	U	9,400	U
4,6-Dinitro-2-methylphenol	ug/kg	210	U	190	U	190	U	200	U	180	U	180	U	9,400	U
4-Bromophenyl phenyl ether	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
4-Chloro-3-methylphenol	ug/kg	86	U	77	U	78	U	79	U	74	U	72	U	3,800	U
4-Chloroaniline	ug/kg	86	U	77	U	78	U	79	U	74	U	72	U	3,800	U
4-Chlorophenyl phenyl ether	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
4-Nitroaniline	ug/kg	210	U	190	U	190	U	200	U	180	U	180	U	9,400	U
4-Nitrophenol	ug/kg	210	U	190	U	190	U	200	U	180	U	180	U	9,400	U
Acenaphthene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Acenaphthylene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Acetophenone	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Aniline	ug/kg	43	UJ	38	UJ	39	UJ	39	UJ	37	UJ	36	UJ	1,900	UJ
Anthracene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Atrazine	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Azobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Benzaldehyde	ug/kg	51		67		45		98		37	U	36	U	1,900	
Benzo(a)anthracene	ug/kg	43	U	13	J	39	U	12	J	37	U	36	U	1,900	U
Benzo(a)pyrene	ug/kg	15	J	18	J	39	U	14	J	37	U	36	U	1,900	U
Benzo(b)fluoranthene	ug/kg	18	J	19	J	39	U	20	J	37	U	36	U	1,900	U
Benzo(ghi)perylene	ug/kg	43	U	15	J	39	U	39	U	37	U	36	U	1,900	U
Benzo(k)fluoranthene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Benzoic Acid	ug/kg	210	UJ	190	UJ	190	UJ	200	UJ	180	UJ	180	UJ	8,100	JEB
Benzyl alcohol	ug/kg	86	U	77	U	78	U	79	U	74	U	72	U	3,800	U
Biphenyl	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Bis(2-Chloroethoxy)methane	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Bis(2-Chloroethyl)ether	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Bis(2-Chloroisopropyl)ether	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Bis(2-Ethylhexyl)phthalate	ug/kg	20	JEB	38	U	12	JEB	14	JEB	37	JEB	16	JEB	1,400	JEB
Butylbenzylphthalate	ug/kg	43	U	38	U	39	U	39	U	37	U	40		1,900	U
Caprolactum	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17A		OCRI-17A		OCRI-18	
Lab Sample ID		OC-SS-451-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-406-13/15-XXX		OC-SB-413-10/12-XXX		OC-SB-435-0.0/1.0-XXX	
Field Sample ID		360-24665-9		360-24665-10		360-24665-11		360-24665-12		360-24665-14		360-24665-18		360-24686-2	
Sample Collection Date		9/16/2009		9/17/2009		9/16/2009		9/16/2009		9/17/2009		9/17/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Chrysene	ug/kg	18	J	20	J	39	U	18	J	37	U	36	U	1,900	U
Di-n-butylphthalate	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Di-n-octylphthalate	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Dibenz(a,h)anthracene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Dibenzofuran	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Diethylphthalate	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Dimethylphthalate	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Diphenyl ether	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Diphenylamine	ug/kg					39	U	39	U					1,900	U
Diphenylmethanone	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Fluoranthene	ug/kg	29	J	23	J	15	J	25	J	37	U	36	U	1,900	U
Fluorene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Hexachlorobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Hexachlorobutadiene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Hexachlorocyclopentadiene	ug/kg	86	U	77	U	78	U	79	U	74	U	72	U	3,800	U
Hexachloroethane	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Indeno(1,2,3-cd)pyrene	ug/kg	21	J	17	J	17	J	21	J	37	U	36	U	1,900	U
Isophorone	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
N-Nitrosodi-n-propylamine	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
N-Nitrosodimethylamine	ug/kg	43	U	38	U	5.9	U	5.9	U	37	UJ	36	UJ	570	U
N-Nitrosodiphenylamine	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Naphthalene	ug/kg	100	U	92	U	93	U	94	U	89	U	86	U	4,500	U
Nitrobenzene	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Pentachlorophenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Phenanthrene	ug/kg	18	J	14	J	47	U	14	J	44	U	43	U	2,300	U
Phenol	ug/kg	43	U	38	U	39	U	39	U	37	U	36	U	1,900	U
Pyrene	ug/kg	33	J	27	J	16	J	29	J	37	U	36	U	1,900	U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX	
Field Sample ID		360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7		360-24686-9		360-24686-10	
Sample Collection Date		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/18/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
1,2,4-Trichlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
1,2-Dichlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
1,3-Dichlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
1,4-Dichlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
1-Methylnaphthalene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,3,4,6-Tetrachlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4,5-Trichlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4,6-Trichlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4-Dichlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4-Dimethylphenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4-Dinitrophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,4-Dinitrotoluene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2,6-Dinitrotoluene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2-Chloronaphthalene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2-Chlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2-Methylnaphthalene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2-Methylphenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
2-Nitroaniline	ug/kg	180	U	190	U	86,000	U	200	U	2,000	U	200	UJ	230	U
2-Nitrophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
3 & 4 Methylphenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
3,3`-Dichlorobenzidine	ug/kg	72	U	76	U	35,000	U	82	U	810	U	79	U	92	U
3-Nitroaniline	ug/kg	180	U	190	U	86,000	U	200	U	2,000	U	200	U	230	U
4,6-Dinitro-2-methylphenol	ug/kg	180	U	190	U	86,000	U	200	U	2,000	U	200	U	230	U
4-Bromophenyl phenyl ether	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
4-Chloro-3-methylphenol	ug/kg	72	U	76	U	35,000	U	82	U	810	U	79	U	92	U
4-Chloroaniline	ug/kg	72	U	76	U	35,000	U	82	U	810	U	79	U	92	U
4-Chlorophenyl phenyl ether	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
4-Nitroaniline	ug/kg	180	U	190	U	86,000	U	200	U	2,000	U	200	U	230	U
4-Nitrophenol	ug/kg	180	U	190	U	86,000	U	200	U	2,000	U	200	U	230	U
Acenaphthene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Acenaphthylene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Acetophenone	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Aniline	ug/kg	36	UJ	38	UJ	17,000	UJ	41	UJ	410	UJ	39	UJ	46	UJ
Anthracene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Atrazine	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Azobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Benzaldehyde	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	75	
Benzo(a)anthracene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	17	J
Benzo(a)pyrene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	18	J
Benzo(b)fluoranthene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	29	J
Benzo(ghi)perylene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Benzo(k)fluoranthene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Benzoic Acid	ug/kg	180	U	190	U	34,000	JEB	200	U	2,000	U	200	U	240	U
Benzyl alcohol	ug/kg	72	U	76	U	35,000	U	82	U	810	U	79	U	92	U
Biphenyl	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Bis(2-Chloroethoxy)methane	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Bis(2-Chloroethyl)ether	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Bis(2-Chloroisopropyl)ether	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Bis(2-Ethylhexyl)phthalate	ug/kg	36	U	38	U	17,000	JEB	41	U	410	U	39	U	46	U
Butylbenzylphthalate	ug/kg	36	U	38	U	17,000	U	14	J	410	U	39	U	46	U
Caprolactum	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX	
	Field Sample ID	360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7		360-24686-9		360-24686-10	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/18/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Chrysene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	24	J
Di-n-butylphthalate	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Di-n-octylphthalate	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Dibenz(a,h)anthracene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Dibenzofuran	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Diethylphthalate	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Dimethylphthalate	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Diphenyl ether	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Diphenylamine	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Diphenylmethanone	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Fluoranthene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	38	J
Fluorene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Hexachlorobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Hexachlorobutadiene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Hexachlorocyclopentadiene	ug/kg	72	U	76	U	35,000	U	82	U	810	U	79	UJ	92	U
Hexachloroethane	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	UJ	46	U
Indeno(1,2,3-cd)pyrene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	30	J
Isophorone	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
N-Nitrosodi-n-propylamine	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
N-Nitrosodimethylamine	ug/kg	5.4	U	5.7	U	800	U	31	U	6.1	U	5.9	U	6.9	U
N-Nitrosodiphenylamine	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Naphthalene	ug/kg	87	U	91	U	41,000	U	98	U	980	U	95	U	110	U
Nitrobenzene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Pentachlorophenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Phenanthrene	ug/kg	43	U	45	U	21,000	U	49	U	490	U	47	U	27	J
Phenol	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	46	U
Pyrene	ug/kg	36	U	38	U	17,000	U	41	U	410	U	39	U	43	J

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the
associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18A		OCRI-18A	
Lab Sample ID		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX		OC-SB-400-17/19-XXX		OC-SB-473-13/15-XXX	
Field Sample ID		360-24686-13		360-24686-11		360-24686-14		360-24686-15		360-24686-16		360-24686-1		360-24686-8	
Sample Collection Date		9/18/2009		9/17/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
1,2,4-Trichlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
1,2-Dichlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
1,3-Dichlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
1,4-Dichlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
1-Methylnaphthalene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,3,4,6-Tetrachlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4,5-Trichlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4,6-Trichlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4-Dichlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4-Dimethylphenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4-Dinitrophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,4-Dinitrotoluene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2,6-Dinitrotoluene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2-Chloronaphthalene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2-Chlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2-Methylnaphthalene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2-Methylphenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
2-Nitroaniline	ug/kg	200	U	180	U	1,900	U	1,900	U	2,000	U	180	U	180	U
2-Nitrophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
3 & 4 Methylphenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
3,3`-Dichlorobenzidine	ug/kg	78	U	73	U	750	U	760	U	780	U	73	U	71	U
3-Nitroaniline	ug/kg	200	U	180	U	1,900	U	1,900	U	2,000	U	180	U	180	U
4,6-Dinitro-2-methylphenol	ug/kg	200	U	180	U	1,900	U	1,900	U	2,000	U	180	U	180	U
4-Bromophenyl phenyl ether	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
4-Chloro-3-methylphenol	ug/kg	78	U	73	U	750	U	760	U	780	U	73	U	71	U
4-Chloroaniline	ug/kg	78	U	73	U	750	U	760	U	780	U	73	U	71	U
4-Chlorophenyl phenyl ether	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
4-Nitroaniline	ug/kg	200	U	180	U	1,900	U	1,900	U	2,000	U	180	U	180	U
4-Nitrophenol	ug/kg	200	U	180	U	1,900	U	1,900	U	2,000	U	180	U	180	U
Acenaphthene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Acenaphthylene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Acetophenone	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Aniline	ug/kg	39	UJ	37	UJ	370	UJ	380	UJ	390	UJ	37	UJ	36	UJ
Anthracene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Atrazine	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Azobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Benzaldehyde	ug/kg	1,200		12	J	690		240	J	160	J	37	U	36	U
Benzo(a)anthracene	ug/kg	17	J	21	J	370	U	400		390	U	37	U	36	U
Benzo(a)pyrene	ug/kg	18	J	22	J	370	UJ	380	J	390	U	37	U	36	U
Benzo(b)fluoranthene	ug/kg	25	J	34	J	130	J	460		390	U	37	U	36	U
Benzo(ghi)perylene	ug/kg	39	U	15	J	370	UJ	260	J	390	U	37	U	36	U
Benzo(k)fluoranthene	ug/kg	13	J	37	U	370	UJ	230	J	390	U	37	U	36	U
Benzoic Acid	ug/kg	2,200	U	180	U	1,900	U	1,900	U	2,000	U	65	U	180	U
Benzyl alcohol	ug/kg	78	U	73	U	750	U	760	U	780	U	73	U	71	U
Biphenyl	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Bis(2-Chloroethoxy)methane	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Bis(2-Chloroethyl)ether	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Bis(2-Chloroisopropyl)ether	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Bis(2-Ethylhexyl)phthalate	ug/kg	19	JEB	37	EB	120	JEB	380	U	390	U	37	U	36	U
Butylbenzylphthalate	ug/kg	39	U	37	U	370	U	380	U	390	U	31	J	36	U
Caprolactum	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18A		OCRI-18A	
Lab Sample ID		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX		OC-SB-400-17/19-XXX		OC-SB-473-13/15-XXX	
Field Sample ID		360-24686-13		360-24686-11		360-24686-14		360-24686-15		360-24686-16		360-24686-1		360-24686-8	
Sample Collection Date		9/18/2009		9/17/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009		9/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Carbazole	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Chrysene	ug/kg	29	J	23	J	140	J	360	J	390	U	37	U	36	U
Di-n-butylphthalate	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Di-n-octylphthalate	ug/kg	39	U	37	U	370	UJ	380	U	390	U	37	U	36	U
Dibenz(a,h)anthracene	ug/kg	39	U	21	J	370	UJ	250	J	390	U	37	U	36	U
Dibenzofuran	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Diethylphthalate	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Dimethylphthalate	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Diphenyl ether	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Diphenylamine	ug/kg	39	U	37	U			380	U						
Diphenylmethanone	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Fluoranthene	ug/kg	35	J	41		200	J	690		120	J	37	U	36	U
Fluorene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Hexachlorobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Hexachlorobutadiene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Hexachlorocyclopentadiene	ug/kg	78	U	73	U	750	U	760	U	780	U	73	U	71	U
Hexachloroethane	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Indeno(1,2,3-cd)pyrene	ug/kg	27	J	29	J	370	UJ	380	J	220	J	37	U	36	U
Isophorone	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
N-Nitrosodi-n-propylamine	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
N-Nitrosodimethylamine	ug/kg	6	U	5.5	U	370	U	5.7	U	390	U	37	U	36	U
N-Nitrosodiphenylamine	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Naphthalene	ug/kg	94	U	88	U	210	J	910	U	940	U	88	U	86	U
Nitrobenzene	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Pentachlorophenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Phenanthrene	ug/kg	23	J	15	J	170	J	170	J	470	U	44	U	43	U
Phenol	ug/kg	39	U	37	U	370	U	380	U	390	U	37	U	36	U
Pyrene	ug/kg	36	J	40		190	J	800		120	J	37	U	36	U

Notes:
Samples analyzed by SW-846 Method 8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected
EB = compound detected in the associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-11		OCRI-12		OCRI-14		OCRI-15	
Lab Sample ID		OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-007		OC-EBK-008		OC-EBK-009		OC-EBK-010	
Field Sample ID		360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24444-16		360-24454-18		360-24563-23		360-24582-4	
Sample Collection Date		8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/3/2009		9/8/2009		9/10/2009		9/14/2009	
QC Code		EB		EB		EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
1-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,3,4,6-Tetrachlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2-Methylnaphthalene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
3 & 4 Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
3,3`-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4,6-Dinitro-2-methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Chloro-3-methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
4-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Acenaphthene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Acenaphthylene	ug/l	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Acetophenone	ug/l	0.62	J	5	U	5	U	5	U	5	U	0.52	J	0.98	J	0.66	J	0.66	J	0.66	J
Aniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Anthracene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Atrazine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Azobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Benzaldehyde	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Benzo(a)pyrene	ug/l	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Benzo(b)fluoranthene	ug/l	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Benzo(ghi)perylene	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.51	U	0.5	U	0.5	U	0.5	U
Benzo(k)fluoranthene	ug/l	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Benzoic Acid	ug/l	5	U	5	U	3.9	J	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Benzyl alcohol	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Biphenyl	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Bis(2-Chloroethyl)ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Bis(2-Chloroisopropyl)ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Bis(2-Ethylhexyl)phthalate	ug/l	2	U	5.1		2.2		0.58	J	2	U	2	U	2	U	1.6	JB	44		1.6	JB
Butylbenzylphthalate	ug/l	5	U	5	U	5	U	0.63	J	5	U	0.54	J	0.68	J	0.96	J	0.82	J	1.2	J
Caprolactum	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Carbazole	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U
Chrysene	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Di-n-butylphthalate	ug/l	1.1	J	0.9	JB	1.8	J	1.8	JB	1.3	JB	1.7	JB	1.8	JB	1.1	JB	0.96	JB	1	JB
Di-n-octylphthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5.1	U	5	U	5	U	5	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01	OCRI-02	OCRI-04	OCRI-05	OCRI-07	OCRI-09	OCRI-11	OCRI-12	OCRI-14	OCRI-15
Lab Sample ID		OC-EBK-001	OC-EBK-002	OC-EBK-003	OC-EBK-004	OC-EBK-005	OC-EBK-006	OC-EBK-007	OC-EBK-008	OC-EBK-009	OC-EBK-010
Field Sample ID		360-24173-8	360-24194-12	360-24244-14	360-24251-26	360-24327-19	360-24365-12	360-24444-16	360-24454-18	360-24563-23	360-24582-4
Sample Collection Date		8/18/2009	8/19/2009	8/21/2009	8/24/2009	8/27/2009	8/31/2009	9/3/2009	9/8/2009	9/10/2009	9/14/2009
QC Code		EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Dibenz(a,h)anthracene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.51 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Diethylphthalate	ug/l	0.51 J	0.74 J	0.78 J	5 U	0.66 J	0.54 J	5.1 U	5 U	5 U	5 U
Dimethylphthalate	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Diphenyl ether	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Diphenylamine	ug/l		5 U	5 U	5 U	5 U	5 U		5 U		5 U
Diphenylmethanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Fluoranthene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluorene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Hexachloroethane	ug/l	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Indeno(1,2,3-cd)pyrene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.51 U	0.5 U	0.5 U	0.5 U
Isophorone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
N-Nitrosodi-n-propylamine	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
N-Nitrosodimethylamine	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U		
N-Nitrosodiphenylamine	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	0.75 J	5 U
Nitrobenzene	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Pentachlorophenol	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Phenanthrene	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Phenol	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U
Pyrene	ug/l	5 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in associated method blank
QC Code:
EB = equipment blank

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-18	
	Lab Sample ID	OC-EBK-011		OC-EBK-012	
	Field Sample ID	360-24634-18		360-24686-20	
	Sample Collection Date	9/16/2009		9/17/2009	
	QC Code	EB		EB	
Analyte	Units	Result	Qualifier	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/l	5.1	U	5.1	U
1-Methylnaphthalene	ug/l	5.1	U	5.1	U
2,3,4,6-Tetrachlorophenol	ug/l	5.1	U	5.1	U
2,4,5-Trichlorophenol	ug/l	5.1	U	5.1	U
2,4,6-Trichlorophenol	ug/l	5.1	U	5.1	U
2,4-Dichlorophenol	ug/l	5.1	U	5.1	U
2,4-Dimethylphenol	ug/l	5.1	U	5.1	U
2,4-Dinitrophenol	ug/l	5.1	U	5.1	U
2,4-Dinitrotoluene	ug/l	5.1	U	5.1	U
2,6-Dinitrotoluene	ug/l	5.1	U	5.1	U
2-Chloronaphthalene	ug/l	5.1	U	5.1	U
2-Chlorophenol	ug/l	5.1	U	5.1	U
2-Methylnaphthalene	ug/l	1	U	1	U
2-Methylphenol	ug/l	5.1	U	5.1	U
2-Nitroaniline	ug/l	5.1	U	5.1	U
2-Nitrophenol	ug/l	5.1	U	5.1	U
3 & 4 Methylphenol	ug/l	5.1	U	5.1	U
3,3`-Dichlorobenzidine	ug/l	5.1	U	5.1	U
3-Nitroaniline	ug/l	5.1	U	5.1	U
4,6-Dinitro-2-methylphenol	ug/l	5.1	U	5.1	U
4-Bromophenyl phenyl ether	ug/l	5.1	U	5.1	U
4-Chloro-3-methylphenol	ug/l	5.1	U	5.1	U
4-Chloroaniline	ug/l	5.1	U	5.1	U
4-Chlorophenyl phenyl ether	ug/l	5.1	U	5.1	U
4-Nitroaniline	ug/l	5.1	U	5.1	U
4-Nitrophenol	ug/l	5.1	U	5.1	U
Acenaphthene	ug/l	1	U	1	U
Acenaphthylene	ug/l	0.3	U	0.3	U
Acetophenone	ug/l	1.5	JB	1.1	JB
Aniline	ug/l	5.1	U	5.1	U
Anthracene	ug/l	1	U	0.58	J
Atrazine	ug/l	5.1	U	5.1	U
Azobenzene	ug/l	5.1	U	5.1	U
Benzaldehyde	ug/l	5.1	U	5.1	U
Benzo(a)anthracene	ug/l	0.3	U	0.3	U
Benzo(a)pyrene	ug/l	0.2	U	0.2	U
Benzo(b)fluoranthene	ug/l	0.3	U	0.3	U
Benzo(ghi)perylene	ug/l	0.51	U	0.51	U
Benzo(k)fluoranthene	ug/l	0.3	U	0.3	U
Benzoic Acid	ug/l	5.1	U	5.1	U
Benzyl alcohol	ug/l	0.64	J	0.67	J
Biphenyl	ug/l	5.1	U	5.1	U
Bis(2-Chloroethoxy)methane	ug/l	5.1	U	5.1	U
Bis(2-Chloroethyl)ether	ug/l	5.1	U	5.1	U
Bis(2-Chloroisopropyl)ether	ug/l	5.1	U	5.1	U
Bis(2-Ethylhexyl)phthalate	ug/l	2	U	2	U
Butylbenzylphthalate	ug/l	5.1	U	1	J
Caprolactum	ug/l	5.1	U	5.1	U
Carbazole	ug/l	5.1	U	5.1	U
Chrysene	ug/l	1	U	1	U
Di-n-butylphthalate	ug/l	0.83	JB	1.2	JB
Di-n-octylphthalate	ug/l	5.1	U	5.1	U

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16	OCRI-18
	Lab Sample ID	OC-EBK-011	OC-EBK-012
	Field Sample ID	360-24634-18	360-24686-20
	Sample Collection Date	9/16/2009	9/17/2009
	QC Code	EB	EB
Dibenz(a,h)anthracene	ug/l	0.51 U	0.51 U
Dibenzofuran	ug/l	5.1 U	5.1 U
Diethylphthalate	ug/l	5.1 U	0.54 J
Dimethylphthalate	ug/l	5.1 U	5.1 U
Diphenyl ether	ug/l	5.1 U	5.1 U
Diphenylamine	ug/l	5.1 U	5.1 U
Diphenylmethanone	ug/l	5.1 U	5.1 U
Fluoranthene	ug/l	1 U	1 U
Fluorene	ug/l	1 U	1 U
Hexachlorobenzene	ug/l	1 U	1 U
Hexachlorocyclopentadiene	ug/l	5.1 U	5.1 U
Hexachloroethane	ug/l	3 U	3 U
Indeno(1,2,3-cd)pyrene	ug/l	0.51 U	0.51 U
Isophorone	ug/l	5.1 U	5.1 U
N-Nitrosodi-n-propylamine	ug/l	5.1 U	5.1 U
N-Nitrosodimethylamine	ug/l	5.1 U	5.1 U
N-Nitrosodiphenylamine	ug/l	5.1 U	5.1 U
Nitrobenzene	ug/l	5.1 U	5.1 U
Pentachlorophenol	ug/l	1 U	1 U
Phenanthrene	ug/l	0.2 U	0.2 U
Phenol	ug/l	5.1 U	5.1 U
Pyrene	ug/l	5.1 U	5.1 U

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
B = analyte detected in associated method blank
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	OC-PE-SS1039-SVOC	
	Field Sample ID	360-24365-20	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	**Units**	Result	Qualifier
1,2,4,5-Tetrachlorobenzene	ug/kg	820	
1,2,4-Trichlorobenzene	ug/kg	33	U
1,2-Dichlorobenzene	ug/kg	33	U
1,3-Dichlorobenzene	ug/kg	33	U
1,4-Dichlorobenzene	ug/kg	33	U
1-Methylnaphthalene	ug/kg	740	
2,3,4,6-Tetrachlorophenol	ug/kg	33	U
2,4,5-Trichlorophenol	ug/kg	800	
2,4,6-Trichlorophenol	ug/kg	33	U
2,4-Dichlorophenol	ug/kg	730	
2,4-Dimethylphenol	ug/kg	33	U
2,4-Dinitrophenol	ug/kg	160	
2,4-Dinitrotoluene	ug/kg	310	
2,6-Dinitrotoluene	ug/kg	1,000	
2-Chloronaphthalene	ug/kg	600	
2-Chlorophenol	ug/kg	210	
2-Methylnaphthalene	ug/kg	33	U
2-Methylphenol	ug/kg	33	U
2-Nitroaniline	ug/kg	170	U
2-Nitrophenol	ug/kg	33	U
3 & 4 Methylphenol	ug/kg	33	U
3,3`-Dichlorobenzidine	ug/kg	46	J
3-Nitroaniline	ug/kg	170	U
4,6-Dinitro-2-methylphenol	ug/kg	170	U
4-Bromophenyl phenyl ether	ug/kg	540	
4-Chloro-3-methylphenol	ug/kg	66	U
4-Chloroaniline	ug/kg	230	
4-Chlorophenyl phenyl ether	ug/kg	440	
4-Nitroaniline	ug/kg	170	U
4-Nitrophenol	ug/kg	170	U
Acenaphthene	ug/kg	27	J
Acenaphthylene	ug/kg	310	
Acetophenone	ug/kg	33	U
Aniline	ug/kg	33	U
Anthracene	ug/kg	410	EB
Atrazine	ug/kg	33	U
Azobenzene	ug/kg	33	U
Benzaldehyde	ug/kg	33	U
Benzo(a)anthracene	ug/kg	610	
Benzo(a)pyrene	ug/kg	33	U
Benzo(b)fluoranthene	ug/kg	820	
Benzo(ghi)perylene	ug/kg	33	U
Benzo(k)fluoranthene	ug/kg	370	
Benzoic Acid	ug/kg	170	U
Benzyl alcohol	ug/kg	66	U
Biphenyl	ug/kg	33	U
Bis(2-Chloroethoxy)methane	ug/kg	2,900	J
Bis(2-Chloroethyl)ether	ug/kg	1,600	
Bis(2-Chloroisopropyl)ether	ug/kg	1,200	
Bis(2-Ethylhexyl)phthalate	ug/kg	33	U
Butylbenzylphthalate	ug/kg	1,000	

TABLE 2.3 - VALIDATED RESULTS SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	OC-PE-SS1039-SVOC	
	Field Sample ID	360-24365-20	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	**Units**	Result	Qualifier
Caprolactum	ug/kg	240	
Carbazole	ug/kg	500	
Chrysene	ug/kg	33	U
Di-n-butylphthalate	ug/kg	33	U
Di-n-octylphthalate	ug/kg	560	
Dibenz(a,h)anthracene	ug/kg	33	U
Dibenzofuran	ug/kg	330	
Diethylphthalate	ug/kg	33	U
Dimethylphthalate	ug/kg	33	U
Diphenyl ether	ug/kg	33	U
Diphenylmethanone	ug/kg	33	U
Fluoranthene	ug/kg	33	U
Fluorene	ug/kg	990	
Hexachlorobenzene	ug/kg	410	
Hexachlorobutadiene	ug/kg	33	U
Hexachlorocyclopentadiene	ug/kg	650	
Hexachloroethane	ug/kg	730	
Indeno(1,2,3-cd)pyrene	ug/kg	33	U
Isophorone	ug/kg	570	
N-Nitrosodi-n-propylamine	ug/kg	580	
N-Nitrosodimethylamine	ug/kg	33	U
N-Nitrosodiphenylamine	ug/kg	33	U
Naphthalene	ug/kg	400	
Nitrobenzene	ug/kg	33	U
Phenanthrene	ug/kg	40	U
Phenol	ug/kg	33	U
Pyrene	ug/kg	33	U

Notes:
Samples analyzed by SW-846 Method 8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
QC Code:
PE = performance evaluation

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.4 - VALIDATED RESULTS SUMMARY - PCBs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11B		OCRI-12	
	Lab Sample ID	OC-SB-449-0.0/1.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-467-0.0/1.0-XXX		OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX		OC-SB-467-30/32-XXX		OC-SB-461-0.0/1.0-XXX	
	Field Sample ID	360-24343-4		360-24444-12		360-24444-6		360-24444-8		360-24444-9		360-24444-7		360-24454-1	
	Sample Collection Date	8/27/2009		9/3/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aroclor-1016	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1221	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1232	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1242	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1248	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1254	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1260	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1262	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U
Aroclor-1268	ug/kg	100	U	100	U	100	U	120	U	120	U	110	U	100	U

Notes:
Samples analyzed by SW-846 Method 8082
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.4 - VALIDATED RESULTS SUMMARY - PCBs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-12		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SS-403-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-410-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX	
	Field Sample ID	360-24454-7		360-24454-8		360-24454-9		360-24582-8		360-24582-9		360-24582-14		360-24582-15		360-24582-17	
	Sample Collection Date	9/4/2009		9/4/2009		9/4/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aroclor-1016	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1221	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1232	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1242	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1248	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1254	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1260	ug/kg	110	U	110	U	120	U	13,000		4,800		140		100	U	110	U
Aroclor-1262	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U
Aroclor-1268	ug/kg	110	U	110	U	120	U	1,000	U	510	U	98	U	100	U	110	U

Notes:
Samples analyzed by SW-846 Method 8082
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.4 - VALIDATED RESULTS SUMMARY - PCBs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-16	
	Lab Sample ID	OC-SS-413-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX		OC-SS-417-0.0/1.0-XXX	
	Field Sample ID	360-24582-18		360-24582-21		360-24582-22		360-24634-1	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FD		FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aroclor-1016	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1221	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1232	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1242	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1248	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1254	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1260	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1262	ug/kg	110	U	110	U	110	U	100	U
Aroclor-1268	ug/kg	110	U	110	U	110	U	100	U

Notes:
Samples analyzed by SW-846 Method 8082
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.4 - VALIDATED RESULTS SUMMARY - PCBs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-12	
	Lab Sample ID	OC-EBK-006		OC-EBK-008	
	Field Sample ID	360-24365-12		360-24454-18	
	Sample Collection Date	8/31/2009		9/8/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Aroclor-1016	ug/l	0.28	U	0.3	U
Aroclor-1221	ug/l	0.28	U	0.3	U
Aroclor-1232	ug/l	0.28	U	0.3	U
Aroclor-1242	ug/l	0.28	U	0.3	U
Aroclor-1248	ug/l	0.28	U	0.3	U
Aroclor-1254	ug/l	0.28	U	0.3	U
Aroclor-1260	ug/l	0.28	U	0.3	U
Aroclor-1262	ug/l	0.28	U	0.3	U
Aroclor-1268	ug/l	0.28	U	0.3	U

Notes:
Samples analyzed by SW-846 Method 8082
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.4 - VALIDATED RESULTS SUMMARY - PCBs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	OC-PE-TT2488-PCB	
	Field Sample ID	360-24365-21	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	**Units**	Result	Qualifier
Aroclor-1016	ug/kg	100	U
Aroclor-1221	ug/kg	100	U
Aroclor-1232	ug/kg	100	U
Aroclor-1242	ug/kg	100	U
Aroclor-1248	ug/kg	100	U
Aroclor-1254	ug/kg	1,000	
Aroclor-1260	ug/kg	100	U
Aroclor-1262	ug/kg	100	U
Aroclor-1268	ug/kg	100	U

Notes:
Samples analyzed by SW-846 Method 8082
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate
EB = equipment blank
PE = performance evaluation

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.5 - VALIDATED RESULTS SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-04		OCRI-04		OCRI-04		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-421-0.0/1.0-XXX		OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-23/25-XXX	
	Field Sample ID	360-24194-1		360-24194-2		360-24194-3		360-24244-1		360-24244-2		360-24244-3		360-24251-8		360-24251-9	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C11-C22 Aromatics	mg/kg	390		88		23		1,900		1,700		4,700		8.1		3.6	U
C11-C22 Aromatics (unadj.)	mg/kg	13,000		170		120		1,900		1,900		4,700		8.9		3.6	U
C19-C36 Aliphatics	mg/kg	350	U	3.6	U	3.5	U	77		110		69		3.8		3.6	U
C9-C18 Aliphatics	mg/kg	350	U	3.6	U	9.4		35	U	72	U	40		3.4	U	3.6	U
Extractable Petroleum Hydrocarbons, Total	mg/kg	390		88		32		2,000		1,800		4,800		12		3.6	U

Notes:
Samples analyzed by MADEP Method EPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.5 - VALIDATED RESULTS SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-440-6.0/8.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-17/19-XXX		OC-SB-441-8.0/10-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX	
	Field Sample ID	360-24251-10		360-24251-13		360-24251-14		360-24251-15		360-24309-1		360-24309-2		360-24365-5		360-24365-6	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/26/2009		8/26/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C11-C22 Aromatics	mg/kg	84		18		4.7		3.7	U	4.5		3.5	U	190		3.6	U
C11-C22 Aromatics (unadj.)	mg/kg	84		190		4.7		3.7	U	4.5		3.5	U	460		3.6	U
C19-C36 Aliphatics	mg/kg	130		33		3.4	U	3.7	U	3.6		3.5	U	68		3.6	U
C9-C18 Aliphatics	mg/kg	34		3.6		3.4	U	3.7	U	3.3	U	3.5	U	38	U	3.6	U
Extractable Petroleum Hydrocarbons, Total	mg/kg	250		55		4.7		3.7	U	8.1		3.5	U	250		3.6	U

Notes:
Samples analyzed by MADEP Method EPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.5 - VALIDATED RESULTS SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-11		OCRI-11		OCRI-13		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-447-3.0/5.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-469-36/37-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP	
	Field Sample ID	360-24365-7		360-24444-1		360-24444-2		360-24499-4		360-24563-1		360-24563-2		360-24563-3		360-24563-4	
	Sample Collection Date	8/31/2009		9/3/2009		9/3/2009		9/9/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C11-C22 Aromatics	mg/kg	360		590		670		3.6	U	13		890		3.6	U	17	U
C11-C22 Aromatics (unadj.)	mg/kg	2,400		1,100		1,300		3.6	U	57		7,200		5.7		240	
C19-C36 Aliphatics	mg/kg	36	U	700		730		3.6	U	21		3,200		4		39	J
C9-C18 Aliphatics	mg/kg	36	U	290		300		3.6	U	3.5	U	520		3.6	U	17	UJ
Extractable Petroleum Hydrocarbons, Total	mg/kg	360		1,600		1,700		3.6	U	34		4,600		4		39	J

Notes:
Samples analyzed by MADEP Method EPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.5 - VALIDATED RESULTS SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-18	
	Lab Sample ID	OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX		OC-SB-428-8.0/10-DUP		OC-SB-428-8.0/10-XXX		OC-SB-400-17/19-XXX	
	Field Sample ID	360-24563-5		360-24563-6		360-24563-7		360-24563-8		360-24563-9		360-24686-1	
	Sample Collection Date	9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/18/2009	
	QC Code	FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C11-C22 Aromatics	mg/kg	17	U	100		5.2		210		190		3.7	U
C11-C22 Aromatics (unadj.)	mg/kg	290		190		5.2		210		190		3.7	U
C19-C36 Aliphatics	mg/kg	45	J	98		6.4		490		450		3.7	U
C9-C18 Aliphatics	mg/kg	18	J	34	U	3.7	U	43		38		3.7	U
Extractable Petroleum Hydrocarbons, Total	mg/kg	63	J	200		12		740		680		3.7	U

Notes:
Samples analyzed by MADEP Method EPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.5 - VALIDATED RESULTS SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-05		OCRI-12	
	Lab Sample ID	OC-EBK-002		OC-EBK-004		OC-EBK-008	
	Field Sample ID	360-24194-12		360-24251-26		360-24454-18	
	Sample Collection Date	8/19/2009		8/24/2009		9/8/2009	
	QC Code	EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
C11-C22 Aromatics	ug/l	100	U	100	U	100	U
C11-C22 Aromatics (unadj.)	ug/l	100	U	100	U	100	U
C19-C36 Aliphatics	ug/l	100	U	100	U	100	U
C9-C18 Aliphatics	ug/l	100	U	100	U	100	U
Extractable Petroleum Hydrocarbons, Total	ug/l	100	U	100	U	100	U

Notes:
Samples analyzed by MADEP Method EPH-98-1
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-04		OCRI-04		OCRI-04		OCRI-05	
	Lab Sample ID	OC-SB-421-0.0/1.0-XXX		OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-440-0.0/1.0-XXX	
	Field Sample ID	360-24194-1		360-24194-2		360-24194-3		360-24244-1		360-24244-2		360-24244-3		360-24251-8	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	2.9	U	6.4	J	2.5	U	3.2	UJ	23	UJ	28	UJ	2.4	UJ
C5-C8 Aliphatics (unadj.)	mg/kg	2.9	U	6.4	J	2.5	U	3.2	UJ	23	UJ	28	UJ	2.4	UJ
C9-C10 Aromatics	mg/kg	2.9	U	3.2	J	2.5	UJ	3.4	J	61	J	36	J	2.4	UJ
C9-C12 Aliphatics	mg/kg	2.9	U	2.6	UJ	2.5	U	3.2	UJ	23	UJ	28	UJ	2.4	UJ
C9-C12 Aliphatics (unadj.)	mg/kg	2.9	U	5.8	J	2.5	U	3.2	UJ	75	J	31	J	2.4	UJ
Volatile Petroleum Hydrocarbons, Total	mg/kg	2.9	U	9.6	J	2.5	UJ	3.4	J	61	J	36	J	2.4	UJ

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-440-23/25-XXX		OC-SB-440-6.0/8.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-17/19-XXX		OC-SB-441-8.0/10-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX	
	Field Sample ID	360-24251-9		360-24251-10		360-24251-13		360-24251-14		360-24251-15		360-24309-1		360-24309-2	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U
C5-C8 Aliphatics (unadj.)	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U
C9-C10 Aromatics	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U
C9-C12 Aliphatics	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U
C9-C12 Aliphatics (unadj.)	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	2.4	UJ	3.1	UJ	2.6	U	2.1	U	2.6	U	2.7	U	2.5	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-11		OCRI-11		OCRI-13		OCRI-14	
	Lab Sample ID	OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-469-36/37-XXX		OC-SB-427-0.0/1.0-XXX	
	Field Sample ID	360-24365-5		360-24365-6		360-24365-7		360-24444-1		360-24444-2		360-24499-4		360-24563-1	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		9/3/2009		9/3/2009		9/9/2009		9/10/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	3.6	U	2.6	U	19	U	13	U	14	U	2.3	U	2.7	U
C5-C8 Aliphatics (unadj.)	mg/kg	3.6	U	2.6	U	19	U	13	U	14	U	2.3	U	2.7	U
C9-C10 Aromatics	mg/kg	3.6	U	2.6	U	19	U	120		110		2.3	U	2.7	U
C9-C12 Aliphatics	mg/kg	3.6	U	2.6	U	19	U	13	U	14	U	2.3	U	2.7	U
C9-C12 Aliphatics (unadj.)	mg/kg	3.6	U	2.6	U	19	U	110		100		2.3	U	2.7	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	3.6	U	2.6	U	19	U	120		110		2.3	U	2.7	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX		OC-SB-428-8.0/10-DUP	
	Field Sample ID	360-24563-2		360-24563-3		360-24563-4		360-24563-5		360-24563-6		360-24563-7		360-24563-8	
	Sample Collection Date	9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	1,400	J	3	U	2.9	U	2.7	U	2.3	UJ	2.2	U	26	U
C5-C8 Aliphatics (unadj.)	mg/kg	1,400	J	3	U	2.9	U	2.7	U	2.3	UJ	2.2	U	26	U
C9-C10 Aromatics	mg/kg	28	J	3	U	2.9	U	2.7	UJ	2.3	U	2.2	U	26	U
C9-C12 Aliphatics	mg/kg	27	UJ	3	U	2.9	U	2.7	U	2.3	UJ	2.2	U	26	U
C9-C12 Aliphatics (unadj.)	mg/kg	27	UJ	3	U	2.9	U	2.7	U	2.3	UJ	2.2	U	26	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	1,400	J	3	U	2.9	U	2.7	UJ	2.3	UJ	2.2	U	26	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-18	
	Lab Sample ID	OC-SB-428-8.0/10-XXX		OC-SB-400-17/19-XXX	
	Field Sample ID	360-24563-9		360-24686-1	
	Sample Collection Date	9/10/2009		9/18/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	2.6	UJ	2.5	U
C5-C8 Aliphatics (unadj.)	mg/kg	2.6	UJ	2.5	U
C9-C10 Aromatics	mg/kg	2.6	UJ	2.5	U
C9-C12 Aliphatics	mg/kg	2.6	UJ	2.5	U
C9-C12 Aliphatics (unadj.)	mg/kg	2.6	UJ	2.5	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	2.6	UJ	2.5	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-05		OCRI-12	
	Lab Sample ID	OC-EBK-002		OC-EBK-004		OC-EBK-008	
	Field Sample ID	360-24194-12		360-24251-26		360-24454-18	
	Sample Collection Date	8/19/2009		8/24/2009		9/8/2009	
	QC Code	EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	ug/l	50	U	50	U	50	U
C5-C8 Aliphatics (unadj.)	ug/l	50	U	50	U	50	U
C9-C10 Aromatics	ug/l	50	U	50	U	50	U
C9-C12 Aliphatics	ug/l	50	U	50	U	50	U
C9-C12 Aliphatics (unadj.)	ug/l	50	U	50	U	50	U
Volatile Petroleum Hydrocarbons, Total	ug/l	50	U	50	U	50	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-04		OCRI-05		OCRI-05		OCRI-06		OCRI-09		OCRI-11		OCRI-13	
	Lab Sample ID	OC-TBK-003		OC-TBK-005		OC-TBK-006		OC-TBK-007		OC-TBK-008		OC-TBK-011		OC-TBK-013		OC-TBK-015	
	Field Sample ID	360-24194-11		360-24244-13		360-24251-11		360-24251-25		360-24309-24		360-24365-11		360-24444-10		360-24499-8	
	Sample Collection Date	8/19/2009		8/21/2009		8/24/2009		8/25/2009		8/26/2009		8/31/2009		9/3/2009		9/9/2009	
	QC Code	TB		TB		TB		TB		TB		TB		TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
C5-C8 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
C9-C10 Aromatics	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
C9-C12 Aliphatics	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
C9-C12 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
TB = trip blank

TABLE 2.6 - VALIDATED RESULTS SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-18	
	Lab Sample ID	OC-TBK-017		OC-TBK-022	
	Field Sample ID	360-24563-10		360-24686-12	
	Sample Collection Date	9/11/2009		9/18/2009	
	QC Code	TB		TB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
C5-C8 Aliphatics	mg/kg	2.5	U	2.5	U
C5-C8 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U
C9-C10 Aromatics	mg/kg	2.5	U	2.5	U
C9-C12 Aliphatics	mg/kg	2.5	U	2.5	U
C9-C12 Aliphatics (unadj.)	mg/kg	2.5	U	2.5	U
Volatile Petroleum Hydrocarbons, Total	mg/kg	2.5	U	2.5	U

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
TB = trip blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
	Lab Sample ID	OC-SB-405-0.0/1.0-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-6.5/8.5-XXX	
	Field Sample ID	360-24173-1		360-24173-3		360-24173-9		360-24173-11		360-24173-4		360-24173-6		360-24173-12		360-24173-14	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	4,900		11,000		3,500		3,800		4,200		8,500		5,700		10,000	
Antimony	mg/kg	0.6	UJ	2.9	UJ	0.57	UJ	0.63	UJ	0.55	UJ	0.6	UJ	0.57	UJ	0.35	J
Arsenic	mg/kg	5.1		4.3		3.3		3		4.8		3		5		2.9	
Barium	mg/kg	12		47		5.5		8.2		7.9		26		77		47	
Beryllium	mg/kg	0.2	J	0.29		0.15	J	0.095	J	0.17	J	0.3		0.23		0.35	
Cadmium	mg/kg	0.16	J	0.31		0.066	J	0.081	J	0.077	J	0.23	J	0.27		0.27	
Calcium	mg/kg	590		3,300		540		630		510		2,300		28,000		2,600	
Chromium	mg/kg	7		21		22		21		7.5		16		15		18	
Cobalt	mg/kg	3.2		14		1.9		1.8		2.1		8.7		2.9		10	
Copper	mg/kg	5.9	EB	33		2.7	EB	4.9	EB	2.7	EB	26		7.1	EB	25	
Iron	mg/kg	7,200		19,000		4,200		5,000		5,200		14,000		9,500		16,000	
Lead	mg/kg	4.6		3		1.4	EB	18		1.4	EB	2.3	EB	12		2.1	EB
Magnesium	mg/kg	1,100		6,700		850		1,100		1,200		4,700		2,000		5,200	
Manganese	mg/kg	76		250		42		40		46		150		110		150	
Nickel	mg/kg	7		16		4.3		4.7		5.4		13		7.9		17	
Potassium	mg/kg	600		2,400		530		550		750		1,600		1,100		2,200	
Selenium	mg/kg	0.6	U	0.58	U	0.57	U	0.63	U	0.55	U	0.6	U	0.57	U	0.66	U
Silver	mg/kg	0.064	J	0.071	J	0.22	J	0.28	J	0.55	U	0.6	U	0.57	U	0.66	U
Sodium	mg/kg	120	U	180		86	J	130	U	120		82	J	280		120	J
Thallium	mg/kg	1.2	U	1.2	U	1.1	U	1.3	U	1.1	U	1.2	U	1.1	U	0.15	J
Tin	mg/kg	2.7	J	7.6	J	8.8	J	8.7	J	2.8	J	5.6	J	5.8	J	6	J
Vanadium	mg/kg	8.4		38		5.2		6.8		7.3		26		9.3		28	
Zinc	mg/kg	14		26		6.9		8.2		9		26		34		25	
Mercury	mg/kg	0.17	U	0.14	U	0.13	U	0.18	U	0.17	U	0.19	U	0.061	J	0.15	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB: compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01A		OCRI-01A		OCRI-01A		OCRI-01A		OCRI-01A		OCRI-02	
	Lab Sample ID	OC-SB-423-0.0/1.0-XXX		OC-SB-423-5.0/6.0-XXX		OC-SB-405-14/15-XXX		OC-SB-412-12/13-XXX		OC-SB-416-13/14-XXX		OC-SB-420-12/14-XXX		OC-SB-423-13/14-XXX		OC-SB-421-0.0/1.0-XXX	
	Field Sample ID	360-24173-15		360-24173-17		360-24173-2		360-24173-10		360-24173-5		360-24173-13		360-24173-16		360-24194-1	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	4,100		6,500		15,000		6,800		19,000		10,000		11,000		6,500	
Antimony	mg/kg	0.53	UJ	0.26	J	1.4	UJ	0.73	UJ	3.1	UJ	0.63	UJ	0.65	UJ	0.57	UJ
Arsenic	mg/kg	4.3		2.4		2.6	J	2.1		2.2	J	1.6		1.8		4.1	
Barium	mg/kg	8.3		15		94		46		34		130		54		14	
Beryllium	mg/kg	0.17	J	0.13	J	0.27	J	0.14	J	0.47	J	0.17	J	0.27		0.17	J
Cadmium	mg/kg	0.091	J	0.19	J	0.34	J	0.19	J	0.51	J	0.4		0.41		0.25	
Calcium	mg/kg	730		3,800		3,500		6,300		5,600		13,000		7,500		1,100	
Chromium	mg/kg	15		33		37		27		39		12		17		34	
Cobalt	mg/kg	2.2		8.4		15		12		22		17		21		2.5	
Copper	mg/kg	4.3	EB	36		33		66		39		28		21		6.5	
Iron	mg/kg	5,300		12,000		25,000		15,000		37,000		27,000		23,000		6,500	
Lead	mg/kg	2.8		1.7		0.94	JEB	3.6		0.57	JEB	0.63	U	1.6	EB	10	
Magnesium	mg/kg	1,100		2,700		10,000		2,400		15,000		4,400		5,100		1,600	
Manganese	mg/kg	68		88		170		95		460		140		150		70	
Nickel	mg/kg	4.9		12		27		11		38		13		16		10	
Potassium	mg/kg	580		930		5,200		680		770	J	4,600		2,200		720	
Selenium	mg/kg	0.53	U	0.55	U	1.4	U	0.73	U	3.1	U	0.63	U	0.65	U	0.57	U
Silver	mg/kg	0.087	J	0.26	J	1.4	U	0.076	J	3.1	U	1.6		1.4		0.42	J
Sodium	mg/kg	20	J	380		230	J	820		230	J	320		250		110	U
Thallium	mg/kg	0.11	J	1.1	U	2.7	U	1.5	U	6.3	U	1.3	U	1.3	U	1.1	U
Tin	mg/kg	5.8	J	13	J	12	J	9.1	J	12	J	2.6	J	4.9	J	14	J
Vanadium	mg/kg	7.4		28		36		45		71		60		47		12	
Zinc	mg/kg	9.9		13		23		17		39		56		55		100	
Mercury	mg/kg	0.18	U	0.15	U											0.05	J

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02A		OCRI-02A		OCRI-02A	
	Lab Sample ID	OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-421-10.5/12.5-XXX		OC-SB-424-17/19-XXX		OC-SB-425-18/20-XXX	
	Field Sample ID	360-24194-3		360-24194-4		360-24194-6		360-24194-7		360-24194-9		360-24194-2		360-24194-5		360-24194-8	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	5,900		10,000		12,000		7,000		3,500		12,000		9,300		8,600	
Antimony	mg/kg	0.62	UJ	0.53	UJ	0.61	UJ	0.57	UJ	0.69	UJ	0.64	UJ	0.72	UJ	0.66	UJ
Arsenic	mg/kg	3.1		15		3.4		4.2		6.9		2.3		2.3		3.3	
Barium	mg/kg	15		39		31		13		6.5		61		100		29	
Beryllium	mg/kg	0.14	J	0.39		0.35		0.18	J	0.15	J	0.2	J	0.17	J	0.16	J
Cadmium	mg/kg	0.28		0.22		0.48		0.2	J	0.088	J	0.32		0.21	J	0.21	J
Calcium	mg/kg	2,400		1,800		3,100		1,000		480		7,600		4,300		3,400	
Chromium	mg/kg	12		24		23		19		9.6		38		88		46	
Cobalt	mg/kg	5.1		7.4		11		3.5		1.9		16		10		8.2	
Copper	mg/kg	13		14		45		10		4.1		46		16		39	
Iron	mg/kg	10,000		15,000		18,000		9,700		6,000		22,000		18,000		16,000	
Lead	mg/kg	1.3		5.5		2.6		13		1.3		1.1		2.1		2.1	
Magnesium	mg/kg	2,700		4,100		5,900		2,000		970		5,800		7,200		6,100	
Manganese	mg/kg	92		210		160		79		41		170		160		150	
Nickel	mg/kg	8.3		20		20		10		5.9		28		41		20	
Potassium	mg/kg	850		2,800		1,200		710		550		2,900		4,200		1,600	
Selenium	mg/kg	0.62	U	0.53	U	0.61	U	0.57	U	0.69	U	0.64	U	0.72	U	0.66	U
Silver	mg/kg	0.62	U	0.53	U	0.61	U	0.068	J	0.69	U	2.1		3.6		0.27	J
Sodium	mg/kg	160		32	J	180		15	J	140	U	900		340		190	
Thallium	mg/kg	1.2	U	1.1	U	1.2	U	1.1	U	1.4	U	1.3	U	1.4	U	1.3	U
Tin	mg/kg	4	J	8.9	J	8.2	J	7.4	J	3.6	J	13	J	33	J	16	J
Vanadium	mg/kg	19		21		34		19		6.7		53		35		29	
Zinc	mg/kg	29		28		43		36		13		30		17		21	
Mercury	mg/kg	0.13	U	0.18	U	0.18	U	0.16	U	0.13	U						

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
	Lab Sample ID	OC-SB-415-0.0/1.0-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-0.0/1.0-XXX	
	Field Sample ID	360-24223-1		360-24223-3		360-24223-4		360-24223-6		360-24223-7		360-24223-10		360-24223-9		360-24223-11	
	Sample Collection Date	8/20/2009		8/20/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	5,400		4,700		3,500		3,400		6,100		4,300		4,300		12,000	
Antimony	mg/kg	0.57	UJ	0.74	UJ	0.54	UJ	0.59	UJ	0.59	UJ	0.59	UJ	0.29	J	0.62	UJ
Arsenic	mg/kg	9.5		4.6		3.3		3.3		10		4.2		4.4		6.3	
Barium	mg/kg	8.6		6.1		8.9		6.5		16		6.4		7		29	
Beryllium	mg/kg	0.19	J	0.16	J	0.14	J	0.14	J	0.24		0.17	J	0.18	J	0.39	
Cadmium	mg/kg	0.12	J	0.075	J	0.081	J	0.076	J	0.29		0.089	J	0.083	J	0.36	
Calcium	mg/kg	2,900		560		3,400		550		3,400		640		660		1,800	
Chromium	mg/kg	9		6.6		6		5.4		180		110		100		13	
Cobalt	mg/kg	1.9		1.7		2		1.7		4		1.7		1.8		10	
Copper	mg/kg	4.5		3.2		3.4		2.7		11		3.7		3.9		17	
Iron	mg/kg	6,300		4,900		4,900		4,800		12,000		4,800		4,900		23,000	
Lead	mg/kg	3.2		2.5		1.4		1.5		6.1		1.5		1.4		1.1	
Magnesium	mg/kg	1,200		870		1,100		930		2,000		930		930		6,000	
Manganese	mg/kg	47		35		59		45		89		37		40		170	
Nickel	mg/kg	6.2		4.5		4.9		4.4		11		5		5.4		16	
Potassium	mg/kg	510		430		620		530		760		570		610		1,400	
Selenium	mg/kg	0.57	U	0.74	U	0.54	U	0.59	U	0.59	U	0.59	U	0.64	U	0.62	U
Silver	mg/kg	0.57	U	0.74	U	0.54	U	0.59	U	2.6		1.7		1.5		0.62	U
Sodium	mg/kg	46	J	150	U	58	J	120	U	120	U	120	U	130	U	60	J
Thallium	mg/kg	1.1	U	1.5	U	1.1	U	1.2	U	1.2	U	1.2	U	1.3	U	1.2	U
Tin	mg/kg	3.4	J	2.3	J	5.4	U	5.9	U	80	J	50	J	46	J	3.9	J
Vanadium	mg/kg	7.1		6.3		6.2		5.6		13		5.6		6		27	
Zinc	mg/kg	12		9.7		8.3		8.3		38		13		14		14	
Mercury	mg/kg	0.19	U	0.17	U	0.12	J	0.13	U	0.15	U	0.19	U	0.16	U	0.19	U

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-03A		OCRI-04	
	Lab Sample ID	OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-415-16/18-XXX		OC-SB-419-17/19-XXX		OC-SB-426-13/15-XXX		OC-SB-436-13/15-XXX		OC-SB-432-0.0/1.0-XXX	
	Field Sample ID	360-24223-12		360-24223-13		360-24223-15		360-24223-2		360-24223-5		360-24223-8		360-24223-14		360-24244-1	
	Sample Collection Date	8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	14,000		1,900		1,200		18,000		10,000		9,500		14,000		8,500	
Antimony	mg/kg	1.2	UJ	0.56	UJ	0.57	UJ	0.46	J	0.69	UJ	0.74	UJ	1.3	UJ	0.73	J
Arsenic	mg/kg	3.8		3.7		1.5		2.2	J	2.1		3		2.8		8.8	
Barium	mg/kg	39		28		5.2		200		41		50		96		85	J
Beryllium	mg/kg	0.47		0.029	J	0.046	J	0.29	J	0.25	J	0.24	J	0.23	J	0.24	J
Cadmium	mg/kg	0.4	J	0.14	J	0.055	J	0.48	J	0.26	J	0.21	J	0.37	J	0.64	
Calcium	mg/kg	2,700		1,100		350		4,600		3,000		2,500		4,300		27,000	
Chromium	mg/kg	51		110		21		11		150		100		200		44	
Cobalt	mg/kg	14		1.7		0.94		26		12		8.5		15		4.5	
Copper	mg/kg	22		7.1		3.8		26		16		42		39		71	
Iron	mg/kg	26,000		4,300		2,800		33,000		22,000		16,000		25,000		18,000	
Lead	mg/kg	0.78	J	6.6		2.3		1.3	U	2		1.8		2.7		17	J
Magnesium	mg/kg	6,700		430		500		13,000		8,100		5,200		9,400		3,300	J
Manganese	mg/kg	300		37		22		310		180		130		190		140	
Nickel	mg/kg	20		3.9		2.8		23		19		15		24		20	J
Potassium	mg/kg	1,500		700		410		9,700		2,100		1,700		3,900		1,800	J
Selenium	mg/kg	1.2	U	0.56	U	0.57	U	1.3	U	0.69	U	0.74	U	1.3	U	0.62	U
Silver	mg/kg	0.29	J	1.9		0.21	J	0.13	J	2		1.4		2.8		0.32	J
Sodium	mg/kg	55	J	40	J	20	J	470		970		180		250	J	120	U
Thallium	mg/kg	2.3	U	1.1	U	1.1	U	0.2	J	1.4	U	1.5	U	2.6	U	0.13	J
Tin	mg/kg	19	J	48	J	8.8	J	13	UJ	57	J	39	J	79	J	17	J
Vanadium	mg/kg	31		3.6		3.1		65		32		27		46		18	
Zinc	mg/kg	17		9.6		7.6		21		18		21		26		250	
Mercury	mg/kg	0.18	U	0.17	U	0.047	J									0.16	U

Notes:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
	Lab Sample ID	OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX	
	Field Sample ID	360-24244-2		360-24244-3		360-24244-10		360-24244-12		360-24244-4		360-24244-6		360-24244-7		360-24244-9	
	Sample Collection Date	8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	2,700		340		7,000		4,200		4,200		670		6,300		3,300	
Antimony	mg/kg	0.58	UJ	0.76	UJ	0.64	UJ	0.65	UJ	0.68	UJ	0.68	UJ	0.56	UJ	0.74	UJ
Arsenic	mg/kg	2.5		0.9	J	5.4		4		4.5		1.7		3.3		5.2	
Barium	mg/kg	35	J	2.2	J	25	J	6.9	J	12	J	3.7	J	26	J	12	J
Beryllium	mg/kg	0.082	J	0.3	U	0.23	J	0.15	J	0.15	J	0.037	J	0.25		0.09	J
Cadmium	mg/kg	0.098	J	0.019	J	0.42		0.069	J	0.24	J	0.036	J	0.24		0.11	J
Calcium	mg/kg	1,300		410		4,200		340		3,500		580		2,500		810	
Chromium	mg/kg	18		11		21		5.6		57		2.5		11		15	
Cobalt	mg/kg	2.8		0.29	J	2.9		1.8		2.6		0.54	J	5.3		1.7	
Copper	mg/kg	5.2		2.9		14		2.6		19		1.4	EB	14		4.7	
Iron	mg/kg	6,800		990		7,600		4,500		11,000		2,000		11,000		7,800	
Lead	mg/kg	1.9	J	0.73	J	39	J	1.4	J	3	J	0.81	J	5	J	1.9	J
Magnesium	mg/kg	1,400	J	69	J	1,600	J	830	J	1,200	J	290	J	2,900	J	1,100	J
Manganese	mg/kg	43		5.8		79		31		79		12		160		40	
Nickel	mg/kg	4.3	J	0.93	J	7.6	J	5	J	10	J	1.5	J	9.9	J	5.4	J
Potassium	mg/kg	1,000	J	270	J	870	J	430	J	700	J	410	J	1,100	J	740	J
Selenium	mg/kg	0.58	U	0.76	U	0.64	U	0.65	U	0.68	U	0.68	U	0.56	U	0.74	U
Silver	mg/kg	0.085	J	0.76	U	0.19	J	0.65	U	0.83		0.68	U	0.56	U	0.74	U
Sodium	mg/kg	120		26	J	51	J	130	U	75	J	29	J	76	J	27	J
Thallium	mg/kg	1.2	UJ	1.5	UJ	1.3	UJ	1.3	UJ	1.4	UJ	1.4	UJ	1.1	UJ	1.5	UJ
Tin	mg/kg	6.8	J	4.9	J	8.4	J	6.5	U	24	J	6.8	U	3.7	J	5.5	J
Vanadium	mg/kg	9.8		0.89	J	11		6		8.1		2.2		16		9.7	
Zinc	mg/kg	6.3		3.7	J	44		14		16		2.9	J	34		9.5	
Mercury	mg/kg	0.18	U	0.18	U	0.19	U	0.15	U	0.14	U	0.21	U	0.45		0.21	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04A		OCRI-04A		OCRI-04A		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-437-21/23-XXX		OC-SB-443-18/20-XXX		OC-SB-445-25/27-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-438-0.0/1.0-XXX		OC-SB-438-5.0/7.0-XXX	
	Field Sample ID	360-24244-11		360-24244-5		360-24244-8		360-24251-1		360-24251-3		360-24251-4		360-24251-23		360-24251-12	
	Sample Collection Date	8/21/2009		8/20/2009		8/21/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	9,500		6,900		8,500		6,500		3,700		3,500		6,700		3,900	
Antimony	mg/kg	0.63	UJ	0.68	UJ	0.7	UJ	0.59	UJ	0.61	UJ	0.72	UJ	0.61	UJ	0.62	UJ
Arsenic	mg/kg	3.7		4.5		4.9		5.1		3.2		3.5		16		4.2	
Barium	mg/kg	40		42		37		9.5		5.3		4.6		11		6.6	
Beryllium	mg/kg	0.22	J	0.12	J	0.22	J	0.21	J	0.14	J	0.13	J	0.26		0.25	
Cadmium	mg/kg	0.26		0.31		0.26	J	0.11	J	0.07	J	0.068	J	0.15	J	0.076	J
Calcium	mg/kg	3,200	J	4,700	J	3,000	J	630		400		360		1,000		500	
Chromium	mg/kg	35		20		48		11		5.8		5.1		10		5.8	
Cobalt	mg/kg	7.5		6.8		7.8		2		1.8		1.7		2.5		1.8	
Copper	mg/kg	15		15		20		5.8		2.8		3.2		7		3.1	
Iron	mg/kg	18,000		21,000		19,000		6,700		4,800		4,300		9,300		5,200	
Lead	mg/kg	1.3	J	2.5	J	1.2	J	3.8		1.4		1.8		4.4		1.2	
Magnesium	mg/kg	6,200	J	3,000	J	5,100	J	1,000	J	960	J	820	J	1,700	J	970	J
Manganese	mg/kg	150		83		110		41		34		30		60		35	
Nickel	mg/kg	15	J	9.3	J	17	J	5.8		4.8		4.8		6.8		5.2	
Potassium	mg/kg	2,600		2,600		2,300		540	J	530	J	430	J	830	J	600	J
Selenium	mg/kg	0.63	U	0.68	U	0.7	U	0.59	U	0.61	U	0.72	U	0.61	U	0.62	U
Silver	mg/kg	0.07	J	2.2		0.28	J	0.59	U	0.61	U	0.72	U	0.61	U	0.62	U
Sodium	mg/kg	130		800		120	J	120	U	120	U	140	U	59	J	120	U
Thallium	mg/kg	1.3	U	1.4	U	1.4	U	1.2	U	1.2	U	1.4	U	1.2	U	1.2	U
Tin	mg/kg	12	J	6.1	J	17	J	4.2	J	6.1	UJ	7.2	UJ	3.7	J	6.2	UJ
Vanadium	mg/kg	31		45		31		17		6.1		5.6		10		6	
Zinc	mg/kg	24		11		20		16		14		13		12		16	
Mercury	mg/kg							0.19	U	0.14	U	0.18	U	0.15	U	0.19	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-439-0.0-1.0-XXX		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-6.0/8.0-XXX		OC-SB-441-0.0/1.0-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-5.0/7.0-DUP	
	Field Sample ID	360-24251-5		360-24251-7		360-24251-8		360-24251-10		360-24251-13		360-24251-15		360-24251-16		360-24251-18	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	3,100		3,300		7,500		5,400		6,400		2,900		1,000		430	
Antimony	mg/kg	0.63	UJ	0.63	UJ	0.58	UJ	0.65	UJ	0.61	UJ	0.66	UJ	0.43	J	0.67	UJ
Arsenic	mg/kg	2.3		3		10		4.6		8.2		2.9		1.3		0.52	J
Barium	mg/kg	27		8.5		24		9.5		11		7.8		16		4.1	
Beryllium	mg/kg	0.18	J	0.11	J	0.27		0.18	J	0.24	J	0.11	J	0.037	J	0.27	U
Cadmium	mg/kg	1.4		0.099	J	0.2	J	0.14	J	0.22	J	0.09	J	0.12	J	0.021	J
Calcium	mg/kg	4,000		830		1,300		750		780		860		2,900		240	
Chromium	mg/kg	800		9.6		21		9.1		29		8.6		12		1.8	
Cobalt	mg/kg	12		1.8		5.7		2.5		3.1		1.5		0.9		0.41	J
Copper	mg/kg	100		3.6		9.7		4.6		41		3.2		5.8		0.6	J
Iron	mg/kg	12,000		5,300		12,000		5,900		9,400		6,000		2,900		590	
Lead	mg/kg	18		1.8		4.4		3.4		15		1.4		97		1.6	
Magnesium	mg/kg	1,600	J	980	J	3,100	J	1,100	J	1,500	J	1,000	J	410	J	71	J
Manganese	mg/kg	250		42		140		50		67		43		25		8.3	
Nickel	mg/kg	76		5.2		19		7.6		20		5.1		7.6		1.3	U
Potassium	mg/kg	400	J	610	J	1,500	J	560	J	610	J	740	J	370	J	320	J
Selenium	mg/kg	0.63	U	0.63	U	0.58	U	0.65	U	0.61	U	0.66	U	0.63	U	0.67	U
Silver	mg/kg	15		0.63	U	0.58	U	0.65	U	0.11	J	0.66	U	0.61	J	0.67	U
Sodium	mg/kg	22	J	37	J	120	U	130	U	120	U	130	U	470		130	U
Thallium	mg/kg	0.35	U	1.3	U	1.2	U	1.3	U	1.2	U	1.3	U	1.3	U	1.3	U
Tin	mg/kg	400	J	3.7	J	7.9	J	3.5	J	12	J	3	J	5.6	J	6.7	UJ
Vanadium	mg/kg	60		6.8		19		20		110		9.8		26		1.5	
Zinc	mg/kg	97		10		21		11		28		7.4		15		8.3	
Mercury	mg/kg	0.085	J	0.18	U	0.16	U	0.19	U	0.18	U	0.16	U	0.18		0.17	U

Notes:
Samples analyzed by SW-846 Method
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05A		OCRI-05A		OCRI-05A		OCRI-05A	
	Lab Sample ID	OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-433-20/22-XXX		OC-SB-438-20/22-XXX		OC-SB-439-16/18-XXX		OC-SB-440-23/25-XXX	
	Field Sample ID	360-24251-19		360-24251-20		360-24251-21		360-24251-22		360-24251-2		360-24251-24		360-24251-6		360-24251-9	
	Sample Collection Date	8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	410		5,100		10,000		8,200		17,000		6,400		4,800		5,800	
Antimony	mg/kg	0.69	UJ	0.63	UJ	0.24	J	0.59	UJ	1.3	UJ	0.59	UJ	0.65	UJ	0.73	UJ
Arsenic	mg/kg	0.5	J	4.6		1.5		3.1		3.3		2.7		3.2		2.2	
Barium	mg/kg	3.1		12		76		30		100		23		24		16	
Beryllium	mg/kg	0.28	U	0.18	J	0.22	J	0.23	J	0.39	J	0.16	J	0.19	J	0.24	J
Cadmium	mg/kg	0.021	J	0.14	J	0.23	J	0.15	J	0.34	J	0.15	J	0.17	J	0.15	J
Calcium	mg/kg	190		690		2,300		1,600		3,300		1,600		1,600		2,900	
Chromium	mg/kg	1.8		110		390		1,200		49		17		17		13	
Cobalt	mg/kg	0.33	J	2		9.1		4.2		13		5		6.1		4.5	
Copper	mg/kg	0.46	J	4.2		15		8.7		18		18		12		11	
Iron	mg/kg	530		6,500		18,000		9,300		28,000		12,000		9,600		11,000	
Lead	mg/kg	1.2		4.8		1.2		3.2		1.1	J	1		1.5		1.6	
Magnesium	mg/kg	63	J	1,200	J	8,100	J	2,700	J	11,000		3,800		2,400		3,000	
Manganese	mg/kg	6.6		53		200		100		190		85		75		91	
Nickel	mg/kg	1.4	U	8.1		20		10		32		11		13		9.5	
Potassium	mg/kg	330	J	510	J	2,700		1,800	J	7,400		1,600		920		1,400	
Selenium	mg/kg	0.69	U	0.63	U	0.67	U	0.59	U	1.3	U	0.59	U	0.65	U	0.73	U
Silver	mg/kg	0.69	U	1.8		6.9		24		1.3	U	0.59	U	0.65	U	0.73	U
Sodium	mg/kg	140	U	130	U	83	J	100	J	150	J	59	J	88	J	140	J
Thallium	mg/kg	1.4	U	1.3	U	1.3	U	0.33	U	2.6	U	1.2	U	1.3	U	1.5	U
Tin	mg/kg	6.9	UJ	50	J	160	J	620	J	17	J	5.8	J	6.4	J	4.1	J
Vanadium	mg/kg	1.2	J	8.1		24		16		43		17		15		12	
Zinc	mg/kg	8.1		22		25		20		26		16		20		18	
Mercury	mg/kg	0.17	U	0.3		0.14	U	0.14	U								

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB: compound detected in the associated equipment rinsate blank
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J = estimated
QC Code:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05A		OCRI-05A		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-441-17/19-XXX		OC-SB-446-15/17-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX	
	Field Sample ID	360-24251-14		360-24251-17		360-24309-1		360-24309-2		360-24309-3		360-24309-4		360-24309-5		360-24309-6	
	Sample Collection Date	8/24/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	8,800		9,800		5,800		4,700		5,900		3,300		5,100		3,900	
Antimony	mg/kg	0.7	UJ	0.59	UJ	0.67	UJ	0.68	UJ	0.68	UJ	0.61	UJ	0.62	UJ	0.63	UJ
Arsenic	mg/kg	3		3.6		16		3.5		3.3		3.2		3.2		3.8	
Barium	mg/kg	48		32		10		8.1		32		7.5		7.7		8.3	
Beryllium	mg/kg	0.25	J	0.35		0.24	J	0.17	J	0.21	J	0.13	J	0.2	J	0.14	J
Cadmium	mg/kg	0.32		0.2	J	0.12	J	0.072	J	0.074	J	0.07	J	0.074	J	0.19	J
Calcium	mg/kg	3,800		2,700		450		390		350		650		700		620	
Chromium	mg/kg	19		26		8.5	J	5	J	5.5	J	6	J	5.2	J	12	J
Cobalt	mg/kg	12		7.1		2.2		1.9		2.7		1.9		6.2		1.8	
Copper	mg/kg	64		22		6.7	J	2.4	J	2.7	J	3	J	3	J	3.4	J
Iron	mg/kg	22,000		14,000		8,100		4,100		5,100		4,600		5,000		4,700	
Lead	mg/kg	2.3		1.7		3.9		3.5		2.6		1.3		3.4		1.4	
Magnesium	mg/kg	4,600		4,600		1,400	J	740	J	770	J	990	J	840	J	980	J
Manganese	mg/kg	130		96		51		44		37		38		39		35	
Nickel	mg/kg	14		16		6.2		3.9		4.5		4.6		5		4.7	
Potassium	mg/kg	2,600		2,100		580	J	500	J	420	J	650	J	360	J	480	J
Selenium	mg/kg	0.7	U	0.59	U	0.67	U	0.68	U	0.68	U	0.61	U	0.62	U	0.63	U
Silver	mg/kg	0.7	U	1.9		0.67	U	0.68	U	0.68	U	0.61	U	0.62	U	0.63	U
Sodium	mg/kg	120	J	200		130	U	140	U	72	J	25	J	50	J	130	U
Thallium	mg/kg	1.4	U	1.2	U	1.3	U	1.4	U	1.4	U	1.2	U	1.2	U	1.3	U
Tin	mg/kg	5.9	J	9.4	J	3	J	6.8	UJ	6.8	UJ	6.1	UJ	6.2	UJ	4.5	J
Vanadium	mg/kg	42		24		8.3		5.3		6.4		5.8		5.9		5.7	
Zinc	mg/kg	39		23		10		38		11		7.4		8		16	
Mercury	mg/kg					0.13	U	0.16	U	0.2	U	0.16	U	0.14	U	0.17	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX		OC-SB-414-6.0/8.0-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX	
	Field Sample ID	360-24309-7		360-24309-9		360-24309-10		360-24309-11		360-24309-12		360-24309-14		360-24309-15		360-24309-17	
	Sample Collection Date	8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	7,800		5,900		5,800		4,300		8,900		6,300		9,400		6,000	
Antimony	mg/kg	0.56	UJ	0.67	UJ	0.67	UJ	0.6	UJ	0.61	UJ	0.6	UJ	0.63	UJ	0.68	UJ
Arsenic	mg/kg	4.4		1.4		3		3.7		5.9		3.6		16		2.7	
Barium	mg/kg	12		7		13		8.2		31		9.7		25		8.2	
Beryllium	mg/kg	0.24		0.13	J	0.2	J	0.15	J	0.28		0.2	J	0.46		0.17	J
Cadmium	mg/kg	0.15	J	0.053	J	0.14	J	0.082	J	0.2	J	0.11	J	0.28		0.087	J
Calcium	mg/kg	420		370		580		550		1,900		740		1,700		550	
Chromium	mg/kg	6.9	J	6.6	J	5.1	J	8.2	J	26	J	12	J	24	J	5.9	J
Cobalt	mg/kg	1.5		1.4		1.3		2		6.6		1.9		5.9		1.5	
Copper	mg/kg	4.5	J	2	J	3.2	J	3.5	J	16	J	4.9	J	12	J	2.5	J
Iron	mg/kg	6,300		3,700		4,800		5,500		12,000		6,100		15,000		4,400	
Lead	mg/kg	9.1		1.6		7		1.4		3.8		15		7.2		5.2	
Magnesium	mg/kg	530	J	980	J	630	J	1,200	J	3,400	J	850	J	3,300	J	830	J
Manganese	mg/kg	39		32		42		43		160		43		130		29	
Nickel	mg/kg	4.6		4.4		4		5.7		16		4.9		15		4.3	
Potassium	mg/kg	380	J	540	J	360	J	660	J	1,600	J	410	J	1,500	J	420	J
Selenium	mg/kg	0.56	U	0.67	U	0.67	U	0.6	U	0.61	U	0.6	U	0.63	U	0.68	U
Silver	mg/kg	0.56	U	0.67	U	0.67	U	0.6	U	0.11	J	0.6	U	0.63	U	0.68	U
Sodium	mg/kg	110	U	22	J	26	J	120	U	120	J	120	U	230		140	U
Thallium	mg/kg	1.1	U	1.3	U	1.3	U	1.2	U	1.2	U	1.2	U	1.3	U	1.4	U
Tin	mg/kg	2.5	J	2.4	J	6.7	UJ	2.9	J	9.8	J	10	J	8.8	J	6.8	UJ
Vanadium	mg/kg	9.4		6.7		5.6		7.2		17		7.8		19		6.4	
Zinc	mg/kg	13		6.6		52		9.8		21		11		24		11	
Mercury	mg/kg	0.029	J	0.15	U	0.2	U	0.2	U	0.15	U	0.16	U	0.18	U	0.2	U

Notes:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06A		OCRI-06A		OCRI-06A		OCRI-06A	
	Lab Sample ID	OC-SB-429-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP		OC-SB-430-8.0/10-XXX		OC-SB-407-26/28-XXX		OC-SB-414-20/22-XXX		OC-SB-422-13/15-XXX		OC-SB-429-16/18-XXX	
	Field Sample ID	360-24309-19		360-24309-20		360-24309-22		360-24309-23		360-24309-8		360-24309-13		360-24309-16		360-24309-18	
	Sample Collection Date	8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	5,800		6,100		5,500		4,800		10,000		9,100		8,000		15,000	
Antimony	mg/kg	0.63	UJ	0.55	UJ	0.72	UJ	0.99	J	0.55	UJ	0.56	UJ	0.61	UJ	1.3	UJ
Arsenic	mg/kg	3.7		6.3		1.7		1.7		4.2		2.2		3.7		0.99	J
Barium	mg/kg	9.8		30		8.9		8.3		57		35		29		23	
Beryllium	mg/kg	0.18	J	0.17	J	0.18	J	0.19	J	0.33		0.23	J	0.32		0.21	J
Cadmium	mg/kg	0.14	J	0.16	J	0.14	J	0.13	J	0.37		0.25		0.16	J	0.42	J
Calcium	mg/kg	1,200		1,600		1,000		870		3,700		3,100		1,000		3,800	
Chromium	mg/kg	38	J	24	J	110	J	91	J	16		18		16		29	
Cobalt	mg/kg	3.2		5.3		3.2		2.8		11		12		5		13	
Copper	mg/kg	12	J	12	J	19	J	18	J	23		33		14		18	
Iron	mg/kg	7,200		9,500		6,100		6,000		22,000		16,000		8,900		27,000	
Lead	mg/kg	25		2.3		2.6		2.8		5.1		2		3.5		1.3	
Magnesium	mg/kg	1,400	J	2,800	J	1,700	J	1,600	J	6,600		5,800		2,800		14,000	
Manganese	mg/kg	50		110		68		61		180		170		85		330	
Nickel	mg/kg	5.8		19		7		6.3		17		13		13		25	
Potassium	mg/kg	410	J	2,400	J	750	J	680	J	2,700		1,300		1,300		1,100	
Selenium	mg/kg	0.63	U	0.55	U	0.72	U	0.64	U	0.55	U	0.56	U	0.61	U	1.3	U
Silver	mg/kg	0.47	J	0.064	J	1.9		1.4		0.055	J	0.56	U	0.61	U	0.24	J
Sodium	mg/kg	130	U	46	J	79	J	69	J	150		120		68	J	140	J
Thallium	mg/kg	1.3	U	0.09	JEB	1.4	U	1.3	U	1.1	U	1.1	U	1.2	U	2.7	U
Tin	mg/kg	16	J	8.9	J	50	J	39	J	4.8	J	6	J	5.7	J	10	J
Vanadium	mg/kg	13		15		10		10		36		29		16		34	
Zinc	mg/kg	23		15		13		13		23		27		18		39	
Mercury	mg/kg	0.16	U	0.17	U	0.17	U	0.2	U								

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06A		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-430-19/21-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP	
	Field Sample ID	360-24309-21		360-24327-1		360-24327-3		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24327-11	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	13,000		10,000		8,200		4,400		5,600		3,600		6,600		4,100	
Antimony	mg/kg	0.66	UJ	0.69	UJ	1	UJ	0.72	UJ	0.56	UJ	0.67	UJ	0.56	UJ	0.85	UJ
Arsenic	mg/kg	3.2		17		4.4		1.5		6.1		3.4		2.9		1.4	J
Barium	mg/kg	160		30		31		6.6		12		10		12		7.6	
Beryllium	mg/kg	0.18	J	0.51		0.37	J	0.11	J	0.21	J	0.14	J	0.21	J	0.11	J
Cadmium	mg/kg	0.39		0.31		0.26	J	0.06	J	0.15	J	0.11	J	0.29		0.077	J
Calcium	mg/kg	5,900		7,100		7,800		590		1,100		600		430		790	
Chromium	mg/kg	22		25		7.2		5.8		7		6.4		30		7.5	
Cobalt	mg/kg	16		6.3		1.9		1.3		3.4		1.8		2		1.7	
Copper	mg/kg	29		14		11		2.3		5.4		3.5		8.3		5.7	
Iron	mg/kg	23,000		16,000		4,800		3,700		7,500		4,900		5,500		3,900	
Lead	mg/kg	1.1		6.4		22		1.5		4.2		1.4		5.4		1.5	
Magnesium	mg/kg	10,000		3,900		750		930		1,500		1,000		1,300		1,100	
Manganese	mg/kg	240		130		61		32		74		37		36		41	
Nickel	mg/kg	15		18		6.7		4.7		5.9		5.2		6.6		5.3	
Potassium	mg/kg	5,800		1,700		370	J	550		610		650		410		580	J
Selenium	mg/kg	0.66	U	0.69	U	0.73	J	0.72	U	0.56	U	0.67	U	0.56	U	0.85	U
Silver	mg/kg	2.2		0.086	J	1	U	0.72	U	0.56	U	0.67	U	0.48	J	0.85	U
Sodium	mg/kg	310		300		200	U	31	J	54	J	29	J	110	U	49	J
Thallium	mg/kg	1.3	U	1.4	U	2	U	1.4	U	1.1	U	1.3	U	1.1	U	1.7	U
Tin	mg/kg	6.9	J	8.8		3	J	7.2	U	2.4	J	6.7	U	12		2.8	J
Vanadium	mg/kg	42		19		18		5.7		10		6.3		8.6		6.2	
Zinc	mg/kg	35		29		25		6.3		12		9.3		23		7.8	
Mercury	mg/kg			0.14	U	0.21	U	0.2	U	0.15	U	0.22	U	0.044	J	0.17	U

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07A		OCRI-07A		OCRI-07A	
	Lab Sample ID	OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-8/10-XXX		OC-SB-403-13/15-XXX		OC-SB-404-13/15-XXX		OC-SB-409-15/17-XXX	
	Field Sample ID	360-24327-12		360-24327-13		360-24327-14		360-24327-15		360-24327-17		360-24327-2		360-24327-4		360-24327-7	
	Sample Collection Date	8/27/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	4,500		4,500		4,200		8,100		9,800		3,000		10,000		10,000	
Antimony	mg/kg	0.71	J	0.62	UJ	0.57	UJ	0.59	UJ	0.66	UJ	0.64	UJ	0.53	UJ	0.65	UJ
Arsenic	mg/kg	1.7		5.4		3.7		11		16		1.2	J	2.2		4.7	
Barium	mg/kg	8.6		9.3		8.7		20		39		7.5		13		55	
Beryllium	mg/kg	0.12	J	0.2	J	0.17	J	0.36		0.43		0.09	J	0.38		0.35	
Cadmium	mg/kg	0.13	J	0.12	J	0.12	J	0.26		0.29		0.049	J	0.26		0.39	
Calcium	mg/kg	750		1,300		2,000		1,400		2,200		550		1,400		2,800	
Chromium	mg/kg	8.4		6.8		6.9		59		14		5.3		11		22	
Cobalt	mg/kg	1.6		5.6		2.1		4.4		7.5		1.6		6		14	
Copper	mg/kg	6.8		3.8		2.9		7.7		16		4.9		12		25	
Iron	mg/kg	4,500		5,800		5,800		12,000		15,000		3,100		16,000		23,000	
Lead	mg/kg	1.8		3		1.6		6.4		3.9		1.5		4.1		0.75	
Magnesium	mg/kg	1,200		1,100		1,100		3,100		2,500		890		5,300		6,900	
Manganese	mg/kg	44		52		85		120		110		32		200		180	
Nickel	mg/kg	6.5		5.3		4.4		12		13		4.8		10		18	
Potassium	mg/kg	680	J	570		520		1,300		2,000		620		930		2,500	
Selenium	mg/kg	0.83	U	0.62	U	0.57	U	0.59	U	0.66	U	0.64	U	0.53	U	0.65	U
Silver	mg/kg	0.83	U	0.08	J	0.06	J	0.61		0.66	U	0.64	U	0.53	U	0.65	U
Sodium	mg/kg	170	U	110	J	60	J	56	J	110	J	130	U	110	U	210	
Thallium	mg/kg	1.7	U	1.2	U	1.1	U	1.2	U	1.3	U	1.3	U	1.1	U	1.3	U
Tin	mg/kg	3.1	J	2.4	J	2.5	J	23		4.6	J	1.8	J	3.3	J	7.3	
Vanadium	mg/kg	6.6		6.8		6.9		16		18		5		26		33	
Zinc	mg/kg	9.9		9.4		8.4		20		23		8.1		34		17	
Mercury	mg/kg	0.17	U	0.17	U	0.17	U	0.19	U	0.053	J						

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB: compound detected in the
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07A		OCRI-07A	
	Lab Sample ID	OC-SB-410-17/19-XXX		OC-SB-418-15/17-XXX	
	Field Sample ID	360-24327-10		360-24327-16	
	Sample Collection Date	8/27/2009		8/27/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	9,500		9,100	
Antimony	mg/kg	0.66	UJ	0.69	UJ
Arsenic	mg/kg	1.8		2.8	
Barium	mg/kg	38		27	
Beryllium	mg/kg	0.23	J	0.24	J
Cadmium	mg/kg	0.27		0.24	J
Calcium	mg/kg	4,100		3,400	
Chromium	mg/kg	20		29	
Cobalt	mg/kg	12		7.6	
Copper	mg/kg	34		43	
Iron	mg/kg	15,000		16,000	
Lead	mg/kg	1.8		1.2	
Magnesium	mg/kg	7,300		4,300	
Manganese	mg/kg	150		110	
Nickel	mg/kg	16		15	
Potassium	mg/kg	2,000		1,200	
Selenium	mg/kg	0.66	U	0.69	U
Silver	mg/kg	0.66	U	0.69	U
Sodium	mg/kg	270		160	
Thallium	mg/kg	1.3	U	1.4	U
Tin	mg/kg	6.7		10	
Vanadium	mg/kg	28		27	
Zinc	mg/kg	17		17	
Mercury	mg/kg				

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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QC Code:
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FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-444-0.0/1.0-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX		OC-SB-454-0.0/1.0-XXX	
	Field Sample ID	360-24343-1		360-24343-3		360-24343-4		360-24343-6		360-24343-7		360-24343-9		360-24343-10		360-24343-11	
	Sample Collection Date	8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	3,100		3,600		7,700		3,700		6,400		970		880		2,000	
Antimony	mg/kg	0.68	UJ	0.6	UJ	0.6	UJ	0.68	UJ	0.65	UJ	0.57	UJ	0.89	J	0.63	UJ
Arsenic	mg/kg	2.3		3.1		3.2		5		56		1.3		1.3		1.8	
Barium	mg/kg	13		8.2		6.6		6.4		30		7.5		6.6		5.1	
Beryllium	mg/kg	0.11	J	0.1	J	0.22	J	0.11	J	0.32		0.054	J	0.037	J	0.069	J
Cadmium	mg/kg	0.096	J	0.094	J	0.084	J	0.092	J	0.43		0.36		0.2	J	0.067	J
Calcium	mg/kg	440		620		220		590		3,400		750		580		350	
Chromium	mg/kg	170		160		6.7		20		25		4		3.4		19	
Cobalt	mg/kg	2		1.4		1.6		2		4.7		0.71		0.56	J	1.2	
Copper	mg/kg	4.9		3.8		2.7		5.9		16		4.8		3.9		2.8	
Iron	mg/kg	6,000		6,000		5,700		5,600		14,000		1,900		1,700		4,200	
Lead	mg/kg	2.1		1.4		2.1		2.5		44		4		3.9		1.3	
Magnesium	mg/kg	1,200		1,100		740		930		2,100		320		280		850	
Manganese	mg/kg	43		37		29		37		120		14		13		30	
Nickel	mg/kg	5.5		4.9		5.1		5.7		13		4.2		4		3.5	
Potassium	mg/kg	650		570		380		600		1,100		300		270		460	
Selenium	mg/kg	0.68	U	0.6	U	0.6	U	0.68	U	0.65	U	0.57	U	0.59	U	0.63	U
Silver	mg/kg	3.1		2.9		0.6	U	0.11	J	0.65	U	0.57	U	0.59	U	0.19	J
Sodium	mg/kg	28	J	21	J	120	U	140	U	24	J	110	U	120	U	18	J
Thallium	mg/kg	1.4	U	1.2	U	1.2	U	1.4	U	1.3	U	1.1	U	1.2	U	1.3	U
Tin	mg/kg	72	J	67	J	6	UJ	7.1	J	23	J	5.7	UJ	5.9	UJ	7.3	J
Vanadium	mg/kg	8.3		6.4		6.6		7.5		23		11		10		5.6	
Zinc	mg/kg	9.5		9		15		9.6		77		39		38		8.8	
Mercury	mg/kg	0.17	U	0.18	U	0.19	U	0.21	U	0.32		0.056	J	0.19	U	0.19	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-08		OCRI-08		OCRI-08A		OCRI-08A		OCRI-08A		OCRI-08A		OCRI-08A	
Lab Sample ID		OC-SB-454-6.0/8.0-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX		OC-SB-444-12/14-XXX		OC-SB-449-11/13-XXX		OC-SB-451-18/20-XXX		OC-SB-454-18/20-XXX		OC-SB-455-28/30-XXX	
Field Sample ID		360-24343-13		360-24343-16		360-24343-17		360-24343-2		360-24343-5		360-24343-8		360-24343-12		360-24343-15	
Sample Collection Date		8/27/2009		8/28/2009		8/28/2009		8/27/2009		8/27/2009		8/28/2009		8/27/2009		8/28/2009	
QC Code		FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	2,700		15,000		15,000		7,800		5,600		7,400		10,000		6,500	
Antimony	mg/kg	0.6	UJ	1.4	UJ	1.5	UJ	0.71	UJ	0.59	UJ	0.71	UJ	0.56	UJ	0.64	UJ
Arsenic	mg/kg	3.1		5.4		5.3		6.4		4.6		6		4.4		2.9	
Barium	mg/kg	6.2		5.6		5.9		33		20		33		31		26	
Beryllium	mg/kg	0.091	J	0.27	J	0.26	J	0.19	J	0.15	J	0.42		0.26		0.16	J
Cadmium	mg/kg	0.086	J	0.071	J	0.078	J	0.27	J	0.11	J	0.27	J	0.25		0.22	J
Calcium	mg/kg	470		680		570		1,700		1,300		1,400		2,800		2,800	
Chromium	mg/kg	120		9.9		9.6		130		160		48		250		18	
Cobalt	mg/kg	1.4		1.4		1.4	J	5.1		2.8		5.9		7.6		7.8	
Copper	mg/kg	2.8		1.6	J	1.4	J	20		8.3		12		25		23	
Iron	mg/kg	5,300		6,300		6,400		17,000		7,000		12,000		17,000		14,000	
Lead	mg/kg	1.7		3.2		3.4		4.4		2.4		2.9		1.4		1.3	
Magnesium	mg/kg	950		750		700		3,600		1,900		3,000		5,300		4,200	
Manganese	mg/kg	35		33		32		110		79		110		110		150	
Nickel	mg/kg	4		4.1		3.9		11		7.5		16		18		14	
Potassium	mg/kg	620		300	J	330	J	1,300		1,000		1,600		2,000		1,700	
Selenium	mg/kg	0.6	U	1.4	U	1.5	U	0.71	U	0.59	U	0.71	U	0.56	U	0.64	U
Silver	mg/kg	2.2		1.4	U	1.5	U	1.8		2.5		0.34	J	4		0.64	U
Sodium	mg/kg	21	J	290	U	290	U	52	J	57	J	22	J	260		110	J
Thallium	mg/kg	1.2	U	2.9	U	2.9	U	1.4	U	1.2	U	1.4	U	1.1	U	1.3	U
Tin	mg/kg	51	J	3.2	J	3.1	J	54	J	67	J	19	J	100	J	6	J
Vanadium	mg/kg	11		11		12		23		11		17		28		21	
Zinc	mg/kg	9.5		9		9.2		19		16		66		16		17	
Mercury	mg/kg	0.19	U	0.039	J	0.18	U										

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-442-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-3.0/5.0-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX	
	Field Sample ID	360-24365-1		360-24365-3		360-24365-4		360-24365-5		360-24365-7		360-24365-8		360-24365-10		360-24365-13	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	5,700		3,800		3,300		5,900		5,900		4,400		2,800		7,200	
Antimony	mg/kg	0.69	UJ	0.57	UJ	0.53	J	0.92	J	0.64	UJ	0.66	UJ	0.63	UJ	0.67	UJ
Arsenic	mg/kg	6.3		2.8		2.6		8.6		2.8		5.7		1	J	5.5	
Barium	mg/kg	15		11		9.6		110		11		12		9.3		10	
Beryllium	mg/kg	0.16	J	0.17	J	0.15	J	0.26	J	0.19	J	0.17	J	0.091	J	0.22	J
Cadmium	mg/kg	0.17	J	0.077	J	0.095	J	2.6		0.24	J	0.23	J	0.054	J	0.16	J
Calcium	mg/kg	1,100		700		680		16,000		1,500		1,200		840		440	
Chromium	mg/kg	22		12		14		100		19		18		28		19	
Cobalt	mg/kg	3.2		1.8		1.8		12		2.8		2.5		1.2		2.3	
Copper	mg/kg	6.8		3.3		3.2		150		22		7.3		3.8		4.7	
Iron	mg/kg	9,500		4,700		4,400		55,000		6,900		7,400		3,300		8,000	
Lead	mg/kg	8		1.2		1.2		140		7.1		11		1.2		5.8	
Magnesium	mg/kg	2,000		990		820		4,800		980		1,200		830		1,600	
Manganese	mg/kg	83		39		33		340		46		65		32		55	
Nickel	mg/kg	13		6.4		5.8		71		52		9.4		4.9		7.4	
Potassium	mg/kg	1,200		690		700		900		410		630		550		500	
Selenium	mg/kg	0.69	U	0.57	U	0.64	U	1.4	U	0.64	U	0.66	U	0.63	U	0.67	U
Silver	mg/kg	0.11	J	0.57	U	0.64	U	0.6	J	0.086	J	0.13	J	0.27	J	0.096	J
Sodium	mg/kg	140	U	40	J	39	J	87	J	130	U	130	U	50	J	130	U
Thallium	mg/kg	1.4	U	1.1	U	1.3	U	2.8	U	0.15	JEB	1.3	U	1.3	U	1.3	U
Tin	mg/kg	8	J	4.1	J	5.3	J	41	J	7.3	J	6.4	J	11	J	6.7	J
Vanadium	mg/kg	15		14		16		240		190		13		8.8		15	
Zinc	mg/kg	19		18		18		650		38		33		8.4		15	
Mercury	mg/kg	0.13	U	0.16	U	0.2	U	0.83		0.33		0.11	J	0.2	U	0.045	J

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A		OCRI-09A	
	Lab Sample ID	OC-SB-458-5.0/7.0-XXX		OC-SB-460-0.0/1.0-XXX		OC-SB-460-5.5/7.5-XXX		OC-SB-442-20/22-XXX		OC-SB-447-18/20-XXX		OC-SB-452-13/15-XXX		OC-SB-458-22/24-XXX		OC-SB-460-30/32-XXX	
	Field Sample ID	360-24365-15		360-24365-16		360-24365-18		360-24365-2		360-24365-6		360-24365-9		360-24365-14		360-24365-17	
	Sample Collection Date	8/31/2009		9/1/2009		9/1/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	7,700		3,500		11,000		4,600		7,400		7,300		5,800		5,900	
Antimony	mg/kg	0.76	UJ	0.57	UJ	0.63	UJ	0.55	UJ	0.68	UJ	0.69	UJ	0.61	UJ	0.6	UJ
Arsenic	mg/kg	4		6.3		3.6		2.6		3.9		7.8		3.5		3.9	
Barium	mg/kg	5.8		11		5.6		14		30		24		16		24	
Beryllium	mg/kg	0.2	J	0.14	J	0.23	J	0.14	J	0.22	J	0.21	J	0.18	J	0.19	J
Cadmium	mg/kg	0.09	J	0.077	J	0.068	J	0.16	J	0.22	J	0.23	J	0.14	J	0.28	
Calcium	mg/kg	270		550		290		1,500		2,000		3,200		1,500		1,900	
Chromium	mg/kg	7.1		22		11		13		12		17		13		120	
Cobalt	mg/kg	2.3		1.2		1.7		6		6		7.2		4		5.3	
Copper	mg/kg	5.2		6.9		2.2		15		26		29		11		19	
Iron	mg/kg	6,900		6,400		5,500		9,700		15,000		15,000		10,000		13,000	
Lead	mg/kg	2		7.6		2.9		1.5		1.4		2.5		1.5		1.4	
Magnesium	mg/kg	950		640		740		2,700		3,500		3,200		2,600		3,300	
Manganese	mg/kg	49		25		27		93		93		110		85		96	
Nickel	mg/kg	5.7		3.4		5		9		9.8		13		8.2		9.9	
Potassium	mg/kg	400		560		420		1,100		1,900		1,000		1,100		1,400	
Selenium	mg/kg	0.76	U	0.57	U	0.63	U	0.55	U	0.68	U	0.69	U	0.61	U	0.6	U
Silver	mg/kg	0.76	U	0.21	J	0.63	U	0.55	U	0.68	U	0.69	U	0.61	U	1.5	
Sodium	mg/kg	150	U	33	J	43	J	61	J	61	J	130	J	68	J	68	J
Thallium	mg/kg	1.5	U	1.1	U	1.3	U	1.1	U	1.4	U	1.4	U	1.2	U	1.2	U
Tin	mg/kg	2.4	J	8.2	J	3.8	J	4.2	J	3.6	J	5.5	J	4.2	J	50	J
Vanadium	mg/kg	8.1		9.3		8.8		13		19		30		13		19	
Zinc	mg/kg	21		6.6		9.8		12		22		20		16		17	
Mercury	mg/kg	0.2	U	0.17	U	0.17	U			0.14	U						

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the
associated equipment rinsate blank
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J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-463-0.0/1.0-XXX		OC-SB-463-6.0/8.0-XXX		OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX	
	Field Sample ID	360-24417-1		360-24417-3		360-24417-4		360-24417-6		360-24417-7		360-24417-9		360-24417-10		360-24417-11	
	Sample Collection Date	9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	5,000		4,200		5,700		2,800		1,500		3,600		3,800		8,700	
Antimony	mg/kg	0.67	UJ	0.67	UJ	0.59	UJ	0.73	UJ	0.62	UJ	0.66	UJ	0.46	J	0.62	UJ
Arsenic	mg/kg	6.8		3.2		3.7		3.2		2.2		2.4		2.5		5.1	
Barium	mg/kg	11		6.5		9.2		7.5		5.9		5.2		5.6		10	
Beryllium	mg/kg	0.18	J	0.17	J	0.14	J	0.086	J	0.053	J	0.11	J	0.12	J	0.24	J
Cadmium	mg/kg	0.11	J	0.084	J	0.095	J	0.074	J	0.099	J	0.071	J	0.084	J	0.094	J
Calcium	mg/kg	600		300		720		990		530		510		640		3,100	
Chromium	mg/kg	14	J	5.9	J	20	J	40	J	5.9	J	6	J	6.8	J	11	J
Cobalt	mg/kg	2.9		2.1		2		1.2		1.1		1.6		1.7		1.8	
Copper	mg/kg	4.1		2.7		3.4		3.5		2.5		2.1		2.2		2.7	
Iron	mg/kg	7,000		5,300		6,900		5,200		3,600		5,000		5,700		5,500	
Lead	mg/kg	2.4		1.4		3		3.1		1.2		0.99		1.4		3.9	
Magnesium	mg/kg	1,000		940		1,200		780		640		900		950		980	
Manganese	mg/kg	54		33		53		34		26		31		33		48	
Nickel	mg/kg	5		5.1		7.6		6.3		3.7		5.3		5.9		5.2	
Potassium	mg/kg	660		450		960		380		460		440		630		510	
Selenium	mg/kg	0.67	U	0.67	U	0.59	U	0.73	U	0.62	U	0.66	U	0.74	U	0.62	U
Silver	mg/kg	0.13	J	0.67	U	0.17	J	0.5	J	0.62	U	0.66	U	0.74	U	0.62	U
Sodium	mg/kg	22	J	130	U	31	J	22	J	120	U	37	J	37	J	53	J
Thallium	mg/kg	1.3	U	1.3	U	1.2	U	1.5	U	1.2	U	1.3	U	1.5	U	1.2	U
Tin	mg/kg	5	J	6.7	UJ	7	J	16	J	6.2	UJ	6.6	UJ	2.2	J	3.7	J
Vanadium	mg/kg	7.6		5.8		8.3		5.7		4.6		5.5		6.4		8.9	
Zinc	mg/kg	11		12		14		7		8.6		7.4		7.5		12	
Mercury	mg/kg	0.14	U	0.17	U	0.15	U	0.052	J	0.074	J	0.17	U	0.16	U	0.17	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A		OCRI-10A	
	Lab Sample ID	OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-463-28/30-XXX		OC-SB-464-26/28-XXX		OC-SB-465-16/18-XXX		OC-SB-468-31/33-XXX		OC-SB-471-26/28-XXX	
	Field Sample ID	360-24417-13		360-24417-14		360-24417-15		360-24417-2		360-24417-5		360-24417-8		360-24417-12		360-24417-16	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	3,800		6,600		9,500		8,100		9,600		4,700		5,900		7,800	
Antimony	mg/kg	0.59	UJ	0.62	UJ	0.75	UJ	0.55	UJ	0.68	UJ	0.56	UJ	0.72	UJ	0.6	UJ
Arsenic	mg/kg	1	J	5.7		4.3		3		3.2		6.6		3.8		3.6	
Barium	mg/kg	5.7		9.6		5.8		31		62		13		42		43	
Beryllium	mg/kg	0.088	J	0.2	J	0.2	J	0.24		0.22	J	0.17	J	0.15	J	0.2	J
Cadmium	mg/kg	0.047	J	0.13	J	0.14	J	0.24		0.22	J	0.09	J	0.15	J	0.2	J
Calcium	mg/kg	630		1,700		480		2,900	J	3,700	J	840	J	3,200	J	3,300	J
Chromium	mg/kg	5.6	J	14	J	7.9	J	16		53		9.2		23		21	
Cobalt	mg/kg	1.3		2.1		1.6		9.9		11		2.5		7.1		9.6	
Copper	mg/kg	1.2		5.6		1.6		16		50		6.2		14		16	
Iron	mg/kg	3,500		7,600		7,000		16,000		15,000		7,700		12,000		16,000	
Lead	mg/kg	1		5.4		2.7		2.5		7.4		2.9		1.6		1.3	
Magnesium	mg/kg	890		1,100		800		6,500		7,100		1,700		3,800		5,200	
Manganese	mg/kg	31		43		27		330	J	230	J	61	J	110	J	150	J
Nickel	mg/kg	4.9		5.5		4.4		15		23		6.5		15		15	
Potassium	mg/kg	510		520		330		1,700	J	3,700	J	870	J	2,000	J	2,500	J
Selenium	mg/kg	0.59	U	0.62	U	0.75	U	0.55	U	0.68	U	0.56	U	0.72	U	0.6	U
Silver	mg/kg	0.59	U	0.62	U	0.081	J	0.55	U	0.38	J	0.56	U	0.72	U	0.6	U
Sodium	mg/kg	50	J	120	U	150	U	71	J	450	J	47	J	190	J	170	J
Thallium	mg/kg	1.2	U	1.2	U	1.5	U	1.1	U	1.4	U	1.1	U	1.4	U	1.2	U
Tin	mg/kg	5.9	UJ	5	J	2.5	J	5	J	19	J	2.9	J	7.9	J	6.9	J
Vanadium	mg/kg	4.9		9.6		9.2		20		24		9.3		18		25	
Zinc	mg/kg	6.4		21		16		27		28		11		19		23	
Mercury	mg/kg	0.15	U	0.028	JEB	0.048	J										

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11A	
	Lab Sample ID	OC-SB-459-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX		OC-SB-459-26/28-XXX	
	Field Sample ID	360-24444-12		360-24444-1		360-24444-2		360-24444-3		360-24444-5		360-24444-8		360-24444-9		360-24444-13	
	Sample Collection Date	9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009		9/2/2009		9/3/2009	
	QC Code	FS		FD		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	8,400		4,900		4,600		7,700		9,300		3,800		3,700		7,500	
Antimony	mg/kg	0.56	UJ	0.66	UJ	0.71	UJ	0.61	UJ	0.65	UJ	0.7	UJ	0.72	UJ	0.59	UJ
Arsenic	mg/kg	5.6		3.2		3.1		13		4.7		3.9		3.8		3.8	
Barium	mg/kg	11		6.7		6.4		34		11		6.4		7.5		11	
Beryllium	mg/kg	0.26		0.11	J	0.11	J	0.28		0.23	J	0.16	J	0.15	J	0.27	
Cadmium	mg/kg	0.14	J	0.07	J	0.086	J	0.17	J	0.13	J	0.08	J	0.079	J	0.14	J
Calcium	mg/kg	810		290		310		1,000		770		530		530		1,400	
Chromium	mg/kg	12		7.4		7.4		11		18		5.9		5.8		460	
Cobalt	mg/kg	3.2		1.7		1.7		3.9		2		2		2.1		3.7	
Copper	mg/kg	5.1		3.5		3.7		8.3		4.2		2.9		3		16	
Iron	mg/kg	8,500		5,200		5,100		12,000		7,600		5,500		5,200		11,000	
Lead	mg/kg	4.7		2.4		2.4		4.3		8.5		1.4		1.4		1.7	
Magnesium	mg/kg	1,200		880		850		2,000		850		960		950		2,800	
Manganese	mg/kg	74		36		34		190		46		35		34		80	
Nickel	mg/kg	6.5		4.6		4.7		8.4		5.6		5.1		5.1		8.6	
Potassium	mg/kg	650		530		460		1,100		490		530		560		840	
Selenium	mg/kg	0.56	U	0.66	U	0.71	U	0.61	U	0.65	U	0.7	U	0.72	U	0.59	U
Silver	mg/kg	0.56	U	0.66	U	0.71	U	0.61	U	0.1	J	0.7	U	0.72	U	8.4	
Sodium	mg/kg	110	U	130	U	140	U	120	U	130	U	140	U	140	U	430	
Thallium	mg/kg	1.1	U	1.3	U	1.4	U	1.2	U	1.3	U	1.4	U	1.4	U	1.2	U
Tin	mg/kg	4.4	J	2.6	J	2.6	J	3.7	J	6.6	J	7	UJ	7.2	UJ	190	J
Vanadium	mg/kg	11		7.1		6.9		12		10		6		6.1		18	
Zinc	mg/kg	16		12		12		14		14		13		13		14	
Mercury	mg/kg	0.14	U	0.14	U	0.14	U	0.13	U	0.18	U	0.18	U	0.16	U		

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
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QC Code:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11A		OCRI-11A		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	OC-SB-462-31/33-XXX		OC-SB-467-30/32-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX	
	Field Sample ID	360-24444-4		360-24444-7		360-24454-3		360-24454-4		360-24454-6		360-24454-7		360-24454-8		360-24454-9	
	Sample Collection Date	9/3/2009		9/2/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	6,000		8,400		3,000		6,300		6,400		7,900		8,100		2,200	
Antimony	mg/kg	0.55	UJ	0.33	J	0.71	UJ	0.63	UJ	0.6	UJ	0.56	UJ	0.64	UJ	0.73	UJ
Arsenic	mg/kg	2.2		4.2		3.1		4.2		9.9		3.8		4		4.3	
Barium	mg/kg	26		73		8.8		18		18		28		39		9.5	
Beryllium	mg/kg	0.17	J	0.2	J	0.17	J	0.26		0.21	J	0.31		0.16	J	0.12	J
Cadmium	mg/kg	0.18	J	0.24	J	0.08	J	0.31		0.15	J	0.19	J	0.31		0.071	J
Calcium	mg/kg	3,400		3,100		410		9,500		1,600		1,300		3,200		1,100	
Chromium	mg/kg	150		250		11		96		280		8.8		280		6.6	
Cobalt	mg/kg	7.6		13		1.6		2.7		2.5		3.4		8.5		0.97	
Copper	mg/kg	20		26		2.9		5.5		6.7		9.4		23		2.6	
Iron	mg/kg	13,000		17,000		4,500		7,000		8,800		9,000		17,000		3,500	
Lead	mg/kg	1.4		1.7		1.2		4.7		3.1		28		2.2		2.2	
Magnesium	mg/kg	4,100		5,400		960		1,700		1,800		1,600		5,000		500	
Manganese	mg/kg	160		220		49		110		62		100		140		23	
Nickel	mg/kg	6.3		14		4.4		8.1		5.6		6.1		13		2.6	
Potassium	mg/kg	1,800		3,600		470		1,500		890		1,400		2,100		490	
Selenium	mg/kg	0.55	U	0.68	U	0.71	U	0.63	U	0.6	U	0.56	U	0.64	U	0.73	U
Silver	mg/kg	2.4		3.9		0.71	U	1.4		4.5		0.56	U	4.1		0.73	U
Sodium	mg/kg	92	J	200		140	U	130	U	150		110	U	170		150	U
Thallium	mg/kg	1.1	U	1.4	U	1.4	U	1.3	U	1.2	U	1.1	U	1.3	U	1.5	U
Tin	mg/kg	59	J	100	J	4	J	42	J	120	J	2.9	J	120	J	7.3	UJ
Vanadium	mg/kg	17		27		5.4		9.9		12		12		30		4.4	
Zinc	mg/kg	15		24		7.8		41		11		22		21		7.4	
Mercury	mg/kg					0.17	U	0.031	J	0.16	U	0.16		0.14	U	0.17	U

Notes:
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12A		OCRI-12A		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-461-28/30-XXX		OC-SB-470-31/33-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX	
	Field Sample ID	360-24454-2		360-24454-5		360-24499-14		360-24499-16		360-24499-17		360-24499-19		360-24499-20		360-24499-22	
	Sample Collection Date	9/3/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/9/2009		9/9/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	7,300		4,000		4,600		2,500		9,000		4,000		7,800		4,000	
Antimony	mg/kg	0.62	UJ	0.58	UJ	0.67	UJ	0.62	UJ	0.54	UJ	0.58	UJ	0.63	UJ	0.65	UJ
Arsenic	mg/kg	4.8		5		3.4		3.4		7.1		4		5.3		4.1	
Barium	mg/kg	20		48		13		8.6		36		7.1		42		4.9	
Beryllium	mg/kg	0.16	J	0.082	J	0.15	J	0.12	J	0.54		0.14	J	0.33		0.12	J
Cadmium	mg/kg	0.26		0.22	J	0.13	J	0.061	J	0.32		0.091	J	0.42		0.064	J
Calcium	mg/kg	2,500		1,900		1,400		480		2,200		440		3,400		300	
Chromium	mg/kg	230		50		7.9		5.4		30		6.6		21		13	
Cobalt	mg/kg	7.5		4.3		3.8		1.7		6.4		1.9		6.9		2	
Copper	mg/kg	25		5.3		5.5		2.8		14		3.2		18		2.7	
Iron	mg/kg	16,000		13,000		7,500		4,500		17,000		6,000		15,000		5,000	
Lead	mg/kg	4		3.6		3.3		1.4		10		1.5		30		1.6	
Magnesium	mg/kg	4,900		1,800		1,700		930		3,600		950		3,100		860	
Manganese	mg/kg	110		75		68		50		410		43		180		36	
Nickel	mg/kg	13		3.2		6.6		5.1		26		5.5		14		4.2	
Potassium	mg/kg	1,000		2,300		700		570		1,900		670		2,400		510	
Selenium	mg/kg	0.62	U	0.58	U	0.67	U	0.62	U	0.54	U	0.58	U	0.63	U	0.65	U
Silver	mg/kg	3.5		0.35	J	0.67	U	0.62	U	0.54	U	0.58	U	0.63	U	0.65	U
Sodium	mg/kg	280		260		130	U	35	J	22	J	33	J	36	J	130	U
Thallium	mg/kg	1.2	U	1.2	U	1.3	U	1.2	U	1.1	U	1.2	U	1.3	U	1.3	U
Tin	mg/kg	100	J	20	J	6.7	UJ	6.2	UJ	11	J	5.8	UJ	7.2	J	4.7	J
Vanadium	mg/kg	31		21		9.9		5.2		74		9.3		24		6.4	
Zinc	mg/kg	20		14		19		8.3		41		8.3		100		8.5	
Mercury	mg/kg					0.17	U	0.15	U	0.12	J	0.18	U	0.25		0.18	U

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
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J = estimated
QC Code:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13A		OCRI-13A	
	Lab Sample ID	OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-417-20/22-XXX		OC-SB-434-15/16-XXX	
	Field Sample ID	360-24499-6		360-24499-7		360-24499-1		360-24499-2		360-24499-4		360-24499-5		360-24499-15		360-24499-18	
	Sample Collection Date	9/8/2009		9/8/2009		9/8/2009		9/8/2009		9/9/2009		9/9/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	3,700		21,000		3,900		5,800		7,400		10,000		8,000	J	11,000	J
Antimony	mg/kg	0.61	UJ	3.5	UJ	0.7	UJ	0.58	UJ	0.64	UJ	0.61	UJ	0.74	UJ	0.68	UJ
Arsenic	mg/kg	3.7		2	J	2.3		4		1.6		16		2.4	J	5.8	J
Barium	mg/kg	7.5		110		32		8.1		32		61		51		39	
Beryllium	mg/kg	0.14	J	0.3	J	0.12	J	0.19	J	0.16	J	0.28		0.17	J	0.31	
Cadmium	mg/kg	0.17	J	0.4	J	0.067	J	0.27		0.17	J	0.2	J	0.38	J	0.41	J
Calcium	mg/kg	700		4,700		1,300		950		3,000		1,900		4,900	J	4,400	J
Chromium	mg/kg	7.4		250		10		25		240		13		27	J	40	J
Cobalt	mg/kg	1.5		14		1.6		2.5		5.8		6.1		10	J	11	J
Copper	mg/kg	3.3		66		2.8		4		14		9.2		27	J	31	J
Iron	mg/kg	5,400		32,000		5,100		6,200		13,000		16,000		21,000	J	22,000	J
Lead	mg/kg	4.1		1.5	J	2.7		3.9		2.4		3.2		0.52	J	2.4	J
Magnesium	mg/kg	830		14,000		870		1,500		4,200		4,000		5,400		5,400	
Manganese	mg/kg	41		340		47		62		110		120		130	J	200	J
Nickel	mg/kg	4.4		27		3.3		6.7		9.1		9.5		12	J	18	J
Potassium	mg/kg	480		12,000		1,200		810		2,900		2,700		2,000		2,000	
Selenium	mg/kg	0.61	U	3.5	U	0.7	U	0.58	U	0.64	U	0.61	U	0.74	U	0.68	U
Silver	mg/kg	0.61	U	3.8		0.7	U	0.58	U	3.9		0.61	U	0.74	U	0.13	J
Sodium	mg/kg	120	U	520	J	220		120	U	330		170		130	J	320	
Thallium	mg/kg	1.2	U	0.54	J	1.4	U	1.2	U	1.3	U	1.2	U	1.5	U	1.4	U
Tin	mg/kg	6.1	UJ	99	J	3.5	J	9.4	J	97	J	3.8	J	9.7	J	15	J
Vanadium	mg/kg	5.8		45		6.1		8.6		25		23		31		37	
Zinc	mg/kg	130		46		11		22		18		20		20		32	
Mercury	mg/kg	0.17	U	0.16	U	0.18	U	0.16	U	0.2	U	0.15	U				

Notes:
Samples analyzed by SW-846 Method
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13A		OCRI-13A		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-450-33/35-XXX		OC-SB-469-28/30-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-8.0/10-XXX	
	Field Sample ID	360-24499-21		360-24499-3		360-24563-1		360-24563-2		360-24563-4		360-24563-5		360-24563-6		360-24563-9	
	Sample Collection Date	9/9/2009		9/9/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	7,900	J	1,400	J	5,300		4,300		2,900		3,000		8,700		2,300	
Antimony	mg/kg	0.64	UJ	0.58	UJ	0.59	UJ	0.7	UJ	0.63	UJ	0.67	J	0.7	UJ	0.6	UJ
Arsenic	mg/kg	4.5	J	2.2	J	5.1		3.8		3.9		4.1		2.9		5.2	
Barium	mg/kg	24		11		9.3		11		7.5		7.3		19		8.2	
Beryllium	mg/kg	0.23	J	0.046	J	0.17	J	0.2	J	0.11	J	0.12	J	0.24	J	0.11	J
Cadmium	mg/kg	0.23	J	0.38	J	0.11	J	0.092	J	0.062	J	0.061	J	0.23	J	0.067	J
Calcium	mg/kg	2,600	J	1,200	J	770		610		440		450		4,600		490	
Chromium	mg/kg	18	J	33	J	12	J	8.7	J	5.5	J	5.3	J	20	J	6.5	J
Cobalt	mg/kg	6.6	J	2.6	J	2.3		2.9		1.8		1.8		7.9		1.3	
Copper	mg/kg	20	J	28	J	7.9	J	4.6	J	3.2	J	3.1	J	15	J	2.8	J
Iron	mg/kg	13,000	J	21,000	J	6,600		5,700		4,100		4,100		16,000		5,100	
Lead	mg/kg	1.7	J	1.1	J	8.7		1.9		1.3		1.4		7.1		1.5	
Magnesium	mg/kg	4,000		280		1,400		1,400		900		880		4,500		900	
Manganese	mg/kg	100	J	190	J	40		48		32		32		170		39	
Nickel	mg/kg	13	J	19	J	6.8		8.2		5		5		14		4.4	
Potassium	mg/kg	1,500		320		580	J	750	J	490	J	530	J	820	J	530	J
Selenium	mg/kg	0.64	U	0.58	U	0.59	U	0.7	U	0.63	U	0.66	U	0.7	U	0.6	U
Silver	mg/kg	0.64	U	0.15	J	0.59	U	0.7	U	0.63	U	0.66	U	0.7	U	0.6	U
Sodium	mg/kg	150		150		120	U	140	U	130	U	130	U	140	U	120	U
Thallium	mg/kg	1.3	U	1.2	U	1.2	U	1.4	U	1.3	U	1.3	U	1.4	U	1.2	U
Tin	mg/kg	6.5	J	14	J	4.3	J	3.1	J	6.3	UJ	6.6	UJ	6.8	J	6	UJ
Vanadium	mg/kg	21		2.8		19		8.1		5.2		5.4		34		5.5	
Zinc	mg/kg	21		4.4		14		13		9.1		9.1		27		9	
Mercury	mg/kg					0.19	U	0.14	U	0.029	J	0.15	U	0.14	U	0.17	U

Notes:
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14A		OCRI-14A	
	Lab Sample ID	OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX		OC-SB-427-17/19-XXX		OC-SB-428-23/25-XXX	
	Field Sample ID	360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15		360-24563-16		360-24563-3		360-24563-7	
	Sample Collection Date	9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	4,400		11,000		2,500		2,600		5,300		3,600		3,500		5,500	
Antimony	mg/kg	0.64	UJ	0.62	UJ	0.6	UJ	0.64	UJ	0.62	UJ	0.6	UJ	0.73	UJ	0.59	UJ
Arsenic	mg/kg	3.7		3.5		6.2		6.9		3.7		1.9		2		4.9	
Barium	mg/kg	9.2		52		12		13		7.6		14		8.9		18	
Beryllium	mg/kg	0.17	J	0.24	J	0.1	J	0.097	J	0.19	J	0.076	J	0.22	J	0.2	J
Cadmium	mg/kg	0.072	J	0.28		0.1	J	0.095	J	0.069	J	0.082	J	0.28	J	0.26	
Calcium	mg/kg	500		3,400		360		410		380		1,400		750		2,100	
Chromium	mg/kg	33	J	280	J	100	J	100	J	64	J	64	J	7.6		21	
Cobalt	mg/kg	2		8.9		1.7		1.6		1.5		2.3		3		7.1	
Copper	mg/kg	3.3	J	35	J	11	J	3.9	J	2.5	J	3.4	J	6.9		29	
Iron	mg/kg	5,300		20,000		8,200		7,600		5,000		6,100		5,000		12,000	
Lead	mg/kg	2.6		3.6		1.7		1.8		3.5		1.3		1.6		2.5	
Magnesium	mg/kg	1,200		6,000		1,000		970		730		1,200		1,200		2,900	
Manganese	mg/kg	48		210		38		39		32		49		45		100	
Nickel	mg/kg	6		13		4		4		4.5		4.1		6.5		10	
Potassium	mg/kg	520	J	2,600	J	760	J	880	J	320	J	960	J	710		1,100	
Selenium	mg/kg	0.64	U	0.62	U	0.6	U	0.64	U	0.62	U	0.6	U	0.73	U	0.59	U
Silver	mg/kg	0.35	J	4.4		1.6		1.6		0.96		0.98		0.73	U	0.59	U
Sodium	mg/kg	130	U	140		120	U	130	U	2,200		17,000		150	U	57	J
Thallium	mg/kg	1.3	U	0.25	JEB	1.2	U	1.3	U	1.2	U	1.2	U	1.5	U	1.2	U
Tin	mg/kg	13	J	110	J	42	J	42	J	26	J	26	J	2.8	J	7.6	J
Vanadium	mg/kg	7.6		39		25		24		6.6		8.6		5.8		19	
Zinc	mg/kg	10		36		9.4		8.9		9.7		11		24		22	
Mercury	mg/kg	0.17	U	0.15	U	0.2	U	0.19	U	0.12	J	0.16	J				

Notes:
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SB-457-28/30-XXX		OC-SS-400-0.0/1.0-XXX		OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX	
	Field Sample ID	360-24582-1		360-24582-5		360-24582-6		360-24582-7		360-24582-9		360-24582-10		360-24582-11		360-24582-12	
	Sample Collection Date	9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	8,600		3,600		6,600		12,000		5,100		6,000		14,000		8,300	
Antimony	mg/kg	0.29	J	0.86	UJ	0.61	UJ	0.82	UJ	0.71	UJ	0.58	UJ	0.79	UJ	0.68	UJ
Arsenic	mg/kg	4		8.9		12		8.2		3.9		5		6.8		5	
Barium	mg/kg	41	J	13	J	16	J	27	J	17	J	7	J	17	J	9.3	J
Beryllium	mg/kg	0.21	J	0.1	J	0.19	J	0.32	J	0.23	J	0.16	J	0.27	J	0.21	J
Cadmium	mg/kg	0.26	J	0.69		0.16	J	0.49		0.63		0.11	J	0.23	J	0.26	J
Calcium	mg/kg	2,800		1,300		890		1,200		1,600		490		600		390	
Chromium	mg/kg	180		15		11		15		13		8		14		32	
Cobalt	mg/kg	7.7		2.9		2.8		3.2		2.7		2.3		2.6		1.8	
Copper	mg/kg	25		35		12		20		24		4.9		12		5.5	
Iron	mg/kg	19,000		36,000		8,800		18,000		8,600		6,500		13,000		7,200	
Lead	mg/kg	3	J	53	J	30	J	48	J	27	J	10	J	33	J	15	J
Magnesium	mg/kg	5,200		170		1,600		820		1,300		1,000		560		830	
Manganese	mg/kg	140		100		68		60		110		46		23		37	
Nickel	mg/kg	14		11		8.8		9.6		7.5		6.6		6.9		6.2	
Potassium	mg/kg	2,600		360		710		370		820		670		450		440	
Selenium	mg/kg	0.75	U	0.86	U	0.61	U	0.82	U	0.71	U	0.58	U	0.79	U	0.68	U
Silver	mg/kg	2.7		0.86	U	0.61	U	0.12	J	0.71	U	0.58	U	0.089	J	0.45	J
Sodium	mg/kg	410		170	U	21	J	39	J	140	U	120	U	160	U	140	U
Thallium	mg/kg	1.5	U	1.7	U	1.2	U	1.6	U	1.4	U	1.2	U	1.6	U	1.4	U
Tin	mg/kg	69	J	5.3	J	3.6	J	5	J	4.7	J	2.6	J	4.6	J	12	J
Vanadium	mg/kg	32		19		17		44		11		10		30		12	
Zinc	mg/kg	23		19		19		32		200		17		13		38	
Mercury	mg/kg	0.23	UJ	0.12	J	0.2	UJ	0.16	J	0.46	J	0.17	UJ	0.077	J	0.21	UJ

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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX	
	Field Sample ID	360-24582-13		360-24582-14		360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21		360-24582-22	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	6,800		8,300		12,000		9,500		6,400		4,000		5,300		5,200	
Antimony	mg/kg	0.63	UJ	0.68	UJ	1.5	UJ	0.69	UJ	0.64	UJ	1.4	UJ	0.67	UJ	0.81	J
Arsenic	mg/kg	7.1		5.6		2.8	J	8		7.8		2	J	4.1		4.2	
Barium	mg/kg	23	J	29	J	81	J	46	J	17	J	56	J	9.4	J	27	J
Beryllium	mg/kg	0.25	J	0.24	J	0.9		0.31		0.22	J	0.19	J	0.14	J	0.16	J
Cadmium	mg/kg	0.43		0.41		0.5	J	0.27	J	0.19	J	1.1		0.55		0.68	
Calcium	mg/kg	2,100		3,700		1,100		1,800		2,000		13,000		580		590	
Chromium	mg/kg	82		21		22		59		14		84		56		57	
Cobalt	mg/kg	3.9		6.6		3.5		6.4		5.9		5.9		2.1		2	
Copper	mg/kg	12		19		25		12		22		26		31		32	
Iron	mg/kg	12,000		16,000		6,900		15,000		12,000		6,800		7,300		8,800	
Lead	mg/kg	31	J	14	J	25	J	11	J	8.1	J	80	J	13	J	26	J
Magnesium	mg/kg	2,200		3,400		110		5,100		2,700		1,100		980		910	
Manganese	mg/kg	96		180		13		180		130		93		48		53	
Nickel	mg/kg	10		15		12		23		11		9.9		6.2		7.3	
Potassium	mg/kg	740		1,200		620	U	3,400		930		380	J	430		440	
Selenium	mg/kg	0.63	U	0.68	U	1.9		0.69	U	0.64	U	1.4	U	0.67	U	0.62	U
Silver	mg/kg	1.1		0.68	U	1.5	U	0.55	J	0.64	U	1.3	J	0.94		0.88	
Sodium	mg/kg	25	J	47	J	310	U	33	J	75	J	88	J	130	U	120	U
Thallium	mg/kg	1.3	U	1.4	U	3.1	U	1.4	U	1.3	U	2.8	U	1.3	U	1.2	U
Tin	mg/kg	31	J	6.9	J	7.9	J	21	J	4.5	J	34	J	22	J	22	J
Vanadium	mg/kg	18		44		18		33		18		14		10		9.9	
Zinc	mg/kg	60		120		82		53		21		59		250		280	
Mercury	mg/kg	0.1	J	0.068	J	0.43	UJ	0.19	UJ	0.2	UJ	0.41	UJ	0.047	J	0.17	J

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
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QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SS-417-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX	
	Field Sample ID	360-24634-1		360-24634-2		360-24634-3		360-24634-4		360-24634-5		360-24634-6		360-24634-7		360-24634-8	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	2,300		640		7,200		6,600		6,800		7,400		7,800		6,200	
Antimony	mg/kg	0.28	J	0.64	UJ	0.62	UJ	0.57	UJ	0.69	UJ	0.77	UJ	0.74	UJ	0.65	UJ
Arsenic	mg/kg	2		1.3	U	13		9.5		8.4		5.6		12		7.5	
Barium	mg/kg	19		3.4		18		43		52		81		42		34	
Beryllium	mg/kg	0.1	J	0.26	U	0.3		0.24		0.25	J	0.27	J	0.29	J	0.33	
Cadmium	mg/kg	0.3		0.026	J	0.3		0.33		0.34		0.26	J	0.51		0.26	
Calcium	mg/kg	950		68		1,400		12,000		29,000		33,000		12,000		14,000	
Chromium	mg/kg	10		1.1		59		48		52		36		60		55	
Cobalt	mg/kg	1.9		0.16	J	3.3		3.5		3.5		3.5		4.6		3.8	
Copper	mg/kg	7.4		0.94	JEB	9.2		7.7		7.7		7.8		8.2		7.9	
Iron	mg/kg	5,600		300		12,000		9,300		9,000		8,800		13,000		9,100	
Lead	mg/kg	9		3.7		11		5.8		5.3		6		5.7		6.3	
Magnesium	mg/kg	570		24		2,100		2,200		2,400		2,600		2,700		1,900	
Manganese	mg/kg	32		2.8		120		110		110		120		160		100	
Nickel	mg/kg	5		0.66	J	8.7		7.9		8		7.9		9.6		10	
Potassium	mg/kg	330		250	J	750		1,900		1,400		1,500		1,100		1,100	
Selenium	mg/kg	0.69	U	0.64	U	0.62	U	0.57	U	0.69	U	0.77	U	0.74	U	0.65	U
Silver	mg/kg	0.69	U	0.64	U	0.65		0.42	J	0.61	J	0.35	J	0.63	J	0.76	
Sodium	mg/kg	55	J	32	J	18	J	79	J	200		440		46	J	62	J
Thallium	mg/kg	1.4	U	1.3	U	1.2	U	1.1	U	1.4	U	1.5	U	1.5	U	1.3	U
Tin	mg/kg	3.9	J	6.4	UJ	24	J	18	J	20	J	14	J	24	J	22	J
Vanadium	mg/kg	7		4.1		15		12		13		12		15		12	
Zinc	mg/kg	48		1.2	J	20		18		18		17		19		20	
Mercury	mg/kg	0.19	U	0.034	J	0.053	J	0.14	U	0.2	U	0.16	U	0.21	U	0.21	U

Notes:
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SS-425-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX	
	Field Sample ID	360-24634-9		360-24634-10		360-24634-11		360-24634-12		360-24634-13		360-24634-14		360-24634-15		360-24634-16	
	Sample Collection Date	9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	7,500		7,100		13,000		6,200		8,000		8,000		7,800		6,800	
Antimony	mg/kg	0.71	UJ	0.59	UJ	0.75	UJ	0.61	UJ	0.77	UJ	0.86	UJ	0.65	UJ	0.66	UJ
Arsenic	mg/kg	8.4		3.8		3.7		21		8.5		23		8.4		8.3	
Barium	mg/kg	51		29		9.2		17		80		56		42		26	
Beryllium	mg/kg	0.29		0.29		0.3	J	0.29		0.28	J	0.31	J	0.29		0.27	
Cadmium	mg/kg	0.42		0.41		0.14	J	0.29		0.41		0.92		0.79		0.3	
Calcium	mg/kg	35,000		12,000		310		2,200		33,000		15,000		13,000		2,400	
Chromium	mg/kg	75		28		6.3		25		87		66		59		30	
Cobalt	mg/kg	4.1		5.3		1.3		3.1		4.1		5.6		4.2		3.8	
Copper	mg/kg	8.3		7.4		2.4	EB	6.3		8.4		8.4		9.3		13	
Iron	mg/kg	10,000		13,000		6,200		12,000		10,000		20,000		10,000		9,500	
Lead	mg/kg	6.3		4.5		8.4		7.7		5.4		8.2		7.1		15	
Magnesium	mg/kg	2,500		3,900		280		1,300		2,700		2,100		2,700		2,000	
Manganese	mg/kg	140		250		19		77		130		370		140		250	
Nickel	mg/kg	8.7		7.5		3.6		7		8.8		9.8		10		7.7	
Potassium	mg/kg	1,400		1,600		340		630		1,500		1,000		1,100		980	
Selenium	mg/kg	0.71	U	0.59	U	0.75	U	0.61	U	0.77	U	0.86	U	0.65	U	0.66	U
Silver	mg/kg	1		0.13	J	0.75	U	0.11	J	1.2		0.67	J	0.7		0.21	J
Sodium	mg/kg	96	J	74	J	150	U	120	U	250		77	J	63	J	130	U
Thallium	mg/kg	1.4	U	1.2	U	1.5	U	1.2	U	1.5	U	1.7	U	1.3	U	1.3	U
Tin	mg/kg	30	J	10	J	2.3	J	9.3	J	36	J	26	J	24	J	12	J
Vanadium	mg/kg	15		18		11		12		14		17		14		14	
Zinc	mg/kg	20		23		9.3		14		18		19		21		30	
Mercury	mg/kg	0.15	U	0.18	U	0.042	J	0.18	U	0.21	U	0.21	U	0.031	J	0.099	J

Notes:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SB-406-0.0/1.0-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-435-0.0/1.0-XXX		OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX	
	Field Sample ID	360-24665-13		360-24665-15		360-24665-16		360-24665-17		360-24665-1		360-24665-2		360-24665-3		360-24665-4	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	24,000		5,000		17,000		10,000		13,000		11,000		3,100		3,800	
Antimony	mg/kg	1.4	UJ	0.59	UJ	1.5	UJ	0.68	UJ	0.75	UJ	0.75	UJ	0.76	UJ	0.73	UJ
Arsenic	mg/kg	15		2.5		5.2		2.6		4.7		6.8		2.4		2.6	
Barium	mg/kg	25		16		6.9		14		12		15		5.9		15	
Beryllium	mg/kg	0.63		0.18	J	0.27	J	0.29		0.3		0.29	J	0.067	J	0.21	J
Cadmium	mg/kg	0.56	J	0.1	J	0.14	J	0.21	J	0.22	J	0.26	J	0.073	J	0.11	J
Calcium	mg/kg	930		850		330		1,400		480		590		130		330	
Chromium	mg/kg	20		8.2		10		10		8.8		9.1		2.9		70	
Cobalt	mg/kg	4.3		2.7		1.1	J	4		2.3		2.3		0.38	J	3.9	
Copper	mg/kg	12		5.9		5.2		28		3.6		5.8		2		6.3	
Iron	mg/kg	23,000		5,200		7,200		12,000		10,000		12,000		2,300		3,200	
Lead	mg/kg	34		2.5		13		2.1		9.8		14		8.4		15	
Magnesium	mg/kg	1,500		1,400		290		3,100		520		600		68		230	
Manganese	mg/kg	70		52		14		160		32		69		4.1		21	
Nickel	mg/kg	13		7.9		3.2		7.3		5.8		5.8		1.4	J	7.5	
Potassium	mg/kg	1,100		1,300		230	J	420		400		440		200	J	580	
Selenium	mg/kg	1.4	U	0.59	U	1.5	U	0.68	U	0.39	J	0.6	J	0.76	U	0.73	U
Silver	mg/kg	1.4	U	0.59	U	1.5	U	0.68	U	0.75	U	0.75	U	0.76	U	0.98	
Sodium	mg/kg	290	U	26	J	290	U	33	J	150	U	150	U	23	J	36	J
Thallium	mg/kg	2.9	U	1.2	U	2.9	U	1.4	U	1.5	U	1.5	U	1.5	U	1.5	U
Tin	mg/kg	6.9	J	2.8	J	4.1	J	3.4	J	3.2	J	3.2	J	1.1	J	31	J
Vanadium	mg/kg	42		8.2		18		17		15		21		8.5		6.7	
Zinc	mg/kg	24		13		6.7	J	16		13		14		2.4	J	5.9	
Mercury	mg/kg			0.16	U	0.2	U	0.15	U	0.074	J	0.11	J	0.18	U	0.2	U

Notes:
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TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-451-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX	
	Field Sample ID	360-24665-5		360-24665-6		360-24665-7		360-24665-8		360-24665-9		360-24665-10		360-24665-11		360-24665-12	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/17/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	3,900		3,600		1,900		5,800		1,400		11,000		12,000		3,200	
Antimony	mg/kg	1.1	UJ	0.97	UJ	0.9	UJ	0.86	UJ	0.84	UJ	0.61	UJ	0.65	UJ	0.7	UJ
Arsenic	mg/kg	14		7.5		1.4	J	5.8		1.6	J	9.5		10		0.64	J
Barium	mg/kg	12		23		3.5		13		5.5		12		8.5		13	
Beryllium	mg/kg	0.16	J	0.13	J	0.087	J	0.18	J	0.042	J	0.32		0.28		0.19	J
Cadmium	mg/kg	0.17	J	0.16	J	0.053	J	0.12	J	0.037	J	0.22	J	0.23	J	0.057	J
Calcium	mg/kg	670		610		86		330		180		480		390		460	
Chromium	mg/kg	81		8.8		1.5		6		1.7		10		9.7		4	
Cobalt	mg/kg	1.4		1.9		0.56	J	2		0.45	J	2.9		2.1		0.51	J
Copper	mg/kg	4.5		6.2		3.1		4.1		1.7	J	5.3		4		5.6	
Iron	mg/kg	8,000		4,200		610		5,200		760		10,000		11,000		660	
Lead	mg/kg	24		41		18		26		12		22		11		7.8	
Magnesium	mg/kg	510		170		33		740		48		1,100		780		24	
Manganese	mg/kg	20		11		3.8		25		7.5		60		38		3.4	
Nickel	mg/kg	4.2		3.7		1.5	J	3.9		1.3	J	7.3		5.8		1.7	
Potassium	mg/kg	650		380	J	210	J	430		210	J	520		580		51	J
Selenium	mg/kg	1.1	U	0.97	U	0.9	U	0.86	U	0.84	U	0.61	U	0.65	U	0.7	U
Silver	mg/kg	0.99	J	0.97	U	0.9	U	0.86	U	0.84	U	0.61	U	0.65	U	0.7	U
Sodium	mg/kg	220	U	42	J	39	J	48	J	37	J	120	U	130	U	33	J
Thallium	mg/kg	2.2	U	1.9	U	1.8	U	1.7	U	1.7	U	1.2	U	1.3	U	1.4	U
Tin	mg/kg	35	J	3.8	J	0.71	J	2.2	J	0.78	J	3.5	J	3.4	J	1.7	J
Vanadium	mg/kg	23		15		5		13		3.6		16		19		3.8	
Zinc	mg/kg	6		5.5		1.9	J	6.1		2.2	J	18		11		5	
Mercury	mg/kg	0.32	U	0.067	J	0.21	U	0.048	J	0.055	J	0.064	J	0.048	J	0.21	U

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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17A		OCRI-17A		OCRI-17B		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SB-406-13/15-XXX		OC-SB-413-10/12-XXX		OC-SB-406-0.0/1.0-XXX		OC-SB-400-17/19-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX	
	Field Sample ID	360-24665-14		360-24665-18		360-24665-13		360-24686-1		360-24686-2		360-24686-3		360-24686-4		360-24686-5	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	10,000		7,500				3,300		4,700		5,600		7,700		5,000	
Antimony	mg/kg	0.65	UJ	0.71	UJ			0.71	U	3.3	UJ	0.72	UJ	0.76	UJ	2.8	UJ
Arsenic	mg/kg	1.3	J	2.2				1.8		2.2	J	1.5		2.5		1.7	J
Barium	mg/kg	15		30				9.3		87		17		38		55	
Beryllium	mg/kg	0.26		0.26	J			0.11	J	0.4	J	0.19	J	0.32		0.42	J
Cadmium	mg/kg	0.44		0.22	J			0.067	J	0.84	J	0.17	J	0.18	J	0.94	J
Calcium	mg/kg	2,400		1,700				800		6,500		1,900		2,400		5,400	
Chromium	mg/kg	27		16				7.5		40		11		14		18	
Cobalt	mg/kg	14		6.4				1.8		3.8		5.8		6.9		2.7	J
Copper	mg/kg	57		24				4		23		20		21		14	
Iron	mg/kg	23,000		12,000				4,500		5,200		10,000		11,000		5,700	
Lead	mg/kg	2.4		1.7				1.7		76		2.5		3.3		42	
Magnesium	mg/kg	7,600		3,400				1,200		370		3,200		3,000		350	
Manganese	mg/kg	190		110				38		44		98		110		18	
Nickel	mg/kg	17		11				5.2		12		8.5		9.5		8.5	
Potassium	mg/kg	910		850				640		340	J	900		1,800		300	J
Selenium	mg/kg	0.65	U	0.71	U			0.71	U	3.6		0.72	U	0.76	U	2	J
Silver	mg/kg	0.65	U	0.71	U			0.71	U	3.3	U	0.72	U	0.76	U	2.8	U
Sodium	mg/kg	130	U	72	J			39	J	160	J	62	J	98	J	590	
Thallium	mg/kg	1.3	U	1.4	U			1.4	U	6.5	U	1.4	U	1.5	U	5.5	U
Tin	mg/kg	9.5	J	5.8	J			2.9	J	18	J	3.7	J	4.9	J	8	J
Vanadium	mg/kg	45		20				6.5		24		17		19		16	
Zinc	mg/kg	37		17				8.5		140		19		18		100	
Mercury	mg/kg					0.081	J			0.35	J	0.18	U	0.14	U	0.76	U

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-13/15-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX	
	Field Sample ID	360-24686-6		360-24686-7		360-24686-8		360-24686-9		360-24686-10		360-24686-13		360-24686-11		360-24686-14	
	Sample Collection Date	9/17/2009		9/18/2009		9/18/2009		9/18/2009		9/17/2009		9/18/2009		9/17/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	8,400		1,700		8,400		4,100		7,100		6,800		9,400		4,800	
Antimony	mg/kg	0.75	UJ	0.61	UJ	0.66	UJ	0.67	UJ	0.83	UJ	0.67	UJ	0.66	UJ	0.67	UJ
Arsenic	mg/kg	1.8		2.1		7.5		2.2		4.3		4.1		18		9.5	
Barium	mg/kg	19		9.6		28		6.2		9.2		9.3		32		19	
Beryllium	mg/kg	0.2	J	0.06	J	0.36		0.1	J	0.18	J	0.2	J	0.33		0.24	J
Cadmium	mg/kg	0.13	J	0.099	J	0.25	J	0.062	J	0.16	J	0.16	J	0.3		0.24	J
Calcium	mg/kg	1,200		270		2,000		550		320		620		2,100		800	
Chromium	mg/kg	9.9		2.6		360		6		4.7		6.8		39		6.8	
Cobalt	mg/kg	2.7		0.41	J	6		1.7		0.91		1.3		7		1.8	
Copper	mg/kg	9.3		1.9		18		2.9		4.1		4.4		13		15	
Iron	mg/kg	6,200		1,900		14,000		3,900		6,600		6,300		14,000		8,100	
Lead	mg/kg	2.4		8		2.5		1.2		20		8.2		12		31	
Magnesium	mg/kg	1,700		39		3,600		900		220		490		3,500		580	
Manganese	mg/kg	56		5.1		140		31		13		61		210		59	
Nickel	mg/kg	6.7		2.3		14		4.6		2.8		4		21		5.3	
Potassium	mg/kg	1,000		290		1,400		520		320	J	330		2,000		290	
Selenium	mg/kg	0.75	U	0.61	U	0.66	U	0.67	U	0.83	U	0.67	U	0.66	U	0.67	U
Silver	mg/kg	0.75	U	0.61	U	5		0.67	U	0.83	U	0.67	U	0.18	J	0.67	U
Sodium	mg/kg	130	J	23	J	53	J	31	J	170	U	130	U	29	J	130	U
Thallium	mg/kg	1.5	U	1.2	U	1.3	U	1.3	U	1.7	U	1.3	U	1.3	U	1.3	U
Tin	mg/kg	3.5	J	1	J	150		2.1	J	1.6	J	2.5	J	15		2.5	J
Vanadium	mg/kg	14		10		20		5.4		11		9.1		24		14	
Zinc	mg/kg	12		3.5		28		7.1		5.6		18		29		20	
Mercury	mg/kg	0.2	U	0.16	U			0.15	U	0.083	J	0.2	U	0.19	U	0.066	J

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX	
	Field Sample ID	360-24686-15		360-24686-16	
	Sample Collection Date	9/18/2009		9/18/2009	
	QC Code	FS		FS	
Analyte	Units	Result	Qualifier	Result	Qualifier
Aluminum	mg/kg	8,400		5,600	
Antimony	mg/kg	0.7	UJ	0.74	UJ
Arsenic	mg/kg	8		5.7	
Barium	mg/kg	23		19	
Beryllium	mg/kg	0.29		0.27	J
Cadmium	mg/kg	0.36		0.24	J
Calcium	mg/kg	1,800		1,500	
Chromium	mg/kg	14		6.4	
Cobalt	mg/kg	3.4		1.5	
Copper	mg/kg	20		9.8	
Iron	mg/kg	9,400		6,500	
Lead	mg/kg	33		24	
Magnesium	mg/kg	1,300		520	
Manganese	mg/kg	160		71	
Nickel	mg/kg	8.2		6	
Potassium	mg/kg	720		310	
Selenium	mg/kg	0.7	U	0.74	U
Silver	mg/kg	0.7	U	0.74	U
Sodium	mg/kg	140	U	150	U
Thallium	mg/kg	1.4	U	1.5	U
Tin	mg/kg	5.9	J	2.5	J
Vanadium	mg/kg	15		12	
Zinc	mg/kg	49		39	
Mercury	mg/kg	0.14	J	0.038	J

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-11		OCRI-12		OCRI-14		OCRI-15		OCRI-16		OCRI-18	
Lab Sample ID		OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-007		OC-EBK-008		OC-EBK-009		OC-EBK-010		OC-EBK-011		OC-EBK-012	
Field Sample ID		360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24444-16		360-24454-18		360-24563-23		360-24582-4		360-24634-18		360-24686-20	
Sample Collection Date		8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/3/2009		9/8/2009		9/10/2009		9/14/2009		9/16/2009		9/17/2009	
QC Code		EB		EB		EB		EB		EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	ug/l	100	U	100	U	43	J	100	U	100	U	100	U	100	U	100	U	100	U	100	U	100	U	100	U
Antimony	ug/l	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U
Arsenic	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Barium	ug/l	3.3	J	3.7	J	10	U	10	U	10	U	10	U	10	U	10	U	3.2	J	10	U	10	U	10	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	ug/l	94	J	450		170	J	60	J	130	J	64	J	400	U	68	J	500		78	J	400	U	400	U
Chromium	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cobalt	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Copper	ug/l	55		7.4	J	31		9.1	J	21		9.4	J	5.1	J	3.7	J	31		29		68		3.2	J
Iron	ug/l	100	U	53	J	81	J	100	U	98	J	41	J	35	J	45	J	94	J	110		100	U	100	U
Lead	ug/l	12		1.5	J	5	U	5	U	5	U	5	U	5	U	5	U	3.2	J	5	U	3.6	J	5	U
Magnesium	ug/l	400	U	120	J	400	U	400	U	400	U	400	U	400	U	400	U	120	J	400	U	400	U	400	U
Manganese	ug/l	1.5	J	1.7	J	2.2	J	10	U	1.4	J	10	U	10	U	1.4	J	1.9	J	10	U	10	U	1.4	J
Nickel	ug/l	1.7	J	2	J	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Potassium	ug/l	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U	4,000	U
Selenium	ug/l	10	U	10	U	2.7	J	10	U	10	U	10	U	10	U	10	U	3	J	3.2	J	4.6	J	10	U
Silver	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	1.8	J	5	U	5	U	5	U
Sodium	ug/l	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U	2,000	U
Thallium	ug/l	10	U	10	U	10	U	10	U	4.3	J	4.4	J	10	U	10	U	4.8	J	3	J	4.6	J	3.8	J
Tin	ug/l	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U
Vanadium	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Zinc	ug/l	22	J	50	U	13	J	50	U	50	U	50	U	50	U	50	U	15	J	50	U	50	U	50	U
Mercury	ug/l	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.12	J	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.7 - VALIDATED RESULTS SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09	
	Lab Sample ID	OC-PE-MS00149-METALS	
	Field Sample ID	360-24365-19	
	Sample Collection Date	9/1/2009	
	QC Code	PE	
Analyte	Units	Result	Qualifier
Aluminum	mg/kg	1,600	
Antimony	mg/kg	30	
Arsenic	mg/kg	40	
Barium	mg/kg	1.5	
Beryllium	mg/kg	15	
Cadmium	mg/kg	2.9	
Calcium	mg/kg	2,300	
Chromium	mg/kg	0.96	
Cobalt	mg/kg	100	
Copper	mg/kg	0.68	J
Iron	mg/kg	2,800	
Lead	mg/kg	12	
Magnesium	mg/kg	2,800	
Manganese	mg/kg	10	
Nickel	mg/kg	80	
Potassium	mg/kg	130	J
Selenium	mg/kg	7	
Silver	mg/kg	0.52	U
Sodium	mg/kg	2,500	
Thallium	mg/kg	0.36	J
Tin	mg/kg	0.76	J
Vanadium	mg/kg	46	
Zinc	mg/kg	1.6	J
Mercury	mg/kg	1.2	

Notes:
Samples analyzed by SW-846 Method 6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
PE = performance evaluation

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.8 - VALIDATED RESULTS SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08A		OCRI-11		OCRI-11		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	OC-SB-449-6.0/8.0-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-454-18/20-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-7.0/9.0-XXX	
	Field Sample ID	360-24343-19		360-24343-21		360-24343-20		360-24444-14		360-24444-15		360-24454-12		360-24454-13		360-24454-15	
	Sample Collection Date	8/27/2009		8/27/2009		8/27/2009		9/3/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chromium, Hexavalent	mg/kg	2.4	U	5.7		10		2.3	U	2.3	U	2.4	U	6.8		8.4	

Notes:
Samples analyzed by SW-846 Method
7199 (soil prep method 3060A)
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.8 - VALIDATED RESULTS SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-12A		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-14	
	Lab Sample ID	OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-470-31/33-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-456-0.0/1.0-XXX	
	Field Sample ID	360-24454-16		360-24454-17		360-24454-14		360-24499-9		360-24499-10		360-24499-11		360-24499-13		360-24563-17	
	Sample Collection Date	9/4/2009		9/4/2009		9/4/2009		9/8/2009		9/8/2009		9/8/2009		9/9/2009		9/11/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chromium, Hexavalent	mg/kg	5.3		2.4	U	2.6	J	16		2.1	U	2.1	U	2.1	U	2.1	J

Notes:
Samples analyzed by SW-846 Method
7199 (soil prep method 3060A)
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.8 - VALIDATED RESULTS SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX		OC-SB-457-28/30-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX	
	Field Sample ID	360-24563-18		360-24563-19		360-24563-20		360-24563-21		360-24563-22		360-24582-3		360-24582-24		360-24582-25	
	Sample Collection Date	9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/14/2009		9/15/2009		9/15/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chromium, Hexavalent	mg/kg	9.7		6.3		3.9		6.8		4		11		6.4		7.3	

Notes:
Samples analyzed by SW-846 Method
7199 (soil prep method 3060A)
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.8 - VALIDATED RESULTS SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX	
	Field Sample ID	360-24665-20		360-24665-21		360-24686-17		360-24686-19	
	Sample Collection Date	9/17/2009		9/17/2009		9/18/2009		9/18/2009	
	QC Code	FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chromium, Hexavalent	mg/kg	3	U	8.9		2.4	U	2.3	U

Notes:
Samples analyzed by SW-846 Method 7199 (soil prep method 3060A)
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.8 - VALIDATED RESULTS SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-12	
	Lab Sample ID	OC-EBK-006		OC-EBK-008	
	Field Sample ID	360-24365-12		360-24454-18	
	Sample Collection Date	8/31/2009		9/8/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Chromium, Hexavalent	ug/l	1	U	1	U

Notes:
Samples analyzed by SW-846 Method 7199 (soil prep method 3060A)
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
	Lab Sample ID	OC-SB-405-0.0/1.0-XXX		OC-SB-405-14/15-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-412-12/13-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-13/14-XXX	
	Field Sample ID	360-24173-1		360-24173-2		360-24173-3		360-24173-9		360-24173-10		360-24173-11		360-24173-4		360-24173-5	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	22		13		7.8	U	7.1		40		6.9	U	6.8		78	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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J = estimated
EB = compound detected in the
associated equipment blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-02	
	Lab Sample ID	OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-12/14-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-13/14-XXX		OC-SB-423-5.0/6.0-XXX		OC-SB-421-0.0/1.0-XXX	
	Field Sample ID	360-24173-6		360-24173-12		360-24173-13		360-24173-14		360-24173-15		360-24173-16		360-24173-17		360-24194-1	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	7.3	U	6.7	U	25		7.7	U	16		65		7.4		23	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02	
	Lab Sample ID	OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-17/19-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-18/20-XXX		OC-SB-425-6.0/8.0-XXX	
	Field Sample ID	360-24194-2		360-24194-3		360-24194-4		360-24194-5		360-24194-6		360-24194-7		360-24194-8		360-24194-9	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	120		7.2	U	19		47		11		45		130		7.5	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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associated equipment blank
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
	Lab Sample ID	OC-SB-415-0.0/1.0-XXX		OC-SB-415-16/18-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-17/19-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-13/15-XXX	
	Field Sample ID	360-24223-1		360-24223-2		360-24223-3		360-24223-4		360-24223-5		360-24223-6		360-24223-7		360-24223-8	
	Sample Collection Date	8/20/2009		8/20/2009		8/20/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	8.4		27		6.5	U	6.1	U	85		7	U	25		130	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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J = estimated
EB = compound detected in the
associated equipment blank
QC Code:
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FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-04	
	Lab Sample ID	OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-13/15-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-432-0.0/1.0-XXX	
	Field Sample ID	360-24223-10		360-24223-9		360-24223-11		360-24223-12		360-24223-13		360-24223-14		360-24223-15		360-24244-1	
	Sample Collection Date	8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	9.6		18		6.6	U	20		59		310		10		170	EB

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
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EB = compound detected in the associated equipment blank
QC Code:
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FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
	Lab Sample ID	OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-21/23-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-18/20-XXX		OC-SB-443-6.0/8.0-XXX	
	Field Sample ID	360-24244-2		360-24244-3		360-24244-10		360-24244-11		360-24244-12		360-24244-4		360-24244-5		360-24244-6	
	Sample Collection Date	8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	12	EB	12	EB	21	EB	160	EB	13	EB	9.9	EB	220	EB	7.1	U

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
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EB = compound detected in the associated equipment blank
QC Code:
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FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-445-0.0/1.0-XXX		OC-SB-445-25/27-XXX		OC-SB-445-8.0/10-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-433-20/22-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-438-0.0/1.0-XXX	
	Field Sample ID	360-24244-7		360-24244-8		360-24244-9		360-24251-1		360-24251-2		360-24251-3		360-24251-4		360-24251-23	
	Sample Collection Date	8/21/2009		8/21/2009		8/21/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	6.3	U	160	EB	46	EB	26		110		7.9	U	6.7	U	6.8	U

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the
associated equipment blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		OC-SB-438-20/22-XXX		OC-SB-438-5.0/7.0-XXX		OC-SB-439-0.0-1.0-XXX		OC-SB-439-16/18-XXX		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-23/25-XXX		OC-SB-440-6.0/8.0-XXX	
Field Sample ID		360-24251-24		360-24251-12		360-24251-5		360-24251-6		360-24251-7		360-24251-8		360-24251-9		360-24251-10	
Sample Collection Date		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	100		6.7	U	8.1		180		7.9	U	11		170		19	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment blank
QC Code:
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FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-441-0.0/1.0-XXX		OC-SB-441-17/19-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-15/17-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
	Field Sample ID	360-24251-13		360-24251-14		360-24251-15		360-24251-16		360-24251-17		360-24251-18		360-24251-19		360-24251-20	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	20		87		6.9	U	6.8	U	400		6.8	U	6.6	U	170	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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J = estimated
EB = compound detected in the
associated equipment blank
QC Code:
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX	
	Field Sample ID	360-24251-21		360-24251-22		360-24309-1		360-24309-2		360-24309-3		360-24309-4		360-24309-5		360-24309-6	
	Sample Collection Date	8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	70		71		5.7	U	6.7	U	18		7	U	16		7.2	U

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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J = estimated
EB = compound detected in the
associated equipment blank
QC Code:
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FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-407-0.0/1.0-XXX		OC-SB-407-26/28-XXX		OC-SB-407-8.0/10-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX		OC-SB-414-20/22-XXX		OC-SB-414-6.0/8.0-XXX	
	Field Sample ID	360-24309-7		360-24309-8		360-24309-9		360-24309-10		360-24309-11		360-24309-12		360-24309-13		360-24309-14	
	Sample Collection Date	8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	86		180		29		44		7.4	U	9.7		76		29	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment blank
QC Code:
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-422-0.0/1.0-XXX		OC-SB-422-13/15-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-16/18-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-19/21-XXX		OC-SB-430-8.0/10-DUP	
Field Sample ID		360-24309-15		360-24309-16		360-24309-17		360-24309-18		360-24309-19		360-24309-20		360-24309-21		360-24309-22	
Sample Collection Date		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	25		51		24		160		36		11		79		12	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-06		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-430-8.0/10-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-13/15-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-13/15-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-15/17-XXX	
	Field Sample ID	360-24309-23		360-24327-1		360-24327-2		360-24327-3		360-24327-4		360-24327-5		360-24327-6		360-24327-7	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	19		7.7		7.9	U	440		24		17		17		310	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
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EB = compound detected in the associated equipment blank
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-17/19-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX	
Field Sample ID		360-24327-8		360-24327-9		360-24327-10		360-24327-11		360-24327-12		360-24327-13		360-24327-14		360-24327-15	
Sample Collection Date		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/27/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	9.3		50		95		16		16		11		7.5		16	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-418-15/17-XXX		OC-SB-418-8/10-XXX	
	Field Sample ID	360-24327-16		360-24327-17	
	Sample Collection Date	8/27/2009		8/27/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	190		15	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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EB = compound detected in the associated equipment blank
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-444-0.0/1.0-XXX		OC-SB-444-12/14-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-449-11/13-XXX		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-18/20-XXX	
	Field Sample ID	360-24343-1		360-24343-2		360-24343-3		360-24343-4		360-24343-5		360-24343-6		360-24343-7		360-24343-8	
	Sample Collection Date	8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	23		310		7.2	U	24		20		7.4		40		85	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX		OC-SB-454-0.0/1.0-XXX		OC-SB-454-18/20-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-0.0/1.0-XXX		OC-SB-455-28/30-XXX		OC-SB-455-6.0/8.0-DUP	
	Field Sample ID	360-24343-9		360-24343-10		360-24343-11		360-24343-12		360-24343-13		360-24343-14		360-24343-15		360-24343-16	
	Sample Collection Date	8/28/2009		8/28/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	24		23		11		150		6.7	U	72		330		630	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-455-6.0/8.0-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-20/22-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX	
	Field Sample ID	360-24343-17		360-24365-1		360-24365-2		360-24365-3		360-24365-4		360-24365-5		360-24365-6		360-24365-7	
	Sample Collection Date	8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	700		33		220		7.9	U	8.2	U	80		210		14	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-452-0.0/1.0-XXX		OC-SB-452-13/15-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-22/24-XXX		OC-SB-458-5.0/7.0-XXX		OC-SB-460-0.0/1.0-XXX		OC-SB-460-30/32-XXX	
	Field Sample ID	360-24365-8		360-24365-9		360-24365-10		360-24365-13		360-24365-14		360-24365-15		360-24365-16		360-24365-17	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	35		210		6.2	U	31		240		13		41		280	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-460-5.5/7.5-XXX		OC-SB-463-0.0/1.0-XXX		OC-SB-463-28/30-XXX		OC-SB-463-6.0/8.0-XXX		OC-SB-464-0.0/1.0-XXX		OC-SB-464-26/28-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX	
	Field Sample ID	360-24365-18		360-24417-1		360-24417-2		360-24417-3		360-24417-4		360-24417-5		360-24417-6		360-24417-7	
	Sample Collection Date	9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	30		11	J	510	J	8.3	UJ	11	J	120	J	11	J	6.7	UJ

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-465-16/18-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-31/33-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-26/28-XXX	
	Field Sample ID	360-24417-8		360-24417-9		360-24417-10		360-24417-11		360-24417-12		360-24417-13		360-24417-14		360-24417-16	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	79	J	78	J	75	J	55	J	88	J	92	J	6.8	UJ	100	J

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
Lab Sample ID		OC-SB-471-3.0/5.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-459-26/28-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-31/33-XXX		OC-SB-462-4.0/6.0-XXX	
Field Sample ID		360-24417-15		360-24444-12		360-24444-13		360-24444-1		360-24444-2		360-24444-3		360-24444-4		360-24444-5	
Sample Collection Date		9/2/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	6.4	UJ	19		220		21		18		7		180		36	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	OC-SB-467-30/32-XXX		OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX		OC-SB-461-28/30-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-31/33-XXX		OC-SB-470-7.0/9.0-XXX	
	Field Sample ID	360-24444-7		360-24444-8		360-24444-9		360-24454-2		360-24454-3		360-24454-4		360-24454-5		360-24454-6	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	100		7.1	U	8	U	210		7.6	U	7.2	U	70		30	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-12		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-20/22-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-15/16-XXX	
	Field Sample ID	360-24454-7		360-24454-8		360-24454-9		360-24499-14		360-24499-15		360-24499-16		360-24499-17		360-24499-18	
	Sample Collection Date	9/4/2009		9/4/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	6	U	160		7.3		13		9.9		5.8	U	2,100		150	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-33/35-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX	
	Field Sample ID	360-24499-19		360-24499-20		360-24499-21		360-24499-22		360-24499-6		360-24499-7		360-24499-1		360-24499-2	
	Sample Collection Date	9/10/2009		9/9/2009		9/9/2009		9/9/2009		9/8/2009		9/8/2009		9/8/2009		9/8/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	7.1		51		210		8.1	U	14		250		7.6	U	17	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-469-28/30-XXX		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX	
	Field Sample ID	360-24499-3		360-24499-4		360-24499-5		360-24563-1		360-24563-2		360-24563-3		360-24563-4		360-24563-5	
	Sample Collection Date	9/9/2009		9/9/2009		9/9/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	7.1		300		5.6	U	51		6.1	U	7.9		14		8.6	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
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FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX		OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX	
	Field Sample ID	360-24563-6		360-24563-7		360-24563-9		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15	
	Sample Collection Date	9/10/2009		9/10/2009		9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	21		76		6.7	U	15	J	390	J	68	J	6.7	UJ	79	J

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-14		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SB-457-8.0/10-XXX		OC-SB-457-28/30-XXX		OC-SS-400-0.0/1.0-XXX		OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX	
	Field Sample ID	360-24563-16		360-24582-1		360-24582-5		360-24582-6		360-24582-7		360-24582-9		360-24582-10		360-24582-11	
	Sample Collection Date	9/11/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	33	J	130		240		83		270		50		40		200	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
Lab Sample ID		OC-SS-407-0.0/1.0-XXX		OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX	
Field Sample ID		360-24582-12		360-24582-13		360-24582-14		360-24582-16		360-24582-17		360-24582-19		360-24582-20	
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	77		100		36		810		64		50		670	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
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TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-15		OCRI-15	
Lab Sample ID		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX	
Field Sample ID		360-24582-21		360-24582-22	
Sample Collection Date		9/15/2009		9/15/2009	
QC Code		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	51		41	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SS-417-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX	
	Field Sample ID	360-24634-1		360-24634-2		360-24634-3		360-24634-4		360-24634-5		360-24634-6		360-24634-7		360-24634-8	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	38		58		62		7.5	U	7.4	U	7.3	U	8.4	U	24	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SS-425-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX	
Field Sample ID		360-24634-9		360-24634-10		360-24634-11		360-24634-12		360-24634-13		360-24634-14		360-24634-15		360-24634-16	
Sample Collection Date		9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	18		6.5	U	120		33		8.2	U	39		20		61	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SB-406-0.0/1.0-XXX		OC-SB-406-13/15-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SB-413-10/12-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-435-0.0/1.0-XXX	
	Field Sample ID	360-24665-13		360-24665-14		360-24665-15		360-24665-16		360-24665-17		360-24665-18		360-24665-1		360-24665-2	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	460		110		12		140		53		7.6	U	110		140	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
Lab Sample ID		OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-451-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX	
Field Sample ID		360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8		360-24665-9		360-24665-10	
Sample Collection Date		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	100		120		250		350		130		200		100		100	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-400-17/19-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX	
Field Sample ID		360-24665-11		360-24665-12		360-24686-1		360-24686-2		360-24686-3		360-24686-4		360-24686-5		360-24686-6	
Sample Collection Date		9/16/2009		9/16/2009		9/18/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	95		120		7.4	U	1200		140		100		730		150	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-473-0.0/1.0-XXX		OC-SB-473-13/15-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX	
Field Sample ID		360-24686-7		360-24686-8		360-24686-9		360-24686-10		360-24686-13		360-24686-11		360-24686-14	
Sample Collection Date		9/18/2009		9/18/2009		9/18/2009		9/17/2009		9/18/2009		9/17/2009		9/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	94		93		6.8	U	160		130		65		140	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX	
	Field Sample ID	360-24686-15		360-24686-16	
	Sample Collection Date	9/18/2009		9/18/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/kg	190		200	

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-01	OCRI-02	OCRI-04	OCRI-05	OCRI-07	OCRI-09	OCRI-11	OCRI-12	OCRI-14	OCRI-15
Lab Sample ID		OC-EBK-001	OC-EBK-002	OC-EBK-003	OC-EBK-004	OC-EBK-005	OC-EBK-006	OC-EBK-007	OC-EBK-008	OC-EBK-009	OC-EBK-010
Field Sample ID		360-24173-8	360-24194-12	360-24244-14	360-24251-26	360-24327-19	360-24365-12	360-24444-16	360-24454-18	360-24563-23	360-24582-4
Sample Collection Date		8/18/2009	8/19/2009	8/21/2009	8/24/2009	8/27/2009	8/31/2009	9/3/2009	9/8/2009	9/10/2009	9/14/2009
QC Code		EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Analyte	**Units**	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier
Nitrogen, as Ammonia	mg/l	0.1 U	0.1 U	0.9	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/l = milligrams per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

TABLE 2.9 - VALIDATED RESULTS SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-18	
	Lab Sample ID	OC-EBK-011		OC-EBK-012	
	Field Sample ID	360-24634-18		360-24686-20	
	Sample Collection Date	9/16/2009		9/17/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Nitrogen, as Ammonia	mg/l	0.1	U	0.1	U

Notes:
Samples analyzed by QuikChem: LACHAT
10-107-06-1-A
Units: mg/l = milligrams per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
	Lab Sample ID	OC-SB-405-0.0/1.0-XXX		OC-SB-405-14/15-XXX		OC-SB-405-8.0/9.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-412-12/13-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-13/14-XXX	
	Field Sample ID	360-24173-1		360-24173-2		360-24173-3		360-24173-9		360-24173-10		360-24173-11		360-24173-4		360-24173-5	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	26		22	U	20	U	22	U	22	U	21	U	21	U
Sulfate	mg/kg	42	U	44	U	54		40	U	44	U	44	U	140		43	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
EB = compound detected in the associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-02	
	Lab Sample ID	OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-12/14-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-423-13/14-XXX		OC-SB-423-5.0/6.0-XXX		OC-SB-421-0.0/1.0-XXX	
	Field Sample ID	360-24173-6		360-24173-12		360-24173-13		360-24173-14		360-24173-15		360-24173-16		360-24173-17		360-24194-1	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	25		19	U	18	U	20	U	21	U	21	U	19	U
Sulfate	mg/kg	42	U	91		38	U	35	U	41	U	54		42	U	39	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
EB = compound detected in the associated equipment rinsate blank
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02	
	Lab Sample ID	OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-17/19-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-18/20-XXX		OC-SB-425-6.0/8.0-XXX	
	Field Sample ID	360-24194-2		360-24194-3		360-24194-4		360-24194-5		360-24194-6		360-24194-7		360-24194-8		360-24194-9	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	20	U	18	U	19	U	20	U	18	U	20	U
Sulfate	mg/kg	41	U	43	U	41	U	37		39	U	40	U	35	U	41	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
EB = compound detected in the associated equipment rinsate blank
QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
	Lab Sample ID	OC-SB-415-0.0/1.0-XXX		OC-SB-415-16/18-XXX		OC-SB-415-5.0/7.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-17/19-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-13/15-XXX	
	Field Sample ID	360-24223-1		360-24223-2		360-24223-3		360-24223-4		360-24223-5		360-24223-6		360-24223-7		360-24223-8	
	Sample Collection Date	8/20/2009		8/20/2009		8/20/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	21	U	22	U	30	J	21	U	21	U	21	U	23	U
Sulfate	mg/kg	67		68		45	U	43		83		43	U	41	U	46	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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	Sample Delivery Group	OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-04	
	Lab Sample ID	OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-0.0/1.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-436-13/15-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-432-0.0/1.0-XXX	
	Field Sample ID	360-24223-10		360-24223-9		360-24223-11		360-24223-12		360-24223-13		360-24223-14		360-24223-15		360-24244-1	
	Sample Collection Date	8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	23	U	23	U	21	U	22	U	21	U	21	U	22	U	90	
Sulfate	mg/kg	46	U	47	U	43	U	44	U	43	U	200		44	U	280	

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
	Lab Sample ID	OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-21/23-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-18/20-XXX		OC-SB-443-6.0/8.0-XXX	
	Field Sample ID	360-24244-2		360-24244-3		360-24244-10		360-24244-11		360-24244-12		360-24244-4		360-24244-5		360-24244-6	
	Sample Collection Date	8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	22	U	22	U	21	U	21	U	23	U	20	U	21	U	23	U
Sulfate	mg/kg	43	U	45	U	83		42	U	45	U	41	U	190		46	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-445-0.0/1.0-XXX		OC-SB-445-25/27-XXX		OC-SB-445-8.0/10-XXX		OC-SB-433-0.0/1.0-XXX		OC-SB-433-20/22-XXX		OC-SB-433-5.0/7.0-DUP		OC-SB-433-5.0/7.0-XXX		OC-SB-438-0.0/1.0-XXX	
	Field Sample ID	360-24244-7		360-24244-8		360-24244-9		360-24251-1		360-24251-2		360-24251-3		360-24251-4		360-24251-23	
	Sample Collection Date	8/21/2009		8/21/2009		8/21/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	20	U	22	U	24	U	21	U	22	U	23	U	23	U	21	U
Sulfate	mg/kg	41	U	140		47	U	43	U	43	U	47	U	47	U	43	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-438-20/22-XXX		OC-SB-438-5.0/7.0-XXX		OC-SB-439-0.0-1.0-XXX		OC-SB-439-16/18-XXX		OC-SB-439-8.0/10-XXX		OC-SB-440-0.0/1.0-XXX		OC-SB-440-23/25-XXX		OC-SB-440-6.0/8.0-XXX	
	Field Sample ID	360-24251-24		360-24251-12		360-24251-5		360-24251-6		360-24251-7		360-24251-8		360-24251-9		360-24251-10	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009		8/24/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	23	U	23	U	25	U	21	U	22	U	22	U
Sulfate	mg/kg	96	EB	45	U	46	U	46	U	49	U	41	U	45	EB	44	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-441-0.0/1.0-XXX		OC-SB-441-17/19-XXX		OC-SB-441-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-15/17-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
	Field Sample ID	360-24251-13		360-24251-14		360-24251-15		360-24251-16		360-24251-17		360-24251-18		360-24251-19		360-24251-20	
	Sample Collection Date	8/24/2009		8/24/2009		8/24/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	23	U	21	U	22	U	24	U	25	U	21	U
Sulfate	mg/kg	41	U	44	U	45	U	120	EB	59	EB	49	U	51	U	42	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-400-0.0/1.0-XXX		OC-SB-400-5.0/7.0-XXX		OC-SB-401-0.0/1.0-XXX		OC-SB-401-7.5/9.5-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX	
	Field Sample ID	360-24251-21		360-24251-22		360-24309-1		360-24309-2		360-24309-3		360-24309-4		360-24309-5		360-24309-6	
	Sample Collection Date	8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	22	U	22	U	21	U	21	U	21	U	22	U	21	U	22	U
Sulfate	mg/kg	44	U	45	U	41	U	43	U	84		44	U	150		45	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-407-0.0/1.0-XXX		OC-SB-407-26/28-XXX		OC-SB-407-8.0/10-XXX		OC-SB-408-0.0/1.0-XXX		OC-SB-408-7.0/9.0-XXX		OC-SB-414-0.0/1.0-XXX		OC-SB-414-20/22-XXX		OC-SB-414-6.0/8.0-XXX	
	Field Sample ID	360-24309-7		360-24309-8		360-24309-9		360-24309-10		360-24309-11		360-24309-12		360-24309-13		360-24309-14	
	Sample Collection Date	8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	22	U	22	U	24	U	34		23	U	21	U	21	U	22	U
Sulfate	mg/kg	44	U	43	U	48	U	110		46	U	240		43	U	44	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-422-0.0/1.0-XXX		OC-SB-422-13/15-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-429-16/18-XXX		OC-SB-429-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-19/21-XXX		OC-SB-430-8.0/10-DUP	
	Field Sample ID	360-24309-15		360-24309-16		360-24309-17		360-24309-18		360-24309-19		360-24309-20		360-24309-21		360-24309-22	
	Sample Collection Date	8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	39		24	U	23	U	21	U	23	U	21	U	21	U	22	U
Sulfate	mg/kg	89		47	U	46	U	42	U	46	U	41	U	42	U	43	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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	Sample Delivery Group	OCRI-06		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-430-8.0/10-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-13/15-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-13/15-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-15/17-XXX	
	Field Sample ID	360-24309-23		360-24327-1		360-24327-2		360-24327-3		360-24327-4		360-24327-5		360-24327-6		360-24327-7	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	95		25	U	32	U	21	U	23	U	21	U	22	U
Sulfate	mg/kg	42	U	130		49	U	64	U	43	U	47	U	41	U	44	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-17/19-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX			
Field Sample ID		360-24327-8		360-24327-9		360-24327-10		360-24327-11		360-24327-12		360-24327-13		360-24327-14		360-24327-15			
Sample Collection Date		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/27/2009			
QC Code		FS		FS		FS		FD		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Chloride	mg/kg	25	U	22	U	21	U	26	U	26	U	35		21	U	22	U		
Sulfate	mg/kg	51	U	45	U	43	U	53	U	52	U	43	U	42	U	43	U		

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-418-15/17-XXX		OC-SB-418-8/10-XXX	
	Field Sample ID	360-24327-16		360-24327-17	
	Sample Collection Date	8/27/2009		8/27/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	22	U	22	U
Sulfate	mg/kg	45	U	43	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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EB = compound detected in the associated equipment rinsate blank
QC Code:
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FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-444-0.0/1.0-XXX		OC-SB-444-12/14-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-449-11/13-XXX		OC-SB-449-6.0/8.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-18/20-XXX	
	Field Sample ID	360-24343-1		360-24343-2		360-24343-3		360-24343-4		360-24343-5		360-24343-6		360-24343-7		360-24343-8	
	Sample Collection Date	8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	20	U	19	U	22	U	21	U	22	U	23	U	19	U	21	U
Sulfate	mg/kg	40	U	37	U	44	U	43	U	44	U	47	U	38	U	42	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX		OC-SB-454-0.0/1.0-XXX		OC-SB-454-18/20-XXX		OC-SB-454-6.0/8.0-XXX		OC-SB-455-28/30-XXX		OC-SB-455-6.0/8.0-DUP		OC-SB-455-6.0/8.0-XXX	
	Field Sample ID	360-24343-9		360-24343-10		360-24343-11		360-24343-12		360-24343-13		360-24343-15		360-24343-16		360-24343-17	
	Sample Collection Date	8/28/2009		8/28/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	19	U	20	U	20	U	24		22	U	20	U	210	U	24	U
Sulfate	mg/kg	39	U	39	U	40	U	99		44	U	41	U	420	U	49	U

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-442-0.0/1.0-XXX		OC-SB-442-20/22-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX		OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX		OC-SB-452-0.0/1.0-XXX	
	Field Sample ID	360-24365-1		360-24365-2		360-24365-3		360-24365-4		360-24365-5		360-24365-6		360-24365-7		360-24365-8	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	23	U	23	U	23	U	22	U	22	U	21	U
Sulfate	mg/kg	43	U	43	U	46	U	45	U	45	U	44	U	44	U	41	U

Notes:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-452-13/15-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-22/24-XXX		OC-SB-458-5.0/7.0-XXX		OC-SB-460-0.0/1.0-XXX		OC-SB-460-30/32-XXX		OC-SB-460-5.5/7.5-XXX	
	Field Sample ID	360-24365-9		360-24365-10		360-24365-13		360-24365-14		360-24365-15		360-24365-16		360-24365-17		360-24365-18	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009		9/1/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	24	U	21	U	21	U	24	U	22	U	22	U	25	U
Sulfate	mg/kg	43	U	48	U	49		43	U	48	U	60		44	U	420	

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
Lab Sample ID		OC-SB-463-0.0/1.0-XXX		OC-SB-463-28/30-XXX		OC-SB-463-6.0/8.0-XXX		OC-SB-464-0.0/1.0-XXX		OC-SB-464-26/28-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-16/18-XXX	
Field Sample ID		360-24417-1		360-24417-2		360-24417-3		360-24417-4		360-24417-5		360-24417-6		360-24417-7		360-24417-8	
Sample Collection Date		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	24	U	21	U	31		23	U	21	U	22	U
Sulfate	mg/kg	54		43	U	69		42	U	43	U	45	U	41	U	44	U

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-31/33-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-26/28-XXX		OC-SB-471-3.0/5.0-XXX	
	Field Sample ID	360-24417-9		360-24417-10		360-24417-11		360-24417-12		360-24417-13		360-24417-14		360-24417-16		360-24417-15	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	22	U	23	U	23	U	21	U	23	U	22	U	21	U	24	U
Sulfate	mg/kg	45	U	45	U	79		390		46	U	44	U	63		48	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11		OCRI-11	
	Lab Sample ID	OC-SB-459-0.0/1.0-XXX		OC-SB-459-26/28-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-462-0.0/1.0-XXX		OC-SB-462-31/33-XXX		OC-SB-462-4.0/6.0-XXX		OC-SB-467-30/32-XXX	
	Field Sample ID	360-24444-12		360-24444-13		360-24444-1		360-24444-2		360-24444-3		360-24444-4		360-24444-5		360-24444-7	
	Sample Collection Date	9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/3/2009		9/2/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	20	U	21	U	15	U	21	U	19	U	18	U	21	U	18	U
Sulfate	mg/kg	40	U	490		31	U	42	U	37	U	37	U	71		36	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12		OCRI-12	
	Lab Sample ID	OC-SB-467-6.0/8.0-DUP		OC-SB-467-6.0/8.0-XXX		OC-SB-461-28/30-XXX		OC-SB-461-5.0/7.0-XXX		OC-SB-470-0.0/1.0-XXX		OC-SB-470-31/33-XXX		OC-SB-470-7.0/9.0-XXX		OC-SB-472-0.0/1.0-XXX	
	Field Sample ID	360-24444-8		360-24444-9		360-24454-2		360-24454-3		360-24454-4		360-24454-5		360-24454-6		360-24454-7	
	Sample Collection Date	9/2/2009		9/2/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	15	U	19	U	20	U	22	U	22	U	53		17	U	20	U
Sulfate	mg/kg	39		39		200		44	U	82		320		34	U	40	U

Notes:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-12		OCRI-12		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-417-0.0/1.0-XXX		OC-SB-417-20/22-XXX		OC-SB-417-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-15/16-XXX		OC-SB-434-7.0/9.0-XXX	
	Field Sample ID	360-24454-8		360-24454-9		360-24499-14		360-24499-15		360-24499-16		360-24499-17		360-24499-18		360-24499-19	
	Sample Collection Date	9/4/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	15	U	21	U	20	U	28		20	U	21	U	23	U	21	U
Sulfate	mg/kg	100		620		40	U	49	U	41	U	42	U	46	U	43	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-450-0.0/1.0-XXX		OC-SB-450-33/35-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-469-0.0/1.0-XXX		OC-SB-469-28/30-XXX	
	Field Sample ID	360-24499-20		360-24499-21		360-24499-22		360-24499-6		360-24499-7		360-24499-1		360-24499-2		360-24499-3	
	Sample Collection Date	9/9/2009		9/9/2009		9/9/2009		9/8/2009		9/8/2009		9/8/2009		9/8/2009		9/9/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	22	U	23	U	21	U	29		22	U	21	U	22	U
Sulfate	mg/kg	42	U	69		46	U	41	U	950		43	U	95		43	U

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-13		OCRI-13		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
Lab Sample ID		OC-SB-469-36/37-XXX		OC-SB-469-7.0/9.0-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX	
Field Sample ID		360-24499-4		360-24499-5		360-24563-1		360-24563-2		360-24563-3		360-24563-4		360-24563-5		360-24563-6	
Sample Collection Date		9/9/2009		9/9/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
QC Code		FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	100		21	U	22	U	22	U	22	U	21	U	21	U	21	U
Sulfate	mg/kg	3,500		110		43	U	44	U	44	U	41	U	41	U	42	U

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-428-23/25-XXX		OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX	
	Field Sample ID	360-24563-7		360-24563-9		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15		360-24563-16	
	Sample Collection Date	9/10/2009		9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	23	U	21	U	38		21	U	21	U	22	U	21	U	22	U
Sulfate	mg/kg	45	U	42	U	41	U	63		43	U	43	U	5,000		37,000	

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SB-457-28/30-XXX		OC-SS-400-0.0/1.0-XXX		OC-SS-401-0.1/1.0-XXX		OC-SS-402-0.0/1.0-XXX		OC-SS-404-0.0/1.0-XXX		OC-SS-405-0.0/1.0-XXX		OC-SS-406-0.0/1.0.-XXX		OC-SS-407-0.0/1.0-XXX	
	Field Sample ID	360-24582-1		360-24582-5		360-24582-6		360-24582-7		360-24582-9		360-24582-10		360-24582-11		360-24582-12	
	Sample Collection Date	9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/14/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	25	U	26	U	21	U	27	U	21	U	21	U	27	U	22	U
Sulfate	mg/kg	210		52	U	42	U	54	U	43	U	43	U	53	U	45	U

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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15		OCRI-15	
	Lab Sample ID	OC-SS-408-0.0/1.0-XXX		OC-SS-409-0.0/1.0-XXX		OC-SS-411-0.0/1.0-XXX		OC-SS-412-0.0/1.0-XXX		OC-SS-414-0.0/1.0-XXX		OC-SS-415-0.0/1.0-XXX		OC-SS-416-0.0/1.0-DUP		OC-SS-416-0.0/1.0-XXX	
	Field Sample ID	360-24582-13		360-24582-14		360-24582-16		360-24582-17		360-24582-19		360-24582-20		360-24582-21		360-24582-22	
	Sample Collection Date	9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	24	U	20	U	48	U	22	U	21	U	55		22	U	22	U
Sulfate	mg/kg	47	U	41	U	97	U	43	U	43	U	94	U	43	U	43	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SS-417-0.0/1.0-XXX		OC-SS-418-0.0/1.0-XXX		OC-SS-419-0.0/1.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-421-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-423-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX	
Field Sample ID		360-24634-1		360-24634-2		360-24634-3		360-24634-4		360-24634-5		360-24634-6		360-24634-7		360-24634-8	
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009		9/15/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	20	U	16	U	21	U	22	U	25	U	44		18	U	22	U
Sulfate	mg/kg	39	U	31	U	43	U	1,100		2,300		620		57		8,100	

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SS-425-0.0/1.0-XXX		OC-SS-426-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-428-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-430-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-432-0.0/1.0-XXX	
Field Sample ID		360-24634-9		360-24634-10		360-24634-11		360-24634-12		360-24634-13		360-24634-14		360-24634-15		360-24634-16	
Sample Collection Date		9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	17	U	19	U	17	U	19	U	20	U	15	U	23	U
Sulfate	mg/kg	13,000		1,000		37	U	33	U	920		2,400		5,100		46	U

Notes:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
Lab Sample ID		OC-SB-406-0.0/1.0-XXX		OC-SB-406-13/15-XXX		OC-SB-406-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SB-413-10/12-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-435-0.0/1.0-XXX	
Field Sample ID		360-24665-13		360-24665-14		360-24665-15		360-24665-16		360-24665-17		360-24665-18		360-24665-1		360-24665-2	
Sample Collection Date		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/16/2009		9/16/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	41	U	19	U	17	U	26	U	18	U	16	U	23	U	24	U
Sulfate	mg/kg	83	U	38	U	34	U	53	U	35	U	33	U	46	U	48	U

Notes:
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
Lab Sample ID		OC-SS-436-0.0/1.0-XXX		OC-SS-437-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-442-0.0/1.0-XXX		OC-SS-449-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-451-0.0/1.0-XXX		OC-SS-454-0.0/1.0-XXX	
Field Sample ID		360-24665-3		360-24665-4		360-24665-5		360-24665-6		360-24665-7		360-24665-8		360-24665-9		360-24665-10	
Sample Collection Date		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/17/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	21	U	24	U	26	U	33	U	25	U	20	U	26	U	19	U
Sulfate	mg/kg	43	U	52		58		66	U	51	U	63		52	U	38	U

Notes:
Samples analyzed by EPA 300
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TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-400-17/19-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX	
	Field Sample ID	360-24665-11		360-24665-12		360-24686-1		360-24686-2		360-24686-3		360-24686-4		360-24686-5		360-24686-6	
	Sample Collection Date	9/16/2009		9/16/2009		9/18/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	23	U	22	U	18	U	180		21	U	20	U	550		22	U
Sulfate	mg/kg	45	U	45	U	36	U	210	U	42	U	40	U	180	U	44	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-473-0.0/1.0-XXX		OC-SB-473-13/15-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-458-0.0/1.0-XXX	
Field Sample ID		360-24686-7		360-24686-8		360-24686-9		360-24686-10		360-24686-13		360-24686-11		360-24686-14	
Sample Collection Date		9/18/2009		9/18/2009		9/18/2009		9/17/2009		9/18/2009		9/17/2009		9/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	19	U	19	U	17	U	25	U	21	U	22	U	19	U
Sulfate	mg/kg	39	U	78		34	U	51	U	43	U	43	U	39	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-459-0.0/1.0-XXX		OC-SS-461-0.0/1.0-XXX	
	Field Sample ID	360-24686-15		360-24686-16	
	Sample Collection Date	9/18/2009		9/18/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Chloride	mg/kg	19	U	18	U
Sulfate	mg/kg	38	U	37	U

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-11		OCRI-12		OCRI-14		OCRI-15	
	Lab Sample ID	OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-007		OC-EBK-008		OC-EBK-009		OC-EBK-010	
	Field Sample ID	360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24444-16		360-24454-18		360-24563-23		360-24582-4	
	Sample Collection Date	8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/3/2009		9/8/2009		9/10/2009		9/14/2009	
	QC Code	EB		EB		EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Chloride	mg/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Sulfate	mg/l	2	U	2	U	2	U	21		2	U	2	U	2	U	2	U	2	U	2	U

Notes:
Samples analyzed by EPA 300
Units: mg/l = milligrams per liter
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
QC Code:
EB = equipment blank

TABLE 2.10 - VALIDATED RESULTS SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-18	
	Lab Sample ID	OC-EBK-011		OC-EBK-012	
	Field Sample ID	360-24634-18		360-24686-20	
	Sample Collection Date	9/16/2009		9/17/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Chloride	mg/l	1	U	1	U
Sulfate	mg/l	2	U	2	U

Notes:
Samples analyzed by EPA 300
Units: mg/l = milligrams per liter
Qualifiers:
U = not-detected
J = estimated
EB = compound detected in the associated equipment rinsate blank
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01	
	Lab Sample ID	OC-SB-412-0.0/1.0-XXX		OC-SB-412-12/13-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-13/14-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-12/14-XXX	
	Field Sample ID	360-24173-9		360-24173-10		360-24173-11		360-24173-4		360-24173-5		360-24173-6		360-24173-12		360-24173-13	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	200	U	210	U	230	U	200	U	210	U	210	U	200	U	200	U
Formaldehyde	ug/kg	180		320		380		190		400		350		160		390	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-01		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-02	
	Lab Sample ID	OC-SB-420-6.5/8.5-XXX		OC-SB-423-0.0/1.0-XXX		OC-SB-421-0.0/1.0-XXX		OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-424-17/19-XXX		OC-SB-424-7.0/9.0-XXX	
	Field Sample ID	360-24173-14		360-24173-15		360-24194-1		360-24194-2		360-24194-3		360-24194-4		360-24194-5		360-24194-6	
	Sample Collection Date	8/18/2009		8/18/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	U	210	U	210	U	160	J	210	U	210	U	63	J	210	U
Formaldehyde	ug/kg	160		140		100	J	530		200		480		610		1,600	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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QC Code:
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TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-04	
	Lab Sample ID	OC-SB-425-0.0/1.0-XXX		OC-SB-425-18/20-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-17/19-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-432-0.0/1.0-XXX	
	Field Sample ID	360-24194-7		360-24194-8		360-24194-9		360-24223-4		360-24223-5		360-24223-6		360-24223-7		360-24244-1	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	200	U	210	U	210	U	200	U	210	U	210	U	200	U	120	J
Formaldehyde	ug/kg	100	U	280		150		290		240		120		140		210	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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QC Code:
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TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
	Lab Sample ID	OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-21/23-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-18/20-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-445-0.0/1.0-XXX	
	Field Sample ID	360-24244-2		360-24244-3		360-24244-10		360-24244-11		360-24244-12		360-24244-5		360-24244-6		360-24244-7	
	Sample Collection Date	8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/21/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	51	J	230	UJ	210	U	50	J	220	U	210	U	210	U	200	U
Formaldehyde	ug/kg	490	J	110	UJ	270		330		110	U	180		150		240	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
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TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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OU1 SOIL PROGRAM
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-04		OCRI-04		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
	Lab Sample ID	OC-SB-445-25/27-XXX		OC-SB-445-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-15/17-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-448-17/19-XXX	
	Field Sample ID	360-24244-8		360-24244-9		360-24251-16		360-24251-17		360-24251-18		360-24251-19		360-24251-20		360-24251-21	
	Sample Collection Date	8/21/2009		8/21/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	U	230	U	45	J	33	J	40	J	42	J	38	J	35	J
Formaldehyde	ug/kg	210		200		390		150		130		140		370		260	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
	Lab Sample ID	OC-SB-448-8.0/10-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-26/28-XXX		OC-SB-407-8.0/10-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-13/15-XXX	
	Field Sample ID	360-24251-22		360-24309-5		360-24309-6		360-24309-7		360-24309-8		360-24309-9		360-24309-15		360-24309-16	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	43	J	44	J	38	J	48	J	52	J	49	J	43	J	47	J
Formaldehyde	ug/kg	280		240		110		220		230		200		330		340	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-422-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-19/21-XXX		OC-SB-430-8.0/10-DUP		OC-SB-430-8.0/10-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-13/15-XXX		OC-SB-403-6.0/8.0-XXX	
	Field Sample ID	360-24309-17		360-24309-20		360-24309-21		360-24309-22		360-24309-23		360-24327-1		360-24327-2		360-24327-3	
	Sample Collection Date	8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	40	J	39	J	41	J	39	J	37	J	210	U	250	U	320	U
Formaldehyde	ug/kg	220		190		810		250		250		280		120	J	430	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
	Lab Sample ID	OC-SB-404-13/15-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-15/17-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-17/19-XXX		OC-SB-410-6.0/8.0-DUP	
	Field Sample ID	360-24327-4		360-24327-5		360-24327-6		360-24327-7		360-24327-8		360-24327-9		360-24327-10		360-24327-11	
	Sample Collection Date	8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	U	230	U	200	U	220	U	250	U	220	U	220	U	260	U
Formaldehyde	ug/kg	270		220		330		300		2,100		280		790		660	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-08		OCRI-08	
	Lab Sample ID	OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-418-0.0/1.0-XXX		OC-SB-418-15/17-XXX		OC-SB-418-8/10-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-444-12/14-XXX	
	Field Sample ID	360-24327-12		360-24327-13		360-24327-14		360-24327-15		360-24327-16		360-24327-17		360-24343-1		360-24343-2	
	Sample Collection Date	8/27/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	260	U	210	U	200	U	210	U	220	U	220	U	33	J	36	J
Formaldehyde	ug/kg	600		300		260		350		350		400		130		250	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-18/20-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-20/22-XXX	
	Field Sample ID	360-24343-3		360-24343-4		360-24343-7		360-24343-8		360-24343-9		360-24343-10		360-24365-1		360-24365-2	
	Sample Collection Date	8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009		8/28/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	37	J	32	J	46	J	37	J	31	J	210	UJ	35	J	36	J
Formaldehyde	ug/kg	110	J	110		310		140		170	J	140	J	280		260	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
	Lab Sample ID	OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-452-13/15-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-22/24-XXX		OC-SB-458-5.0/7.0-XXX	
	Field Sample ID	360-24365-3		360-24365-4		360-24365-8		360-24365-9		360-24365-10		360-24365-13		360-24365-14		360-24365-15	
	Sample Collection Date	8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	45	J	34	J	200	U	39	J	49	J	220	U	220	U	240	U
Formaldehyde	ug/kg	600	J	170	J	190		260		240		150		250		120	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
	Lab Sample ID	OC-SB-464-0.0/1.0-XXX		OC-SB-464-26/28-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-16/18-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX	
	Field Sample ID	360-24417-4		360-24417-5		360-24417-6		360-24417-7		360-24417-8		360-24417-9		360-24417-10		360-24417-11	
	Sample Collection Date	9/1/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	U	220	U	220	U	210	U	220	U	220	U	220	U	230	U
Formaldehyde	ug/kg	270		500		280		230		250		220		270		290	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-11		OCRI-11		OCRI-11	
	Lab Sample ID	OC-SB-468-31/33-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-26/28-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-459-26/28-XXX		OC-SB-459-6.0/8.0-DUP	
	Field Sample ID	360-24417-12		360-24417-13		360-24417-14		360-24417-16		360-24417-15		360-24444-12		360-24444-13		360-24444-1	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009		9/3/2009		9/3/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	220	U	230	U	220	U	210	U	240	U	220	UJ	210	UJ	220	UJ
Formaldehyde	ug/kg	510		280		210		640		180		250		150		310	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
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J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-459-6.0/8.0-XXX		OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-15/16-XXX		OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX	
	Field Sample ID	360-24444-2		360-24454-7		360-24454-8		360-24454-9		360-24499-17		360-24499-18		360-24499-19		360-24499-20	
	Sample Collection Date	9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/10/2009		9/10/2009		9/10/2009		9/9/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	220	UJ	210	U	210	U	230	U	210	U	230	U	210	U	210	U
Formaldehyde	ug/kg	200		260		290		210		1,300		1,000		250		350	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-13		OCRI-13		OCRI-13		OCRI-13	
	Lab Sample ID	OC-SB-450-33/35-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX	
	Field Sample ID	360-24499-21		360-24499-22		360-24499-7		360-24499-1	
	Sample Collection Date	9/9/2009		9/9/2009		9/8/2009		9/8/2009	
	QC Code	FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	220	U	230	U	220	U	220	U
Formaldehyde	ug/kg	320		290		660		270	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-17/19-XXX		OC-SB-427-8.0/10-DUP		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-23/25-XXX	
	Field Sample ID	360-24563-1		360-24563-2		360-24563-3		360-24563-4		360-24563-5		360-24563-6		360-24563-7	
	Sample Collection Date	9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009		9/10/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	UJ	220	UJ	220	UJ	210	UJ	200	UJ	210	UJ	73	J
Formaldehyde	ug/kg	210		110	J	130		100		87	J	230		520	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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	Sample Delivery Group	OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
	Lab Sample ID	OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX	
	Field Sample ID	360-24563-9		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15		360-24563-16	
	Sample Collection Date	9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	210	UJ	210	UJ	220	UJ	33	J	210	UJ	210	UJ	100	J
Formaldehyde	ug/kg	190		190		230		550		280		230		1,800	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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	Sample Delivery Group	OCRI-15		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
	Lab Sample ID	OC-SB-457-28/30-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX	
	Field Sample ID	360-24582-1		360-24634-4		360-24634-6		360-24634-8		360-24634-11		360-24634-13		360-24634-15	
	Sample Collection Date	9/14/2009		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	66	J	230	UJ	240	U	230	U	240	U	240	U	230	U
Formaldehyde	ug/kg	650		110	U	96	J	110	U	180		170		100	J

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SB-413-10/12-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX	
	Field Sample ID	360-24665-16		360-24665-17		360-24665-18		360-24665-1		360-24665-5		360-24665-8		360-24665-11	
	Sample Collection Date	9/17/2009		9/17/2009		9/17/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	44	J	38	J	220	U	240	UJ	360	U	300	U	230	U
Formaldehyde	ug/kg	260		340		120		110	J	570		350		220	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-17		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
	Lab Sample ID	OC-SS-460-0.0/1.0-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX	
	Field Sample ID	360-24665-12		360-24686-2		360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7	
	Sample Collection Date	9/16/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	230	U	200	J	220	U	220	U	1,100	U	250	U	240	U
Formaldehyde	ug/kg	220		860		170		150		640		180		220	J

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-473-13/15-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX	
Field Sample ID		360-24686-8		360-24686-9		360-24686-10		360-24686-13		360-24686-11		360-24686-15	
Sample Collection Date		9/18/2009		9/18/2009		9/17/2009		9/18/2009		9/17/2009		9/18/2009	
QC Code		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/kg	220	U	240	U	280	U	240	U	46	J	230	U
Formaldehyde	ug/kg	93	J	110	J	310		220		270		230	

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
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	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-12		OCRI-15	
	Lab Sample ID	OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-008		OC-EBK-010	
	Field Sample ID	360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24454-18		360-24582-4	
	Sample Collection Date	8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/8/2009		9/14/2009	
	QC Code	EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/l	100	U	100	U	100	U	100	U	100	U	100	U	100	U	100	U
Formaldehyde	ug/l	50	U	7.1	J	9.9	J	6.9	J	8.1	JB	50	U	50	U	50	U

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
B = detected in associated method blank
QC Code:
FS = field sample
FD = field duplicate
EB = equipment blank

TABLE 2.11 - VALIDATED RESULTS SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
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	Sample Delivery Group	OCRI-16		OCRI-18	
	Lab Sample ID	OC-EBK-011		OC-EBK-012	
	Field Sample ID	360-24634-18		360-24686-20	
	Sample Collection Date	9/16/2009		9/17/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Acetaldehyde	ug/l	100	U	100	U
Formaldehyde	ug/l	50	U	12	JB

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
B = detected in associated method blank
QC Code:
FS = field sample
FD = field duplicate
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-01		OCRI-02		OCRI-02	
Lab Sample ID		OC-SB-412-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-0.0/1.0-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-421-0.0/1.0-XXX		OC-SB-421-8.0/10-XXX	
Field Sample ID		360-24173-9		360-24173-11		360-24173-4		360-24173-6		360-24173-12		360-24173-14		360-24194-1		360-24194-3	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	96	U	110	UJ	100	UJ	110	U	29,000		110	U	100	U	110	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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Sample Delivery Group		OCRI-02		OCRI-02		OCRI-02		OCRI-02		OCRI-03		OCRI-03		OCRI-03		OCRI-03	
Lab Sample ID		OC-SB-424-0.0/1.0-XXX		OC-SB-424-7.0/9.0-XXX		OC-SB-425-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-5.0/7.0-DUP	
Field Sample ID		360-24194-4		360-24194-6		360-24194-7		360-24194-9		360-24223-4		360-24223-6		360-24223-7		360-24223-10	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	100	U	110	U	97	U	110	U	580		100	U	29	J	110	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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Sample Delivery Group		OCRI-03		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04		OCRI-04	
Lab Sample ID		OC-SB-426-5.0/7.0-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX			
Field Sample ID		360-24223-9		360-24244-1		360-24244-2		360-24244-3		360-24244-10		360-24244-12		360-24244-4		360-24244-6			
Sample Collection Date		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/21/2009		8/21/2009		8/20/2009		8/20/2009			
QC Code		FS		FS		FS		FS		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	110	U	2,100		48	J	41	J	110		110	U	22	J	110	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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Sample Delivery Group		OCRI-04		OCRI-04		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05		OCRI-05	
Lab Sample ID		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX	
Field Sample ID		360-24244-7		360-24244-9		360-24251-16		360-24251-18		360-24251-19		360-24251-20		360-24251-21		360-24251-22	
Sample Collection Date		8/21/2009		8/21/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FD		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	97	U	110	U	51	J	120	U	120	U	100	U	110	U	110	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
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FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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Sample Delivery Group		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06	
Lab Sample ID		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-8.0/10-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP	
Field Sample ID		360-24309-5		360-24309-6		360-24309-7		360-24309-9		360-24309-15		360-24309-17		360-24309-20		360-24309-22	
Sample Collection Date		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	36	J	100	U	110	U	110	U	280		110	U	100	U	100	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-06		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07		OCRI-07	
Lab Sample ID		OC-SB-430-8.0/10-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX		OC-SB-410-6.0/8.0-DUP	
Field Sample ID		360-24309-23		360-24327-1		360-24327-3		360-24327-5		360-24327-6		360-24327-8		360-24327-9		360-24327-11	
Sample Collection Date		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	100	U	77	J	160	U	120	U	100	U	120	U	110	U	130	UJ

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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Sample Delivery Group		OCRI-07		OCRI-07		OCRI-07		OCRI-08		OCRI-08		OCRI-08		OCRI-08		OCRI-08	
Lab Sample ID		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP	
Field Sample ID		360-24327-12		360-24327-13		360-24327-14		360-24343-1		360-24343-3		360-24343-4		360-24343-7		360-24343-9	
Sample Collection Date		8/27/2009		8/26/2009		8/26/2009		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	130	UJ	110	U	100	U	100	U	110	U	110	U	100	U	100	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-08		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09		OCRI-09	
Lab Sample ID		OC-SB-451-2.5/4.5-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-458-5.0/7.0-XXX	
Field Sample ID		360-24343-10		360-24365-1		360-24365-3		360-24365-4		360-24365-8		360-24365-10		360-24365-13		360-24365-15	
Sample Collection Date		8/28/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	100	U	110	U	110	U	110	U	100	U	120	U	110	U	120	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-10	
Lab Sample ID		OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX			
Field Sample ID		360-24417-4		360-24417-6		360-24417-7		360-24417-9		360-24417-10		360-24417-11		360-24417-13		360-24417-14			
Sample Collection Date		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009			
QC Code		FS		FS		FS		FD		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	100	U	110	U	99	U	100	UJ	110	UJ	110	U	110	U	100	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-10		OCRI-11		OCRI-11		OCRI-11		OCRI-12		OCRI-12		OCRI-12		OCRI-13	
Lab Sample ID		OC-SB-471-3.0/5.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX		OC-SB-434-0.0/1.0-XXX	
Field Sample ID		360-24417-15		360-24444-12		360-24444-1		360-24444-2		360-24454-7		360-24454-8		360-24454-9		360-24499-17	
Sample Collection Date		9/2/2009		9/3/2009		9/3/2009		9/3/2009		9/4/2009		9/4/2009		9/4/2009		9/10/2009	
QC Code		FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	120	U	100	U	110	U	110	U	110	U	110	U	120	U	100	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-13		OCRI-14		OCRI-14		OCRI-14	
Lab Sample ID		OC-SB-434-7.0/9.0-XXX		OC-SB-450-0.0/1.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-427-12/14-XXX		OC-SB-427-8.0/10-DUP	
Field Sample ID		360-24499-19		360-24499-20		360-24499-22		360-24499-7		360-24499-1		360-24563-1		360-24563-2		360-24563-4	
Sample Collection Date		9/10/2009		9/9/2009		9/9/2009		9/8/2009		9/8/2009		9/10/2009		9/10/2009		9/10/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	110	U	100	U	110	U	110	U	110	U	110	U	34	J	100	UJ

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14		OCRI-14	
Lab Sample ID		OC-SB-427-8.0/10-XXX		OC-SB-428-0.0/1.0-XXX		OC-SB-428-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX			
Field Sample ID		360-24563-5		360-24563-6		360-24563-9		360-24563-11		360-24563-12		360-24563-13		360-24563-14		360-24563-15			
Sample Collection Date		9/10/2009		9/10/2009		9/10/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009			
QC Code		FS		FS		FS		FS		FS		FD		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	100	UJ	100	U	100	U	100	U	110	U	110	UJ	110	UJ	100	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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Sample Delivery Group		OCRI-14		OCRI-15		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16		OCRI-16	
Lab Sample ID		OC-SB-457-8.0/10-XXX		OC-SB-457-28/30-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX			
Field Sample ID		360-24563-16		360-24582-1		360-24634-4		360-24634-6		360-24634-8		360-24634-11		360-24634-13		360-24634-15			
Sample Collection Date		9/11/2009		9/14/2009		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009			
QC Code		FS		FS		FS		FS		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	110	U	130	U	110	U	120	U	110	U	120	U	120	U	110	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-17		OCRI-18	
Lab Sample ID		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-435-0.0/1.0-XXX			
Field Sample ID		360-24665-16		360-24665-17		360-24665-1		360-24665-5		360-24665-8		360-24665-11		360-24665-12		360-24686-2			
Sample Collection Date		9/17/2009		9/17/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/17/2009			
QC Code		FS		FS		FS		FS		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	130	U	110	U	110	UJ	180	U	150	U	120	U	110	U	560	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX			
Field Sample ID		360-24686-3		360-24686-4		360-24686-5		360-24686-6		360-24686-7		360-24686-9		360-24686-10		360-24686-13			
Sample Collection Date		9/17/2009		9/17/2009		9/17/2009		9/17/2009		9/18/2009		9/18/2009		9/17/2009		9/18/2009			
QC Code		FS		FS		FS		FS		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Phthalic Acid/Phthalic anhydride	ug/kg	110	U	110	U	510	U	120	U	120	UJ	120	U	140	U	110	U		

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group		OCRI-18		OCRI-18	
Lab Sample ID		OC-SS-457-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX	
Field Sample ID		360-24686-11		360-24686-15	
Sample Collection Date		9/17/2009		9/18/2009	
QC Code		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/kg	110	U	110	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-01		OCRI-02		OCRI-04		OCRI-05		OCRI-07		OCRI-09		OCRI-12		OCRI-15	
	Lab Sample ID	OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-008		OC-EBK-010	
	Field Sample ID	360-24173-8		360-24194-12		360-24244-14		360-24251-26		360-24327-19		360-24365-12		360-24454-18		360-24582-4	
	Sample Collection Date	8/18/2009		8/19/2009		8/21/2009		8/24/2009		8/27/2009		8/31/2009		9/8/2009		9/14/2009	
	QC Code	EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
Samples analyzed by Modified Method
8000 - LC
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
J = estimated
QC Code:
EB = equipment blank

TABLE 2.12 - VALIDATED RESULTS SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-16		OCRI-18	
	Lab Sample ID	OC-EBK-011		OC-EBK-012	
	Field Sample ID	360-24634-18		360-24686-20	
	Sample Collection Date	9/16/2009		9/17/2009	
	QC Code	EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Phthalic Acid/Phthalic anhydride	ug/l	10	U	10	U

Notes:

Samples analyzed by Modified Method
8000 - LC

Units: ug/l = micrograms per liter

Qualifiers:
U = not-detected
J = estimated

QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.13 - VALIDATED RESULTS SUMMARY - TOTAL ORGANIC CARBON
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-02		OCRI-02		OCRI-02		OCRI-03		OCRI-03		OCRI-03		OCRI-03		OCRI-05	
	Lab Sample ID	OC-SB-421-0.0/1.0-XXX		OC-SB-421-10.5/12.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-426-13/15-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
	Field Sample ID	360-24194-1		360-24194-2		360-24194-3		360-24223-7		360-24223-8		360-24223-10		360-24223-9		360-24251-20	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Organic Carbon	mg/kg	27,000		1,000	U	1,000	U	4,400		1,000	U	1,000	U	1,200		5,000	

Notes:
Samples analyzed by Lloyd Kahn
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.13 - VALIDATED RESULTS SUMMARY - TOTAL ORGANIC CARBON
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-05		OCRI-05		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-06		OCRI-09	
	Lab Sample ID	OC-SB-448-17/19-XXX		OC-SB-448-8.0/10-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-407-26/28-XXX		OC-SB-407-8.0/10-XXX		OC-SB-447-0.0/1.0-XXX	
	Field Sample ID	360-24251-21		360-24251-22		360-24309-5		360-24309-6		360-24309-7		360-24309-8		360-24309-9		360-24365-5	
	Sample Collection Date	8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/31/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Organic Carbon	mg/kg	1,000	U	1,800		3,000		1,000	U	22,000		1,000	U	7,700		29,000	

Notes:
Samples analyzed by Lloyd Kahn
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.13 - VALIDATED RESULTS SUMMARY - TOTAL ORGANIC CARBON
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-09		OCRI-09		OCRI-10		OCRI-10		OCRI-10		OCRI-10		OCRI-11		OCRI-11	
	Lab Sample ID	OC-SB-447-18/20-XXX		OC-SB-447-3.0/5.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-16/18-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-459-26/28-XXX	
	Field Sample ID	360-24365-6		360-24365-7		360-24417-7		360-24417-8		360-24417-9		360-24417-10		360-24444-12		360-24444-13	
	Sample Collection Date	8/31/2009		8/31/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009		9/3/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Organic Carbon	mg/kg	1,000	U	42,000		1,100		1,000	U	1,000	U	1,000	U	4,300		1,000	U

Notes:
Samples analyzed by Lloyd Kahn
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.13 - VALIDATED RESULTS SUMMARY - TOTAL ORGANIC CARBON
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	OCRI-11		OCRI-11		OCRI-13		OCRI-13		OCRI-13		OCRI-16		OCRI-17		OCRI-17	
	Lab Sample ID	OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-466-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX	
	Field Sample ID	360-24444-1		360-24444-2		360-24499-6		360-24499-7		360-24499-1		360-24634-8		360-24665-1		360-24665-11	
	Sample Collection Date	9/3/2009		9/3/2009		9/8/2009		9/8/2009		9/8/2009		9/15/2009		9/16/2009		9/16/2009	
	QC Code	FD		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Organic Carbon	mg/kg	7,500		5,400		2,600		1,000	U	1,000	U	9,400		32,000		29,000	

Notes:
Samples analyzed by Lloyd Kahn
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.13 - VALIDATED RESULTS SUMMARY - TOTAL ORGANIC CARBON
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		OCRI-18		OCRI-18		OCRI-18		OCRI-18	
Lab Sample ID		OC-SB-473-0.0/1.0-XXX		OC-SB-473-13/15-XXX		OC-SB-473-4.0/6.0-XXX		OC-SS-457-0.0/1.0-XXX	
Field Sample ID		360-24686-7		360-24686-8		360-24686-9		360-24686-11	
Sample Collection Date		9/18/2009		9/18/2009		9/18/2009		9/17/2009	
QC Code		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Organic Carbon	mg/kg	35,000		1,000	U	1,000	U	12,000	

Notes:
Samples analyzed by Lloyd Kahn
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.14 - VALIDATED RESULTS SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1158425		1158425		1158425		1158425		1158425		1158426		1158426		1158426	
	Lab Sample ID	OC-SB-412-6.0/7.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-420-6.5/8.5-XXX		OC-SB-421-8.0/10-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-412-0.0/1.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-421-0.0/1.0-XXX	
	Field Sample ID	5754467		5754469		5754468		5754470		5754471		5754472		5754473		5754475	
	Sample Collection Date	8/18/2009		8/18/2009		8/18/2009		8/19/2009		8/19/2009		8/18/2009		8/18/2009		8/19/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	0.71	J	2.1	U	2.1	U	0.58	J	0.7	J	2.1	U	2.1	U	2.1	U
Monomethylhydrazine (MMH)	ng/g	5.8	U	5.3	U	5.3	U	5.5	U	5.5	U	5.3	U	5.3	U	5.3	U
UDMH	ng/g	5.8	U	5.3	U	5.3	U	5.5	U	5.5	U	5.3	U	5.3	U	5.3	U

Notes:
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1158426		1158830		1158830		1158830		1158830		1158830		1158830	
	Lab Sample ID	OC-SB-424-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-431-7.0/9.0-XXX		OC-SB-436-6.0/8.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-6.0/8.0-XXX	
	Field Sample ID	5754476		5757305		5757306		5757307		5757310		5757311		5757314		5757313	
	Sample Collection Date	8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009		8/21/2009		8/20/2009	
	QC Code	FS		FS		FD		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.1	U	2.1	U	2.4	U	0.69	J	2.2	U	0.8	J	2.3	U	2.4	U
Monomethylhydrazine (MMH)	ng/g	5.3	U	5.3	U	6	U	6	U	5.5	U	5.5	U	5.8	U	6	U
UDMH	ng/g	5.3	U	5.3	U	6	U	6	U	5.5	U	5.5	U	5.8	U	6	U

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	Sample Delivery Group	1158830		1158831		1158831		1158831		1158831		1158831		1158831		1158831	
	Lab Sample ID	OC-SB-445-8.0/10-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-431-0.0/1.0-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-14/16-XXX		OC-SB-432-5.0/7.0-XXX		OC-SB-436-0.0/1.0-XXX		OC-SB-437-0.0/1.0-XXX	
	Field Sample ID	5757312		5757315		5757316		5757319		5757320		5757321		5757317		5757323	
	Sample Collection Date	8/21/2009		8/19/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/20/2009		8/21/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	0.65	J	0.81	J	2.2	U	240		2.5		0.76	J	1.6	J	2.2	U
Monomethylhydrazine (MMH)	ng/g	6	U	5.3	U	5.5	U	5.3	U	5.8	U	5.8	U	5.3	U	5.5	U
UDMH	ng/g	6	U	5.3	U	5.5	U	5.3	U	5.8	U	5.8	U	5.3	U	5.5	U

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	Sample Delivery Group	1158831		1158831		1159282		1159282		1159282		1159283		1159283		1159283	
	Lab Sample ID	OC-SB-443-0.0/1.0-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-430-8.0/10-DUP		OC-SB-430-8.0/10-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-8.0/10-XXX	
	Field Sample ID	5757322		5757318		5760556		5760557		5760558		5760561		5760562		5760565	
	Sample Collection Date	8/20/2009		8/21/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FD		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	140		2	U	2.3	U	2.2	U	2.2	U	2.5	U	2.5	U	1.3	J
Monomethylhydrazine (MMH)	ng/g	5.3	U	5	U	5.8	U	5.5	U	5.5	U	6.3	U	6.3	U	5.8	U
UDMH	ng/g	5.3	U	5	U	5.8	U	5.5	U	5.5	U	6.3	U	6.3	U	5.8	U

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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		1159284		1159284		1159284		1159284		1159656		1159656		1159656	
Lab Sample ID		OC-SB-422-0.0/1.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-448-0.0/1.0-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-407-0.0/1.0-XXX		OC-SB-409-0.0/1.0-XXX	
Field Sample ID		5760566		5760567		5760568		5760569		5763095		5763097		5763096		5763098	
Sample Collection Date		8/25/2009		8/25/2009		8/25/2009		8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.1	U	2	U	1.8	J	39		2.1	U	2.1	U	2.2	U	2.1	U
Monomethylhydrazine (MMH)	ng/g	5.3	U	5.3	U	5.3	U	5.3	U	5.3	U	5.3	U	5.5	U	5.3	U
UDMH	ng/g	5.3	U	5.3	U	5.3	U	5.3	U	5.3	U	5.3	U	5.5	U	5.3	U

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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1159656		1159656		1159656		1159656		1159657		1159657		1159657		1159657	
	Lab Sample ID	OC-SB-410-0.0/1.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-444-0.0/1.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-407-8.0/10-XXX	
	Field Sample ID	5763099		5763100		5763102		5763103		5763104		5763106		5763107		5763105	
	Sample Collection Date	8/27/2009		8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.2	U	2.1	U	2.1	U	2.2	U	2.1	U	3.4	U	2.4	U	2.4	U
Monomethylhydrazine (MMH)	ng/g	5.5	U	5.3	U	5.3	U	5.5	U	5.3	U	8.5	U	5.8	U	6	U
UDMH	ng/g	5.5	U	5.3	U	5.3	U	5.5	U	5.3	U	8.5	U	5.8	U	6	U

Notes:
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DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1159657		1159657		1159657		1159657		1159657		1159827		1159828		1159828	
	Lab Sample ID	OC-SB-409-6.0/8.0-XXX		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX	
	Field Sample ID	5763108		5763109		5763110		5763113		5763114		5764219		5764220		5764221	
	Sample Collection Date	8/26/2009		8/27/2009		8/27/2009		8/26/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	0.84	J	2.5	U	2.5	U	2.8		2.3	U	2	U	2.9		2.3	
Monomethylhydrazine (MMH)	ng/g	6.3	U	6.3	U	6.3	U	5.3	U	5.8	U	5	U	5.3	U	5.3	U
UDMH	ng/g	6.3	U	6.3	U	6.3	U	5.3	U	5.8	U	5	U	5.3	U	5.3	U

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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1160157		1160157		1160157		1160157		1160157		1160157		1160158		1160158	
	Lab Sample ID	OC-SB-442-0.0/1.0-XXX		OC-SB-448-17/19-XXX		OC-SB-452-0.0/1.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-463-0.0/1.0-XXX		OC-SB-464-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX	
	Field Sample ID	5766205		5766211		5766206		5766207		5766208		5766209		5766212		5766213	
	Sample Collection Date	8/31/2009		8/25/2009		8/31/2009		8/31/2009		9/1/2009		9/1/2009		8/31/2009		8/31/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.1	U	2.1	U	2.1	U	2.2	U	2.1	U	3.7		4.4		3.4	
Monomethylhydrazine (MMH)	ng/g	5.3	U	5.3	U	5.3	U	5.5	U	5.3	U	5.3	U	5.8	U	5.8	U
UDMH	ng/g	5.3	U	5.3	U	5.3	U	5.5	U	5.3	U	5.3	U	5.8	U	5.8	U

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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		1160158		1160158		1160158		1160614		1160614		1160614		1160614		1160615	
Lab Sample ID		OC-SB-452-5.0/7.0-XXX		OC-SB-463-6.0/8.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-468-0.0/1.0-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP	
Field Sample ID		5766216		5766217		5766218		5769167		5769168		5769169		5769170		5769171	
Sample Collection Date		8/31/2009		9/1/2009		9/1/2009		9/3/2009		9/2/2009		9/2/2009		9/2/2009		9/3/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	3.2		4.5		2.8		2.1	U	7		270		0.98	J	7.5	J
Monomethylhydrazine (MMH)	ng/g	6	U	6	U	5.8	U	5.3	U	5.3	U	6	U	5.5	U	5.8	UJ
UDMH	ng/g	6	U	6	U	5.8	U	5.3	U	5.3	U	6	U	5.5	U	5.8	UJ

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	Sample Delivery Group	1160615		1160616		1160616		1160616		1160616		1160847		1160847		1160847	
	Lab Sample ID	OC-SB-459-6.0/8.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-8.0/10-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-472-0.0/1.0-XXX		OC-SB-472-30/32-XXX		OC-SB-472-8.0/10-XXX	
	Field Sample ID	5769172		5769175		5769176		5769179		5769180		5770779		5770780		5770781	
	Sample Collection Date	9/3/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009		9/4/2009		9/4/2009		9/4/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	8.6	J	200	J	210	J	280	J	2.3	J	2.2	U	3.1		0.78	J
Monomethylhydrazine (MMH)	ng/g	5.8	UJ	5.8	UJ	5.8	UJ	5.8	UJ	6.8	UJ	5.8	U	5.3	U	6.5	U
UDMH	ng/g	5.8	UJ	5.8	UJ	5.8	UJ	5.8	UJ	6.8	UJ	5.8	U	5.3	U	6.5	U

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WILMINGTON, MASSACHUSETTS

Sample Delivery Group		1161210		1161210		1161210		1161211		1161543		1161544		1161544		1161544	
Lab Sample ID		OC-SB-450-0.0/1.0-XXX		OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-450-8.0/10-XXX		OC-SB-434-7.0/9.0-XXX		OC-SB-427-0.0/1.0-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-456-0.0/1.0-XXX	
Field Sample ID		5772546		5772547		5772548		5772550		5774702		5774703		5774704		5774705	
Sample Collection Date		9/9/2009		9/8/2009		9/8/2009		9/9/2009		9/10/2009		9/10/2009		9/10/2009		9/11/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.1	U	1.2	J	2.2	U	0.67	J	2.2	U	2.1	U	200		0.65	J
Monomethylhydrazine (MMH)	ng/g	5.3	U	5.5	U	5.5	U	5.8	U	5.5	U	5.3	U	5.3	U	5	U
UDMH	ng/g	5.3	U	5.5	U	5.5	U	5.8	U	5.5	U	5.3	U	5.3	U	5	U

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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1161544		1161544		1161544		1161544		1161544		1162387		1162388		1162388	
	Lab Sample ID	OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX		OC-SB-457-8.0/10-XXX		OC-SB-413-1.0/5.0-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-457-28/30-XXX	
	Field Sample ID	5774706		5774707		5774708		5774711		5774712		5779940		5779953		5779941	
	Sample Collection Date	9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/17/2009		9/17/2009		9/14/2009	
	QC Code	FS		FD		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	0.58	J	1.7	J	2.7		2.1	U	52		2.3	U	2.7	U	2.8	
Monomethylhydrazine (MMH)	ng/g	5.5	U	5.3	U	5.3	U	5.3	U	5.5	U	5.8	U	6.8	U	5.8	U
UDMH	ng/g	5.5	U	5.3	U	5.3	U	5.3	U	5.5	U	5.8	U	6.8	U	5.8	U

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ng/g = nanograms per gram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.14 - VALIDATED RESULTS SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		1162388		1162388		1162388		1162388		1162388		1162388		1162388		1162388		1162388	
Lab Sample ID		OC-SS-420-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX		OC-SS-434-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX			
Field Sample ID		5779942		5779943		5779944		5779945		5779946		5779947		5779948		5779949			
Sample Collection Date		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009		9/16/2009			
QC Code		FS		FS		FS		FS		FS		FS		FS		FS			
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier		
Hydrazine	ng/g	2.3	U	4.1		2	J	2.4	U	0.62	J	1.6	J	2.4	U	3.5	U		
Monomethylhydrazine (MMH)	ng/g	5.8	U	5.8	U	5.8	U	6	U	6	U	5.8	U	6	U	8.8	U		
UDMH	ng/g	5.8	U	5.8	U	5.8	U	6	U	6	U	5.8	U	6	U	8.8	U		

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ng/g = nanograms per gram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.14 - VALIDATED RESULTS SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1162388		1162388		1162388		1162600		1162601		1162601		1162601		1162601	
	Lab Sample ID	OC-SS-450-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX		OC-SB-473-4.0/6.0-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-453-0.0/1.0-XXX	
	Field Sample ID	5779950		5779951		5779952		5781371		5781372		5781373		5781374		5781375	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/18/2009		9/17/2009		9/17/2009		9/17/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	3.2	U	2.3	U	2.4	U	2.4	U	10.4	U	2.2	U	2.2	U	10.4	U
Monomethylhydrazine (MMH)	ng/g	8	U	5.8	U	6	U	6	U	25	U	5.5	U	5.5	U	25	U
UDMH	ng/g	8	U	5.8	U	6	U	6	U	25	U	5.5	U	5.5	U	25	U

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ng/g = nanograms per gram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.14 - VALIDATED RESULTS SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	1162601		1162601		1162601		1162601		1162601		1162601	
	Lab Sample ID	OC-SB-453-1.0/6.0-XXX		OC-SB-473-0.0/1.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX		OC-SS-459-0.0/1.0-XXX	
	Field Sample ID	5781376		5781377		5781378		5781380		5781379		5781381	
	Sample Collection Date	9/17/2009		9/18/2009		9/17/2009		9/18/2009		9/17/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine	ng/g	2.4	U	2.4	U	2.8	U	2.4	U	2.2	U	2.3	U
Monomethylhydrazine (MMH)	ng/g	6	U	6	U	7	U	6	U	5.5	U	5.8	U
UDMH	ng/g	6	U	6	U	7	U	6	U	5.5	U	5.8	U

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ng/g = nanograms per gram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.14 - VALIDATED RESULTS SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		1158426	1158426	1158831	1159284	1159656	1160157	1161210	1162388	1162388	1162601
Lab Sample ID		OC-EBK-001	OC-EBK-002	OC-EBK-003	OC-EBK-004	OC-EBK-005	OC-EBK-006	OC-EBK-008	OC-EBK-010	OC-EBK-011	OC-EBK-012
Field Sample ID		5754474	5754477	5757324	5760570	5763101	5766210	5772549	5779954	5779955	5781382
Sample Collection Date		8/18/2009	8/19/2009	8/21/2009	8/25/2009	8/27/2009	8/31/2009	9/8/2009	9/14/2009	9/16/2009	9/17/2009
QC Code		EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Analyte	**Units**	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier	Result Qualifier
Hydrazine	ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Monomethylhydrazine (MMH)	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
UDMH	ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ug/l = micrograms per liter
Qualifiers:
U = not-detected
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-1		WIL-1		WIL-1		WIL-1		WIL-1		WIL-1	
Lab Sample ID		OC-SB-412-0.0/1.0-XXX		OC-SB-412-6.0/7.0-XXX		OC-SB-416-0.0/1.0-XXX		OC-SB-416-8.0/9.0-XXX		OC-SB-419-0.0/1.0-XXX		OC-SB-419-3.0/5.0-XXX		OC-SB-420-6.5/8.5-XXX	
Field Sample ID		SC4859-1		SC4859-2		SC4859-4		SC4859-5		SC4929-7		SC4929-8		SC4859-3	
Sample Collection Date		8/18/2009		8/18/2009		8/18/2009		8/18/2009		8/19/2009		8/19/2009		8/18/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.58	U	0.44	U	0.5	U	0.62	U	0.56	U	0.63	U	0.55	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-1		WIL-1		WIL-1		WIL-1		WIL-1		WIL-1	
Lab Sample ID		OC-SB-421-0.0/1.0-XXX		OC-SB-421-8.0/10-XXX		OC-SB-424-0.0/1.0-XXX		OC-SB-425-6.0/8.0-XXX		OC-SB-426-0.0/1.0-XXX		OC-SB-432-0.0/1.0-XXX		OC-SB-432-5.0/7.0-XXX	
Field Sample ID		SC4859-6		SC4859-7		SC4859-8		SC4859-9		SC4929-9		SC4929-1		SC4929-2	
Sample Collection Date		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/19/2009		8/20/2009		8/20/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.6	U	0.68	U	0.53	U	0.53	U	0.48	U	0.5	U	0.43	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
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QC Code:
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FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-1		WIL-1		WIL-1		WIL-1		WIL-3		WIL-3		WIL-3	
	Lab Sample ID	OC-SB-437-0.0/1.0-XXX		OC-SB-437-5.0/7.0-XXX		OC-SB-443-0.0/1.0-XXX		OC-SB-443-6.0/8.0-XXX		OC-SB-402-0.0/1.0-XXX		OC-SB-402-7.5/9.5-XXX		OC-SB-407-0.0/1.0-XXX	
	Field Sample ID	SC4929-5		SC4929-6		SC4929-3		SC4929-4		SC5041-1		SC5041-2		SC5041-3	
	Sample Collection Date	8/21/2009		8/21/2009		8/20/2009		8/20/2009		8/26/2009		8/26/2009		8/26/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.63	U	0.77	U	0.56	U	0.4	U	0.72	U	0.82	U	0.8	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-3		WIL-3		WIL-3		WIL-3		WIL-3		WIL-3		WIL-3	
	Lab Sample ID	OC-SB-407-8.0/10-XXX		OC-SB-422-0.0/1.0-XXX		OC-SB-422-6.0/8.0-XXX		OC-SB-426-5.0/7.0-DUP		OC-SB-426-5.0/7.0-XXX		OC-SB-430-0.0/1.0-XXX		OC-SB-430-8.0/10-DUP	
	Field Sample ID	SC5041-4		SC4995-9RA		SC4995-10RA		SC4941-1		SC4941-2		SC4995-6RA		SC4995-7RA	
	Sample Collection Date	8/26/2009		8/25/2009		8/25/2009		8/19/2009		8/19/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FD		FS		FS		FD	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.76	U	0.82	U	0.79	U	0.7	U	0.73	U	0.68	U	0.82	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-3		WIL-3		WIL-3		WIL-3		WIL-3		WIL-3		WIL-3	
	Lab Sample ID	OC-SB-430-8.0/10-XXX		OC-SB-445-0.0/1.0-XXX		OC-SB-445-8.0/10-XXX		OC-SB-446-0.0/1.0-XXX		OC-SB-446-5.0/7.0-DUP		OC-SB-446-5.0/7.0-XXX		OC-SB-448-0.0/1.0-XXX	
	Field Sample ID	SC4995-8RA		SC4941-3		SC4941-4RA		SC4995-1RA		SC4995-2RA		SC4995-3RA		SC4995-4RA	
	Sample Collection Date	8/25/2009		8/21/2009		8/21/2009		8/25/2009		8/25/2009		8/25/2009		8/25/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.63	U	0.69	U	0.81	U	0.76	U	0.62	U	0.76	U	0.67	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
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J = estimated
QC Code:
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FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-3		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4	
	Lab Sample ID	OC-SB-448-8.0/10-XXX		OC-SB-403-0.0/1.0-XXX		OC-SB-403-6.0/8.0-XXX		OC-SB-404-5.0/7.0-XXX		OC-SB-409-0.0/1.0-XXX		OC-SB-409-6.0/8.0-XXX		OC-SB-410-0.0/1.0-XXX	
	Field Sample ID	SC4995-5RA		SC5042-1		SC5042-2		SC5042-3		SC5042-4		SC5042-5		SC5104-1	
	Sample Collection Date	8/25/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/26/2009		8/27/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.73	U	0.48	U	1.4	U	0.62	U	0.7	U	0.48	U	0.6	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4	
Lab Sample ID		OC-SB-410-6.0/8.0-DUP		OC-SB-410-6.0/8.0-XXX		OC-SB-411-0.0/1.0-XXX		OC-SB-411-4.7/6.7-XXX		OC-SB-442-0.0/1.0-XXX		OC-SB-442-8.0/10-DUP		OC-SB-442-8.0/10-XXX	
Field Sample ID		SC5104-2		SC5104-3		SC5042-6		SC5042-7		SC5141-1		SC5141-2		SC5141-3	
Sample Collection Date		8/27/2009		8/27/2009		8/26/2009		8/26/2009		8/31/2009		8/31/2009		8/31/2009	
QC Code		FD		FS		FS		FS		FS		FD		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.74	U	0.57	U	0.62	U	0.59	U	0.5	U	0.47	U	0.58	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4		WIL-4		WIL-6	
Lab Sample ID		OC-SB-444-0.0/1.0-XXX		OC-SB-444-5.0/7.0-XXX		OC-SB-449-0.0/1.0-XXX		OC-SB-451-0.0/1.0-XXX		OC-SB-451-2.5/4.5-DUP		OC-SB-451-2.5/4.5-XXX		OC-SB-448-17/19-XXX	
Field Sample ID		SC5104-4		SC5104-5		SC5104-6		SC5104-7		SC5104-8		SC5104-9		SC5142-9RA	
Sample Collection Date		8/27/2009		8/27/2009		8/27/2009		8/28/2009		8/28/2009		8/28/2009		8/25/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.66	U	0.65	U	0.68	U	0.7	U	0.64	U	0.45	U	0.59	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-6		WIL-6		WIL-6		WIL-6		WIL-6		WIL-6	
Lab Sample ID		OC-SB-452-0.0/1.0-XXX		OC-SB-452-5.0/7.0-XXX		OC-SB-458-0.0/1.0-XXX		OC-SB-459-0.0/1.0-XXX		OC-SB-459-6.0/8.0-DUP		OC-SB-459-6.0/8.0-XXX		OC-SB-460-0.0/1.0-XXX	
Field Sample ID		SC5142-1		SC5142-2		SC5142-3		SC5230-1		SC5230-2		SC5230-3		SC5142-4	
Sample Collection Date		8/31/2009		8/31/2009		8/31/2009		9/3/2009		9/3/2009		9/3/2009		9/1/2009	
QC Code		FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.7	U	0.72	U	0.72	U	0.57	U	0.75	U	0.81	U	0.69	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-6		WIL-6		WIL-6		WIL-6		WIL-6		WIL-6		WIL-6	
	Lab Sample ID	OC-SB-460-5.5/7.5-XXX		OC-SB-464-0.0/1.0-XXX		OC-SB-464-5.0/7.0-XXX		OC-SB-465-0.0/1.0-XXX		OC-SB-465-8.0/10-DUP		OC-SB-465-8.0/10-XXX		OC-SB-468-0.0/1.0-XXX	
	Field Sample ID	SC5142-5		SC5142-6		SC5142-7		SC5230-4		SC5230-5		SC5230-6		SC5230-7	
	Sample Collection Date	9/1/2009		9/1/2009		9/1/2009		9/2/2009		9/2/2009		9/2/2009		9/2/2009	
	QC Code	FS		FS		FS		FS		FD		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.62	U	0.64	U	0.7	U	0.76	U	0.53	U	0.52	U	0.62	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-6		WIL-6		WIL-6		WIL-6		WIL-6		WIL-7		WIL-7	
	Lab Sample ID	OC-SB-468-8.0/10-XXX		OC-SB-471-0.0/1.0-XXX		OC-SB-471-3.0/5.0-XXX		OC-SB-472-0.0/1.0-XXX		OC-SB-472-8.0/10-XXX		OC-SB-413-0.0/1.0-XXX		OC-SB-413-1.0/5.0-XXX	
	Field Sample ID	SC5230-8		SC5230-9		SC5230-10		SC5255-1		SC5255-2		SC5605-1		SC5605-2	
	Sample Collection Date	9/2/2009		9/2/2009		9/2/2009		9/4/2009		9/4/2009		9/17/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.54	U	0.57	U	0.52	U	0.66	U	0.51	U	0.79	UJ	0.77	UJ

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
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QC Code:
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FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-7		WIL-7		WIL-7		WIL-7		WIL-7		WIL-7	
Lab Sample ID		OC-SB-427-0.0/1.0-XXX		OC-SB-434-0.0/1.0-XXX		OC-SB-434-7.0/9.0-XXX		OC-SB-435-0.0/1.0-XXX		OC-SB-435-11/15-XXX		OC-SB-435-6.0/10-XXX		OC-SB-450-0.0/1.0-XXX	
Field Sample ID		SC5415-1		SC5415-2		SC5415-3		SC5605-3		SC5605-4		SC5605-5		SC5326-1	
Sample Collection Date		9/10/2009		9/10/2009		9/10/2009		9/17/2009		9/17/2009		9/17/2009		9/9/2009	
QC Code		FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.57	UJ	0.81	UJ	0.52	UJ	2.2	UJ	0.48	UJ	0.45	UJ	0.61	UJ

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-7		WIL-7		WIL-7		WIL-7		WIL-7		WIL-7	
	Lab Sample ID	OC-SB-450-8.0/10-XXX		OC-SB-456-0.0/1.0-XXX		OC-SB-456-16/18-XXX		OC-SB-456-7.0/9.0-DUP		OC-SB-456-7.0/9.0-XXX		OC-SB-457-0.0/1.0-XXX	OC-SB-457-8.0/10-XXX
	Field Sample ID	SC5326-2		SC5415-4		SC5415-5		SC5415-6		SC5415-7		SC5415-8	SC5415-9
	Sample Collection Date	9/9/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009		9/11/2009	9/11/2009
	QC Code	FS		FS		FS		FD		FS		FS	FS
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.62	UJ	0.61	UJ	0.5	UJ	0.7	UJ	0.6	UJ	0.68	UJ	0.52	UJ

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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	Sample Delivery Group	WIL-7		WIL-7		WIL-7		WIL-8		WIL-8		WIL-8		WIL-8	
	Lab Sample ID	OC-SB-466-30/32-XXX		OC-SB-466-6.0/8.0-XXX		OC-SB-472-30/32-XXX		OC-SB-453-0.0/1.0-XXX		OC-SB-453-1.0/6.0-XXX		OC-SB-457-28/30-XXX		OC-SB-473-0.0/1.0-XXX	
	Field Sample ID	SC5326-3		SC5326-4		SC5256-1		SC5606-1		SC5606-2		SC5606-3		SC5606-4	
	Sample Collection Date	9/8/2009		9/8/2009		9/4/2009		9/17/2009		9/17/2009		9/14/2009		9/18/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.6	UJ	0.61	UJ	0.82	UJ	2.8	U	0.69	U	0.54	U	0.66	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-8		WIL-8		WIL-8		WIL-8		WIL-8		WIL-8		WIL-8	
	Lab Sample ID	OC-SB-473-4.0/6.0-XXX		OC-SS-420-0.0/1.0-XXX		OC-SS-422-0.0/1.0-XXX		OC-SS-424-0.0/1.0-XXX		OC-SS-427-0.0/1.0-XXX		OC-SS-429-0.0/1.0-XXX		OC-SS-431-0.0/1.0-XXX	
	Field Sample ID	SC5606-5		SC5606-6		SC5606-7		SC5606-8		SC5606-9		SC5606-10		SC5606-11	
	Sample Collection Date	9/18/2009		9/15/2009		9/15/2009		9/15/2009		9/16/2009		9/16/2009		9/16/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.73	U	0.5	U	0.84	U	0.56	U	0.73	U	0.76	U	0.69	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-8		WIL-8		WIL-8		WIL-8		WIL-8		WIL-8		WIL-8	
	Lab Sample ID	OC-SS-434-0.0/1.0-XXX		OC-SS-440-0.0/1.0-XXX		OC-SS-450-0.0/1.0-XXX		OC-SS-453-0.0/1.0-XXX		OC-SS-455-0.0/1.0-XXX		OC-SS-456-0.0/1.0-XXX		OC-SS-457-0.0/1.0-XXX	
	Field Sample ID	SC5606-12		SC5606-13		SC5606-14		SC5606-15		SC5606-16		SC5606-17		SC5606-18	
	Sample Collection Date	9/16/2009		9/16/2009		9/16/2009		9/17/2009		9/16/2009		9/18/2009		9/17/2009	
	QC Code	FS		FS		FS		FS		FS		FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.88	U	0.74	U	1.1	U	0.86	U	0.68	U	0.8	U	0.74	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
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WILMINGTON, MASSACHUSETTS

	Sample Delivery Group	WIL-8		WIL-8	
	Lab Sample ID	OC-SS-459-0.0/1.0-XXX		OC-SS-460-0.0/1.0-XXX	
	Field Sample ID	SC5606-19		SC5606-20	
	Sample Collection Date	9/18/2009		9/16/2009	
	QC Code	FS		FS	
Analyte	**Units**	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/kg	0.77	U	0.77	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated
QC Code:
FS = field sample
FD = field duplicate

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 2.15 - VALIDATED RESULTS SUMMARY - N, N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group		WIL-1		WIL-1		WIL-3		WIL-3		WIL-4		WIL-6		WIL-6		WIL-7		WIL-7		WIL-8	
Lab Sample ID		OC-EBK-001		OC-EBK-002		OC-EBK-003		OC-EBK-004		OC-EBK-005		OC-EBK-006		OC-EBK-006		OC-EBK-008		OC-EBK-012		OC-EBK-011	
Field Sample ID		SC4859-10		SC4859-11		SC4941-5		SC4995-11		SC5104-10RA		SC5142-8		SC5142-8RA		SC5326-5RA		SC5605-6		SC5606-21	
Sample Collection Date		8/18/2009		8/19/2009		8/21/2009		8/25/2009		8/27/2009		8/31/2009		8/31/2009		9/8/2009		9/17/2009		9/16/2009	
QC Code		EB		EB		EB		EB		EB		EB		EB		EB		EB		EB	
Analyte	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dimethylformamide	mg/l	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/ = milligrams per liter
Qualifiers:
U = not-detected
J = estimated
QC Code:
EB = equipment blank

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 07/02/10

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-1	SW8260	OC-SB-405-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-1	SW8260	OC-SB-405-0.0/1.0-XXX	Acetone	230	U *	230	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-1	SW8260	OC-SB-405-0.0/1.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	LCS-L	ug/kg
OCRI-01	360-24173-1	SW8260	OC-SB-405-0.0/1.0-XXX	Methylene chloride	4.9	J B	9.3	U	BL	ug/kg
OCRI-01	360-24173-11	SW8260	OC-SB-412-6.0/7.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-11	SW8260	OC-SB-412-6.0/7.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-11	SW8260	OC-SB-412-6.0/7.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	1,1,2,2-Tetrachloroethane	140	U	140	UJ	CCV%D	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	1,4-Dioxane	14000	U	14000	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	Acetone	14000	U *	14000	UJ	CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	Bromobenzene	140	U	140	UJ	CCV%D	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	Chlorodibromomethane	140	U	140	UJ	CCV%D	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	Chloroethane	290	U *	290	UJ	LCS-L	ug/kg
OCRI-01	360-24173-12	SW8260	OC-SB-420-0.0/1.0-XXX	Dichlorodifluoromethane	290	U *	290	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-13	SW8260	OC-SB-420-12/14-XXX	1,4-Dioxane	10000	U	10000	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-13	SW8260	OC-SB-420-12/14-XXX	Acetic acid, methyl ester	2000	U	2000	UJ	CCV%D	ug/kg
OCRI-01	360-24173-13	SW8260	OC-SB-420-12/14-XXX	Acetone	10000	U *	10000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-13	SW8260	OC-SB-420-12/14-XXX	Dichlorodifluoromethane	200	U *	200	UJ	LCS-L	ug/kg
OCRI-01	360-24173-14	SW8260	OC-SB-420-6.5/8.5-XXX	1,4-Dioxane	280000	U	280000	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-14	SW8260	OC-SB-420-6.5/8.5-XXX	2,4,4-Trimethyl-1-pentene	240000		240000	J	ICV%D, CCV%D	ug/kg
OCRI-01	360-24173-14	SW8260	OC-SB-420-6.5/8.5-XXX	Acetic acid, methyl ester	56000	U	56000	UJ	CCV%D	ug/kg
OCRI-01	360-24173-14	SW8260	OC-SB-420-6.5/8.5-XXX	Acetone	280000	U *	280000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-14	SW8260	OC-SB-420-6.5/8.5-XXX	Dichlorodifluoromethane	5600	U	5600	UJ	CCV%D	ug/kg
OCRI-01	360-24173-15	SW8260	OC-SB-423-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-15	SW8260	OC-SB-423-0.0/1.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-15	SW8260	OC-SB-423-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L	ug/kg
OCRI-01	360-24173-17	SW8260	OC-SB-423-5.0/6.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-17	SW8260	OC-SB-423-5.0/6.0-XXX	Acetone	230	U *	230	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-17	SW8260	OC-SB-423-5.0/6.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	LCS-L	ug/kg
OCRI-01	360-24173-2	SW8260	OC-SB-405-14/15-XXX	1,4-Dioxane	11000	U	11000	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-2	SW8260	OC-SB-405-14/15-XXX	2,4,4-Trimethyl-1-pentene	2300		2300	J	ICV%D	ug/kg
OCRI-01	360-24173-2	SW8260	OC-SB-405-14/15-XXX	Acetic acid, methyl ester	2100	U	2100	UJ	CCV%D	ug/kg
OCRI-01	360-24173-2	SW8260	OC-SB-405-14/15-XXX	Acetone	11000	U *	11000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-2	SW8260	OC-SB-405-14/15-XXX	Dichlorodifluoromethane	210	U *	210	UJ	LCS-L	ug/kg
OCRI-01	360-24173-3	SW8260	OC-SB-405-8.0/9.0-XXX	1,4-Dioxane	1100000	U	1100000	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-3	SW8260	OC-SB-405-8.0/9.0-XXX	2,4,4-Trimethyl-1-pentene	1200000		1200000	J	ICV%D, CCV%D	ug/kg
OCRI-01	360-24173-3	SW8260	OC-SB-405-8.0/9.0-XXX	Acetic acid, methyl ester	230000	U	230000	UJ	CCV%D	ug/kg
OCRI-01	360-24173-3	SW8260	OC-SB-405-8.0/9.0-XXX	Acetone	1100000	U *	1100000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-3	SW8260	OC-SB-405-8.0/9.0-XXX	Dichlorodifluoromethane	23000	U	23000	UJ	CCV%D	ug/kg
OCRI-01	360-24173-4	SW8260	OC-SB-416-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-4	SW8260	OC-SB-416-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-4	SW8260	OC-SB-416-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-01	360-24173-4	SW8260	OC-SB-416-0.0/1.0-XXX	Methylene chloride	7	J B	10	U	BL	ug/kg
OCRI-01	360-24173-5	SW8260	OC-SB-416-13/14-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-5	SW8260	OC-SB-416-13/14-XXX	2,4,4-Trimethyl-1-pentene	37		37	J	ICV%D	ug/kg
OCRI-01	360-24173-5	SW8260	OC-SB-416-13/14-XXX	Acetone	220	U *	220	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-5	SW8260	OC-SB-416-13/14-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	1,1,2,2-Tetrachloroethane	110	U	110	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	1,4-Dioxane	11000	U	11000	UJ	ICVRRF	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	2,4,4-Trimethyl-1-pentene	140000		140000	J	ICV%D, CCV%D	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Acetic acid, methyl ester	2100	U	2100	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Acetone	11000	U *	11000	UJ	CCV%D, LCS-L	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Bromobenzene	110	U	110	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Chlorodibromomethane	110	U	110	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Chloroethane	210	U *	210	UJ	LCS-L	ug/kg
OCRI-01	360-24173-6	SW8260	OC-SB-416-8.0/9.0-XXX	Dichlorodifluoromethane	210	U *	210	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-9	SW8260	OC-SB-412-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-01	360-24173-9	SW8260	OC-SB-412-0.0/1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-01	360-24173-9	SW8260	OC-SB-412-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	1,1,2,2-Tetrachloroethane	150	U	150	UJ	CCV%D	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	1,4-Dioxane	15000	U	15000	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	Acetone	15000	U *	15000	UJ	CCV%D, LCS-L	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	Bromobenzene	150	U	150	UJ	CCV%D	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	Chlorodibromomethane	150	U	150	UJ	CCV%D	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	Chloroethane	290	U *	290	UJ	LCS-L	ug/kg
OCRI-02	360-24194-1	SW8260	OC-SB-421-0.0/1.0-XXX	Dichlorodifluoromethane	290	U *	290	UJ	LCS-L	ug/kg
OCRI-02	360-24194-2	SW8260	OC-SB-421-10.5/12.5-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-2	SW8260	OC-SB-421-10.5/12.5-XXX	2,4,4-Trimethyl-1-pentene	3900	*	3900	J	CCV%D, LCS-H	ug/kg
OCRI-02	360-24194-2	SW8260	OC-SB-421-10.5/12.5-XXX	Acetic acid, methyl ester	2600	U	2600	UJ	CCV%D	ug/kg
OCRI-02	360-24194-2	SW8260	OC-SB-421-10.5/12.5-XXX	Acetone	13000	U *	13000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-02	360-24194-2	SW8260	OC-SB-421-10.5/12.5-XXX	Methylene chloride	530	U *	530	UJ	CCV%D	ug/kg
OCRI-02	360-24194-3	SW8260	OC-SB-421-8.0/10-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-3	SW8260	OC-SB-421-8.0/10-XXX	Acetic acid, methyl ester	46	U	46	UJ	CCV%D	ug/kg
OCRI-02	360-24194-3	SW8260	OC-SB-421-8.0/10-XXX	Acetone	230	U *	230	UJ	ICV%D, LCS-L	ug/kg
OCRI-02	360-24194-3	SW8260	OC-SB-421-8.0/10-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	LCS-L	ug/kg
OCRI-02	360-24194-4	SW8260	OC-SB-424-0.0/1.0-XXX	1,4-Dioxane	290	U	290	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-4	SW8260	OC-SB-424-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5.7	U *	5.7	UJ	CCV%D	ug/kg
OCRI-02	360-24194-4	SW8260	OC-SB-424-0.0/1.0-XXX	Acetic acid, methyl ester	57	U	57	UJ	CCV%D	ug/kg
OCRI-02	360-24194-4	SW8260	OC-SB-424-0.0/1.0-XXX	Acetone	290	U *	290	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-02	360-24194-6	SW8260	OC-SB-424-7.0/9.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-6	SW8260	OC-SB-424-7.0/9.0-XXX	Acetic acid, methyl ester	44	U	44	UJ	CCV%D	ug/kg
OCRI-02	360-24194-6	SW8260	OC-SB-424-7.0/9.0-XXX	Acetone	220	U *	220	UJ	ICV%D, LCS-L	ug/kg
OCRI-02	360-24194-6	SW8260	OC-SB-424-7.0/9.0-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	LCS-L	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	1,1,2,2-Tetrachloroethane	130	U	130	UJ	CCV%D	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	Acetone	13000	U *	13000	UJ	CCV%D, LCS-L	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	Bromobenzene	130	U	130	UJ	CCV%D	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	Chlorodibromomethane	130	U	130	UJ	CCV%D	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	Chloroethane	270	U *	270	UJ	LCS-L	ug/kg
OCRI-02	360-24194-7	SW8260	OC-SB-425-0.0/1.0-XXX	Dichlorodifluoromethane	270	U *	270	UJ	LCS-L	ug/kg
OCRI-02	360-24194-9	SW8260	OC-SB-425-6.0/8.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-02	360-24194-9	SW8260	OC-SB-425-6.0/8.0-XXX	Acetic acid, methyl ester	54	U	54	UJ	CCV%D	ug/kg
OCRI-02	360-24194-9	SW8260	OC-SB-425-6.0/8.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-02	360-24194-9	SW8260	OC-SB-425-6.0/8.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-03	360-24223-1	SW8260	OC-SB-415-0.0/1.0-XXX	1,4-Dioxane	280	U	280	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-1	SW8260	OC-SB-415-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5.5	U *	5.5	UJ	CCV%D	ug/kg
OCRI-03	360-24223-1	SW8260	OC-SB-415-0.0/1.0-XXX	Acetic acid, methyl ester	55	U	55	UJ	CCV%D	ug/kg
OCRI-03	360-24223-1	SW8260	OC-SB-415-0.0/1.0-XXX	Acetone	280	U *	280	UJ	ICV%D, CCV%D, LCS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03	360-24223-10	SW8260	OC-SB-426-5.0/7.0-DUP	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-10	SW8260	OC-SB-426-5.0/7.0-DUP	Acetic acid, methyl ester	49	U	49	UJ	CCV%D	ug/kg
OCRI-03	360-24223-10	SW8260	OC-SB-426-5.0/7.0-DUP	Acetone	250	U *	250	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-03	360-24223-10	SW8260	OC-SB-426-5.0/7.0-DUP	Dichlorodifluoromethane	4.9	U *	4.9	UJ	LCS-L, MS-L	ug/kg
OCRI-03	360-24223-11	SW8260	OC-SB-431-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-11	SW8260	OC-SB-431-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	4.6	U *	4.6	UJ	CCV%D	ug/kg
OCRI-03	360-24223-11	SW8260	OC-SB-431-0.0/1.0-XXX	Acetic acid, methyl ester	46	U	46	UJ	CCV%D	ug/kg
OCRI-03	360-24223-11	SW8260	OC-SB-431-0.0/1.0-XXX	Acetone	230	U *	230	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-03	360-24223-12	SW8260	OC-SB-431-7.0/9.0-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-12	SW8260	OC-SB-431-7.0/9.0-XXX	Acetic acid, methyl ester	43	U	43	UJ	CCV%D	ug/kg
OCRI-03	360-24223-12	SW8260	OC-SB-431-7.0/9.0-XXX	Acetone	210	U *	210	UJ	ICV%D, LCS-L	ug/kg
OCRI-03	360-24223-12	SW8260	OC-SB-431-7.0/9.0-XXX	Dichlorodifluoromethane	4.3	U *	4.3	UJ	LCS-L	ug/kg
OCRI-03	360-24223-12	SW8260	OC-SB-431-7.0/9.0-XXX	Methylene chloride	7.2	J B	8.5	U	BL	ug/kg
OCRI-03	360-24223-13	SW8260	OC-SB-436-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-13	SW8260	OC-SB-436-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5.5	U *	5.5	UJ	CCV%D	ug/kg
OCRI-03	360-24223-13	SW8260	OC-SB-436-0.0/1.0-XXX	Acetic acid, methyl ester	55	U	55	UJ	CCV%D	ug/kg
OCRI-03	360-24223-13	SW8260	OC-SB-436-0.0/1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-03	360-24223-15	SW8260	OC-SB-436-6.0/8.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-15	SW8260	OC-SB-436-6.0/8.0-XXX	Acetic acid, methyl ester	55	U	55	UJ	CCV%D	ug/kg
OCRI-03	360-24223-15	SW8260	OC-SB-436-6.0/8.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-03	360-24223-15	SW8260	OC-SB-436-6.0/8.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	LCS-L	ug/kg
OCRI-03	360-24223-15	SW8260	OC-SB-436-6.0/8.0-XXX	Methylene chloride	7.9	J B	11	U	BL	ug/kg
OCRI-03	360-24223-3	SW8260	OC-SB-415-5.0/7.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-3	SW8260	OC-SB-415-5.0/7.0-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-03	360-24223-3	SW8260	OC-SB-415-5.0/7.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-03	360-24223-3	SW8260	OC-SB-415-5.0/7.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	LCS-L	ug/kg
OCRI-03	360-24223-4	SW8260	OC-SB-419-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-4	SW8260	OC-SB-419-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5.1	U *	5.1	UJ	CCV%D	ug/kg
OCRI-03	360-24223-4	SW8260	OC-SB-419-0.0/1.0-XXX	Acetic acid, methyl ester	51	U	51	UJ	CCV%D	ug/kg
OCRI-03	360-24223-4	SW8260	OC-SB-419-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-03	360-24223-6	SW8260	OC-SB-419-3.0/5.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-6	SW8260	OC-SB-419-3.0/5.0-XXX	2,4,4-Trimethyl-1-pentene	5.4	U *	5.4	UJ	CCV%D	ug/kg
OCRI-03	360-24223-6	SW8260	OC-SB-419-3.0/5.0-XXX	Acetic acid, methyl ester	54	U	54	UJ	CCV%D	ug/kg
OCRI-03	360-24223-6	SW8260	OC-SB-419-3.0/5.0-XXX	Acetone	270	U *	270	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-03	360-24223-6	SW8260	OC-SB-419-3.0/5.0-XXX	Methylene chloride	21	B	21	U	BL	ug/kg
OCRI-03	360-24223-7	SW8260	OC-SB-426-0.0/1.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-7	SW8260	OC-SB-426-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	4.4	U *	4.4	UJ	CCV%D	ug/kg
OCRI-03	360-24223-7	SW8260	OC-SB-426-0.0/1.0-XXX	Acetic acid, methyl ester	44	U	44	UJ	CCV%D	ug/kg
OCRI-03	360-24223-7	SW8260	OC-SB-426-0.0/1.0-XXX	Acetone	220	U *	220	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-03	360-24223-9	SW8260	OC-SB-426-5.0/7.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-03	360-24223-9	SW8260	OC-SB-426-5.0/7.0-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-03	360-24223-9	SW8260	OC-SB-426-5.0/7.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-03	360-24223-9	SW8260	OC-SB-426-5.0/7.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	LCS-L, MS-L	ug/kg
OCRI-04	360-24244-1	SW8260	OC-SB-432-0.0/1.0-XXX	1,4-Dioxane	16000	U	16000	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-1	SW8260	OC-SB-432-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	320	U *	320	UJ	CCV%D	ug/kg
OCRI-04	360-24244-1	SW8260	OC-SB-432-0.0/1.0-XXX	Acetic acid, methyl ester	7200		7200	J	CCV%D	ug/kg
OCRI-04	360-24244-1	SW8260	OC-SB-432-0.0/1.0-XXX	Acetone	16000	U *	16000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-10	SW8260	OC-SB-437-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-10	SW8260	OC-SB-437-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04	360-24244-10	SW8260	OC-SB-437-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-12	SW8260	OC-SB-437-5.0/7.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-12	SW8260	OC-SB-437-5.0/7.0-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-04	360-24244-12	SW8260	OC-SB-437-5.0/7.0-XXX	Acetone	270	U *	270	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-2	SW8260	OC-SB-432-14/16-XXX	1,4-Dioxane	12000	U	12000	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-2	SW8260	OC-SB-432-14/16-XXX	2,4,4-Trimethyl-1-pentene	250	*	250	J	ICV%D, CCV%D	ug/kg
OCRI-04	360-24244-2	SW8260	OC-SB-432-14/16-XXX	Acetic acid, methyl ester	2300	U	2300	UJ	CCV%D	ug/kg
OCRI-04	360-24244-2	SW8260	OC-SB-432-14/16-XXX	Acetone	12000	U *	12000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-3	SW8260	OC-SB-432-5.0/7.0-XXX	1,4-Dioxane	14000	U	14000	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-3	SW8260	OC-SB-432-5.0/7.0-XXX	2,4,4-Trimethyl-1-pentene	280	U *	280	UJ	CCV%D	ug/kg
OCRI-04	360-24244-3	SW8260	OC-SB-432-5.0/7.0-XXX	Acetic acid, methyl ester	2800	U	2800	UJ	CCV%D	ug/kg
OCRI-04	360-24244-3	SW8260	OC-SB-432-5.0/7.0-XXX	Acetone	14000	U *	14000	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-4	SW8260	OC-SB-443-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-4	SW8260	OC-SB-443-0.0/1.0-XXX	Acetone	240	U *	240	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-4	SW8260	OC-SB-443-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-6	SW8260	OC-SB-443-6.0/8.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-6	SW8260	OC-SB-443-6.0/8.0-XXX	Acetic acid, methyl ester	51	U	51	UJ	CCV%D	ug/kg
OCRI-04	360-24244-6	SW8260	OC-SB-443-6.0/8.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-6	SW8260	OC-SB-443-6.0/8.0-XXX	Methylene chloride	16	B	16	U	BL	ug/kg
OCRI-04	360-24244-7	SW8260	OC-SB-445-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-7	SW8260	OC-SB-445-0.0/1.0-XXX	Acetone	240	U *	240	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-7	SW8260	OC-SB-445-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-9	SW8260	OC-SB-445-8.0/10-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-04	360-24244-9	SW8260	OC-SB-445-8.0/10-XXX	Acetic acid, methyl ester	48	U	48	UJ	CCV%D	ug/kg
OCRI-04	360-24244-9	SW8260	OC-SB-445-8.0/10-XXX	Acetone	240	U *	240	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-04	360-24244-9	SW8260	OC-SB-445-8.0/10-XXX	Methylene chloride	16	B	16	U	BL	ug/kg
OCRI-05	360-24251-1	SW8260	OC-SB-433-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-1	SW8260	OC-SB-433-0.0/1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-1	SW8260	OC-SB-433-0.0/1.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	LCS-L	ug/kg
OCRI-05	360-24251-1	SW8260	OC-SB-433-0.0/1.0-XXX	Methylene chloride	8.4	J	8.4	U	BL	ug/kg
OCRI-05	360-24251-10	SW8260	OC-SB-440-6.0/8.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-10	SW8260	OC-SB-440-6.0/8.0-XXX	2,4,4-Trimethyl-1-pentene	5.4	U *	5.4	UJ	CCV%D	ug/kg
OCRI-05	360-24251-10	SW8260	OC-SB-440-6.0/8.0-XXX	Acetic acid, methyl ester	54	U	54	UJ	CCV%D	ug/kg
OCRI-05	360-24251-10	SW8260	OC-SB-440-6.0/8.0-XXX	Acetone	270	U *	270	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-05	360-24251-12	SW8260	OC-SB-438-5.0/7.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-12	SW8260	OC-SB-438-5.0/7.0-XXX	2,2-Dichloropropane	2.5	U	2.5	UJ	CCV%D	ug/kg
OCRI-05	360-24251-12	SW8260	OC-SB-438-5.0/7.0-XXX	Acetone	250	U *	250	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-12	SW8260	OC-SB-438-5.0/7.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	LCS-L	ug/kg
OCRI-05	360-24251-13	SW8260	OC-SB-441-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-13	SW8260	OC-SB-441-0.0/1.0-XXX	Acetone	240	U *	240	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-13	SW8260	OC-SB-441-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	LCS-L	ug/kg
OCRI-05	360-24251-15	SW8260	OC-SB-441-8.0/10-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-15	SW8260	OC-SB-441-8.0/10-XXX	2,2-Dichloropropane	2.4	U	2.4	UJ	CCV%D	ug/kg
OCRI-05	360-24251-15	SW8260	OC-SB-441-8.0/10-XXX	Acetone	240	U *	240	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-15	SW8260	OC-SB-441-8.0/10-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	LCS-L	ug/kg
OCRI-05	360-24251-16	SW8260	OC-SB-446-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-16	SW8260	OC-SB-446-0.0/1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-16	SW8260	OC-SB-446-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	1,2-Dibromoethane	2.6	U	2.6	UJ	MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	2,2-Dichloropropane	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	2-Hexanone	26	U	26	UJ	MS-L	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	Acetone	260	U *	260	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	Hexachlorobutadiene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-05	360-24251-18	SW8260	OC-SB-446-5.0/7.0-DUP	trans-1,3-Dichloropropene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	1,2-Dibromoethane	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	2,2-Dichloropropane	2.7	U	2.7	UJ	CCV%D	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	2-Hexanone	27	U	27	UJ	MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	Hexachlorobutadiene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-05	360-24251-19	SW8260	OC-SB-446-5.0/7.0-XXX	trans-1,3-Dichloropropene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-05	360-24251-20	SW8260	OC-SB-448-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-20	SW8260	OC-SB-448-0.0/1.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-20	SW8260	OC-SB-448-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-05	360-24251-21	SW8260	OC-SB-448-17/19-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-21	SW8260	OC-SB-448-17/19-XXX	Acetone	220	U *	220	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-21	SW8260	OC-SB-448-17/19-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	LCS-L	ug/kg
OCRI-05	360-24251-22	SW8260	OC-SB-448-8.0/10-XXX	1,4-Dioxane	200	U	200	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-22	SW8260	OC-SB-448-8.0/10-XXX	2,2-Dichloropropane	2	U	2	UJ	CCV%D	ug/kg
OCRI-05	360-24251-22	SW8260	OC-SB-448-8.0/10-XXX	Acetone	200	U *	200	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-22	SW8260	OC-SB-448-8.0/10-XXX	Dichlorodifluoromethane	4	U *	4	UJ	LCS-L	ug/kg
OCRI-05	360-24251-23	SW8260	OC-SB-438-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-23	SW8260	OC-SB-438-0.0/1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-23	SW8260	OC-SB-438-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-05	360-24251-24	SW8260	OC-SB-438-20/22-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-24	SW8260	OC-SB-438-20/22-XXX	Acetone	210	U *	210	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-24	SW8260	OC-SB-438-20/22-XXX	Dichlorodifluoromethane	4.2	U *	4.2	UJ	LCS-L	ug/kg
OCRI-05	360-24251-3	SW8260	OC-SB-433-5.0/7.0-DUP	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-3	SW8260	OC-SB-433-5.0/7.0-DUP	2,2-Dichloropropane	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-05	360-24251-3	SW8260	OC-SB-433-5.0/7.0-DUP	Acetone	260	U *	260	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-05	360-24251-3	SW8260	OC-SB-433-5.0/7.0-DUP	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-4	SW8260	OC-SB-433-5.0/7.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-4	SW8260	OC-SB-433-5.0/7.0-XXX	2,4,4-Trimethyl-1-pentene	5	U *	5	UJ	CCV%D	ug/kg
OCRI-05	360-24251-4	SW8260	OC-SB-433-5.0/7.0-XXX	Acetic acid, methyl ester	50	U	50	UJ	CCV%D	ug/kg
OCRI-05	360-24251-4	SW8260	OC-SB-433-5.0/7.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-05	360-24251-4	SW8260	OC-SB-433-5.0/7.0-XXX	Dichlorodifluoromethane	5	U	5	UJ	MS-L	ug/kg
OCRI-05	360-24251-5	SW8260	OC-SB-439-0.0-1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-5	SW8260	OC-SB-439-0.0-1.0-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-5	SW8260	OC-SB-439-0.0-1.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	LCS-L	ug/kg
OCRI-05	360-24251-5	SW8260	OC-SB-439-0.0-1.0-XXX	Methylene chloride	5.8	J	11	U	BL	ug/kg
OCRI-05	360-24251-7	SW8260B	OC-SB-439-8.0/10-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-7	SW8260B	OC-SB-439-8.0/10-XXX	2,4,4-Trimethyl-1-pentene	5.3	U	5.3	UJ	CCV%D	ug/kg
OCRI-05	360-24251-7	SW8260B	OC-SB-439-8.0/10-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-05	360-24251-7	SW8260B	OC-SB-439-8.0/10-XXX	Acetone	260	U *	260	UJ	CCV%D, LCS-L	ug/kg
OCRI-05	360-24251-7	SW8260B	OC-SB-439-8.0/10-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	CCV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-8	SW8260	OC-SB-440-0.0/1.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-05	360-24251-8	SW8260	OC-SB-440-0.0/1.0-XXX	Acetone	220	U *	220	UJ	ICV%D, LCS-L	ug/kg
OCRI-05	360-24251-8	SW8260	OC-SB-440-0.0/1.0-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	LCS-L	ug/kg
OCRI-05	360-24251-8	SW8260	OC-SB-440-0.0/1.0-XXX	Methylene chloride	6.1	J	9	U	BL	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1,1,2-Tetrachloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1,1-Trichloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1,2,2-Tetrachloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	U H	11	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1,2-Trichloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1-Dichloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1-Dichloroethene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,1-Dichloropropene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2,3-Trichlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2,3-Trichloropropane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2,4-Trichlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2,4-Trimethylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2-Dibromo-3-chloropropane	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2-Dibromoethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2-Dichlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2-Dichloroethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,2-Dichloropropane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,3,5-Trimethylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,3-Dichlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,3-Dichloropropane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,4-Dichlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	1,4-Dioxane	220	U H *		R	HT, ICVRRF	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2,2-Dichloropropane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2,4,4-Trimethyl-1-pentene	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2,4,4-Trimethyl-2-Pentene	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2-Butanone	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2-Chlorotoluene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	2-Hexanone	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	4-Chlorotoluene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	4-iso-Propyltoluene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	4-Methyl-2-pentanone	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Acetic acid, methyl ester	44	U H	44	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Acetone	220	U H	220	UJ	HT, ICV%D	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Benzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Bromobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Bromochloromethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Bromodichloromethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Bromoform	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Bromomethane	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Butane, 2-methoxy-2-methyl-	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Carbon disulfide	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Carbon tetrachloride	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Chlorobenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Chlorodibromomethane	2.2	U H	2.2	UJ	HT	ug/kg

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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Chloroethane	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Chloroform	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Chloromethane	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Cis-1,2-Dichloroethene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	cis-1,3-Dichloropropene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Cyclohexane	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Dibromomethane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Dichlorodifluoromethane	4.4	U H *	4.4	UJ	HT, LCS-L	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Diethyl ether	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Diisopropylether	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Ethyl benzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Ethyl-t-Butyl Ether	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Hexachlorobutadiene	2.2	U H *	2.2	UJ	HT, CCV%D	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Isopropylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Methyl cyclohexane	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Methyl Tertbutyl Ether	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Methylene chloride	8.8	U H	8.8	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Naphthalene	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	n-Butylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Propylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	sec-Butylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Styrene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	tert-Butylbenzene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Tetrachloroethene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Tetrahydrofuran	22	U H	22	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Toluene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	trans-1,2-Dichloroethene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	trans-1,3-Dichloropropene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Trichloroethene	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Trichlorofluoromethane	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Vinyl chloride	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Xylene, m/p	4.4	U H	4.4	UJ	HT	ug/kg
OCRI-05	360-24251-9	SW8260	OC-SB-440-23/25-XXX	Xylene, o	2.2	U H	2.2	UJ	HT	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	1,4-Dioxane	230	U *		R	ICVRRF, LCS-L	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	4.6	U	4.6	UJ	CCV%D	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	2-Butanone	23	U	23	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	Acetone	230	U *	230	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	Tetrahydrofuran	23	U	23	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-1	SW8260	OC-SB-400-0.0/1.0-XXX	Trichlorofluoromethane	4.6	U *	4.6	UJ	LCS-L	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	1,4-Dioxane	250	U *		R	ICVRRF, LCS-L	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5	U	5	UJ	CCV%D	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-10	SW8260	OC-SB-408-0.0/1.0-XXX	Trichlorofluoromethane	5	U *	5	UJ	LCS-L	ug/kg
OCRI-06	360-24309-11	SW8260	OC-SB-408-7.0/9.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-11	SW8260	OC-SB-408-7.0/9.0-XXX	2,2-Dichloropropane	2.3	U	2.3	UJ	CCV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-11	SW8260	OC-SB-408-7.0/9.0-XXX	Acetone	230	U *	230	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-11	SW8260	OC-SB-408-7.0/9.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	LCS-L	ug/kg
OCRI-06	360-24309-12	SW8260	OC-SB-414-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-12	SW8260	OC-SB-414-0.0/1.0-XXX	Acetone	260	U *	260	UJ	LCS-L	ug/kg
OCRI-06	360-24309-12	SW8260	OC-SB-414-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-06	360-24309-14	SW8260	OC-SB-414-6.0/8.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-14	SW8260	OC-SB-414-6.0/8.0-XXX	2,2-Dichloropropane	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-06	360-24309-14	SW8260	OC-SB-414-6.0/8.0-XXX	Acetone	260	U *	260	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-14	SW8260	OC-SB-414-6.0/8.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	2-Hexanone	22	U	22	UJ	CCV%D	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	Acetic acid, methyl ester	44	U	44	UJ	CCV%D	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	Acetone	220	U *	220	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	Chlorodibromomethane	2.2	U	2.2	UJ	CCV%D	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	Chloroethane	4.4	U	4.4	UJ	LCS-L	ug/kg
OCRI-06	360-24309-15	SW8260B	OC-SB-422-0.0/1.0-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	LCS-L	ug/kg
OCRI-06	360-24309-17	SW8260	OC-SB-422-6.0/8.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-17	SW8260	OC-SB-422-6.0/8.0-XXX	2,2-Dichloropropane	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-06	360-24309-17	SW8260	OC-SB-422-6.0/8.0-XXX	Acetone	260	U *	260	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-17	SW8260	OC-SB-422-6.0/8.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L	ug/kg
OCRI-06	360-24309-19	SW8260	OC-SB-429-6.0/8.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-19	SW8260	OC-SB-429-6.0/8.0-XXX	2,2-Dichloropropane	2.5	U	2.5	UJ	CCV%D	ug/kg
OCRI-06	360-24309-19	SW8260	OC-SB-429-6.0/8.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-19	SW8260	OC-SB-429-6.0/8.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	LCS-L	ug/kg
OCRI-06	360-24309-2	SW8260	OC-SB-400-5.0/7.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-2	SW8260	OC-SB-400-5.0/7.0-XXX	2,2-Dichloropropane	2.4	U	2.4	UJ	CCV%D	ug/kg
OCRI-06	360-24309-2	SW8260	OC-SB-400-5.0/7.0-XXX	Acetone	240	U *	240	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-2	SW8260	OC-SB-400-5.0/7.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	LCS-L	ug/kg
OCRI-06	360-24309-20	SW8260	OC-SB-430-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF, ICV%D	ug/kg
OCRI-06	360-24309-20	SW8260	OC-SB-430-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICVRRF, ICV%D	ug/kg
OCRI-06	360-24309-20	SW8260	OC-SB-430-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	U	11	UJ	MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	1,2,3-Trichlorobenzene	2.2	U	2.2	UJ	MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	1,2,4-Trichlorobenzene	2.2	U	2.2	UJ	MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	2,2-Dichloropropane	2.2	U	2.2	UJ	CCV%D	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	2,4,4-Trimethyl-2-Pentene	4.3	U	4.3	UJ	MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	Acetone	220	U *	220	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	Dichlorodifluoromethane	4.3	U *	4.3	UJ	LCS-L, MS-L	ug/kg
OCRI-06	360-24309-22	SW8260	OC-SB-430-8.0/10-DUP	Hexachlorobutadiene	2.2	U	2.2	UJ	MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	U	11	UJ	MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	1,2,3-Trichlorobenzene	2.1	U	2.1	UJ	MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	1,2,4-Trichlorobenzene	2.1	U	2.1	UJ	MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	2,4,4-Trimethyl-2-Pentene	4.3	U	4.3	UJ	MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	Acetone	210	U *	210	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	Dichlorodifluoromethane	4.3	U *	4.3	UJ	CCV%D, LCS-L, MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-23	SW8260	OC-SB-430-8.0/10-XXX	Hexachlorobutadiene	2.1	U	2.1	UJ	MS-L	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	1,4-Dioxane	250	U *		R	ICVRRF, LCS-L	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5.1	U	5.1	UJ	CCV%D	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-3	SW8260	OC-SB-401-0.0/1.0-XXX	Trichlorofluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-06	360-24309-4	SW8260	OC-SB-401-7.5/9.5-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-4	SW8260	OC-SB-401-7.5/9.5-XXX	2,2-Dichloropropane	2.2	U	2.2	UJ	CCV%D	ug/kg
OCRI-06	360-24309-4	SW8260	OC-SB-401-7.5/9.5-XXX	Acetone	220	U *	220	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-4	SW8260	OC-SB-401-7.5/9.5-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	LCS-L	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	1,4-Dioxane	250	U *		R	ICVRRF, LCS-L	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	5	U	5	UJ	CCV%D	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-5	SW8260	OC-SB-402-0.0/1.0-XXX	Trichlorofluoromethane	5	U *	5	UJ	LCS-L	ug/kg
OCRI-06	360-24309-6	SW8260	OC-SB-402-7.5/9.5-XXX	1,4-Dioxane	290	U	290	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-6	SW8260	OC-SB-402-7.5/9.5-XXX	2,2-Dichloropropane	2.9	U	2.9	UJ	CCV%D	ug/kg
OCRI-06	360-24309-6	SW8260	OC-SB-402-7.5/9.5-XXX	Acetone	290	U *	290	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-6	SW8260	OC-SB-402-7.5/9.5-XXX	Dichlorodifluoromethane	5.7	U *	5.7	UJ	LCS-L	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	1,4-Dioxane	300	U *		R	ICVRRF, LCS-L	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	6	U	6	UJ	CCV%D	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	2-Butanone	30	U	30	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	Acetone	300	U *	300	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	Dichlorodifluoromethane	6	U *	6	UJ	ICV%D, LCS-L	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	Tetrahydrofuran	30	U	30	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-7	SW8260	OC-SB-407-0.0/1.0-XXX	Trichlorofluoromethane	6	U *	6	UJ	LCS-L	ug/kg
OCRI-06	360-24309-9	SW8260	OC-SB-407-8.0/10-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-06	360-24309-9	SW8260	OC-SB-407-8.0/10-XXX	2,2-Dichloropropane	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-06	360-24309-9	SW8260	OC-SB-407-8.0/10-XXX	Acetone	260	U *	260	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-06	360-24309-9	SW8260	OC-SB-407-8.0/10-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L	ug/kg
OCRI-07	360-24327-1	SW8260	OC-SB-403-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-1	SW8260	OC-SB-403-0.0/1.0-XXX	2-Butanone	23	U	23	UJ	CCV%D	ug/kg
OCRI-07	360-24327-1	SW8260	OC-SB-403-0.0/1.0-XXX	2-Hexanone	23	U	23	UJ	CCV%D	ug/kg
OCRI-07	360-24327-1	SW8260	OC-SB-403-0.0/1.0-XXX	Acetone	230	U	230	UJ	ICV%D, CCV%D	ug/kg
OCRI-07	360-24327-1	SW8260	OC-SB-403-0.0/1.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-07	360-24327-11	SW8260	OC-SB-410-6.0/8.0-DUP	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-11	SW8260	OC-SB-410-6.0/8.0-DUP	Acetone	260	U *	260	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-07	360-24327-11	SW8260	OC-SB-410-6.0/8.0-DUP	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L, MS-L	ug/kg
OCRI-07	360-24327-12	SW8260	OC-SB-410-6.0/8.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-12	SW8260	OC-SB-410-6.0/8.0-XXX	Acetone	260	U *	260	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-07	360-24327-12	SW8260	OC-SB-410-6.0/8.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	CCV%D, LCS-L, MS-L	ug/kg
OCRI-07	360-24327-12	SW8260	OC-SB-410-6.0/8.0-XXX	Methylene chloride	7.4	J	7.4	J	ICV%D	ug/kg
OCRI-07	360-24327-13	SW8260	OC-SB-411-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-13	SW8260	OC-SB-411-0.0/1.0-XXX	2-Butanone	24	U	24	UJ	CCV%D	ug/kg
OCRI-07	360-24327-13	SW8260	OC-SB-411-0.0/1.0-XXX	2-Hexanone	24	U	24	UJ	CCV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-07	360-24327-13	SW8260	OC-SB-411-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D, CCV%D	ug/kg
OCRI-07	360-24327-13	SW8260	OC-SB-411-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-07	360-24327-14	SW8260	OC-SB-411-4.7/6.7-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-14	SW8260	OC-SB-411-4.7/6.7-XXX	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-07	360-24327-14	SW8260	OC-SB-411-4.7/6.7-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L	ug/kg
OCRI-07	360-24327-15	SW8260	OC-SB-418-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-15	SW8260	OC-SB-418-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-15	SW8260	OC-SB-418-0.0/1.0-XXX	2-Hexanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-15	SW8260	OC-SB-418-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-07	360-24327-15	SW8260	OC-SB-418-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-07	360-24327-17	SW8260	OC-SB-418-8/10-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-17	SW8260	OC-SB-418-8/10-XXX	Acetone	230	U *	230	UJ	ICV%D, LCS-L	ug/kg
OCRI-07	360-24327-17	SW8260	OC-SB-418-8/10-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	LCS-L	ug/kg
OCRI-07	360-24327-3	SW8260	OC-SB-403-6.0/8.0-XXX	1,4-Dioxane	590	U	590	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-3	SW8260	OC-SB-403-6.0/8.0-XXX	Acetone	590	U *	590	UJ	ICV%D, LCS-L	ug/kg
OCRI-07	360-24327-3	SW8260	OC-SB-403-6.0/8.0-XXX	Dichlorodifluoromethane	12	U *	12	UJ	LCS-L	ug/kg
OCRI-07	360-24327-5	SW8260	OC-SB-404-5.0/7.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-5	SW8260	OC-SB-404-5.0/7.0-XXX	Acetone	240	U *	240	UJ	ICV%D, LCS-L	ug/kg
OCRI-07	360-24327-5	SW8260	OC-SB-404-5.0/7.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	LCS-L	ug/kg
OCRI-07	360-24327-6	SW8260	OC-SB-409-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-6	SW8260	OC-SB-409-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-6	SW8260	OC-SB-409-0.0/1.0-XXX	2-Hexanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-6	SW8260	OC-SB-409-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-07	360-24327-6	SW8260	OC-SB-409-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-07	360-24327-8	SW8260	OC-SB-409-6.0/8.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-8	SW8260	OC-SB-409-6.0/8.0-XXX	Acetone	250	U *	250	UJ	ICV%D, LCS-L	ug/kg
OCRI-07	360-24327-8	SW8260	OC-SB-409-6.0/8.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	LCS-L	ug/kg
OCRI-07	360-24327-9	SW8260	OC-SB-410-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-07	360-24327-9	SW8260	OC-SB-410-0.0/1.0-XXX	2-Butanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-9	SW8260	OC-SB-410-0.0/1.0-XXX	2-Hexanone	25	U	25	UJ	CCV%D	ug/kg
OCRI-07	360-24327-9	SW8260	OC-SB-410-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-07	360-24327-9	SW8260	OC-SB-410-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-08	360-24343-1	SW8260	OC-SB-444-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-1	SW8260	OC-SB-444-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-08	360-24343-1	SW8260	OC-SB-444-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	U	13	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2,3-Trichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2,3-Trichloropropane	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2,4-Trichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2,4-Trimethylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2-Dibromo-3-chloropropane	26	U	26	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,2-Dichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,3,5-Trimethylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,3-Dichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,4-Dichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	1,4-Dioxane	260	U *		R	ICVRRF	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	2,2-Dichloropropane	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	2,4,4-Trimethyl-1-pentene	5.2	U	5.2	UJ	CCV%D, MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	2,4,4-Trimethyl-2-Pentene	5.2	U	5.2	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	2-Butanone	26	U	26	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	2-Chlorotoluene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	4-Chlorotoluene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	4-iso-Propyltoluene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Acetone	260	U *	260	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Bromobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Carbon tetrachloride	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Chlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Cyclohexane	26	U	26	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Ethyl benzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Hexachlorobutadiene	2.6	U		R	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Isopropylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Methyl cyclohexane	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Naphthalene	26	U	26	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	n-Butylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Propylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	sec-Butylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Styrene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	tert-Butylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Tetrachloroethene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Tetrahydrofuran	26	U	26	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Toluene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Trichlorofluoromethane	5.2	U *	5.2	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Xylene, m/p	5.2	U	5.2	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8260	OC-SB-451-2.5/4.5-XXX	Xylene, o	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-08	360-24343-11	SW8260	OC-SB-454-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-11	SW8260	OC-SB-454-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-08	360-24343-11	SW8260	OC-SB-454-0.0/1.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-13	SW8260	OC-SB-454-6.0/8.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-13	SW8260	OC-SB-454-6.0/8.0-XXX	Acetone	240	U *	240	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-13	SW8260	OC-SB-454-6.0/8.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	LCS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1,1,2-Tetrachloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1,1-Trichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1,2,2-Tetrachloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	U	16	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1,2-Trichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,1-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2,3-Trichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2,3-Trichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2,4-Trichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2,4-Trimethylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2-Dibromo-3-chloropropane	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2-Dibromoethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2-Dichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,2-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,3,5-Trimethylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,3-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,3-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,4-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	1,4-Dioxane	330	U	330	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	2,2-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	2,4,4-Trimethyl-1-pentene	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	2,4,4-Trimethyl-2-Pentene	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	2-Chlorotoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	4-Chlorotoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	4-iso-Propyltoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Acetone	330	U *	330	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Benzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Bromobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Bromodichloromethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Bromoform	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Bromomethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Carbon disulfide	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Carbon tetrachloride	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Chlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Chlorodibromomethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Chloroethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Chloromethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Cis-1,2-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	cis-1,3-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Cyclohexane	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Dibromomethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Dichlorodifluoromethane	6.5	U *	6.5	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Diisopropylether	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Ethyl benzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Ethyl-t-Butyl Ether	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Hexachlorobutadiene	3.3	U		R	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Isopropylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Methyl cyclohexane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Naphthalene	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	n-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Propylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	sec-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Styrene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	tert-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Tetrachloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Toluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	trans-1,2-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	trans-1,3-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Trichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Trichlorofluoromethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Vinyl chloride	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Xylene, m/p	6.5	U	6.5	UJ	MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-16	SW8260	OC-SB-455-6.0/8.0-DUP	Xylene, o	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1,1,2-Tetrachloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1,1-Trichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1,2,2-Tetrachloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	U	16	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1,2-Trichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,1-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2,3-Trichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2,3-Trichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2,4-Trichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2,4-Trimethylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2-Dibromo-3-chloropropane	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2-Dibromoethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2-Dichloroethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,2-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,3,5-Trimethylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,3-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,3-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,4-Dichlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	1,4-Dioxane	330	U *		R	ICVRRF	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	2,2-Dichloropropane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	2,4,4-Trimethyl-1-pentene	6.5	U	6.5	UJ	CCV%D, MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	2,4,4-Trimethyl-2-Pentene	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	2-Butanone	33	U	33	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	2-Chlorotoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	4-Chlorotoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	4-iso-Propyltoluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Acetone	78	J *	78	J	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Benzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Bromobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Bromodichloromethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Bromoform	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Carbon disulfide	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Carbon tetrachloride	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Chlorobenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Chlorodibromomethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Chloroethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Chloromethane	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Cis-1,2-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	cis-1,3-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Cyclohexane	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Dibromomethane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Dichlorodifluoromethane	6.5	U *	6.5	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Diisopropylether	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Ethyl benzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Ethyl-t-Butyl Ether	3.3	U	3.3	UJ	MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Hexachlorobutadiene	3.3	U		R	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Isopropylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Methyl cyclohexane	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Naphthalene	33	U	33	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	n-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Propylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	sec-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Styrene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	tert-Butylbenzene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Tetrachloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Tetrahydrofuran	33	U	33	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Toluene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	trans-1,2-Dichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	trans-1,3-Dichloropropene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Trichloroethene	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Trichlorofluoromethane	6.5	U *	6.5	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Vinyl chloride	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Xylene, m/p	6.5	U	6.5	UJ	MS-L	ug/kg
OCRI-08	360-24343-17	SW8260	OC-SB-455-6.0/8.0-XXX	Xylene, o	3.3	U	3.3	UJ	MS-L	ug/kg
OCRI-08	360-24343-2	SW8260	OC-SB-444-12/14-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-2	SW8260	OC-SB-444-12/14-XXX	Acetone	220	J	220	J	ICV%D	ug/kg
OCRI-08	360-24343-2	SW8260	OC-SB-444-12/14-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-2	SW8260	OC-SB-444-12/14-XXX	Methylene chloride	4.8	J B	9.3	U	BL	ug/kg
OCRI-08	360-24343-3	SW8260	OC-SB-444-5.0/7.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-3	SW8260	OC-SB-444-5.0/7.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-3	SW8260	OC-SB-444-5.0/7.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	LCS-L	ug/kg
OCRI-08	360-24343-4	SW8260	OC-SB-449-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-4	SW8260	OC-SB-449-0.0/1.0-XXX	Acetone	300	U	300	UJ	ICV%D	ug/kg
OCRI-08	360-24343-4	SW8260	OC-SB-449-0.0/1.0-XXX	Dichlorodifluoromethane	6.1	U *	6.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-6	SW8260	OC-SB-449-6.0/8.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-6	SW8260	OC-SB-449-6.0/8.0-XXX	2,4,4-Trimethyl-1-pentene	12		12	J	ICV%D	ug/kg
OCRI-08	360-24343-6	SW8260	OC-SB-449-6.0/8.0-XXX	Acetone	260	U *	260	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-6	SW8260	OC-SB-449-6.0/8.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	LCS-L	ug/kg
OCRI-08	360-24343-7	SW8260	OC-SB-451-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-7	SW8260	OC-SB-451-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-08	360-24343-7	SW8260	OC-SB-451-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,1,2-Trichloro-1,2,2-Trifluoroethane	14	U	14	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2,3-Trichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2,3-Trichloropropane	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2,4-Trichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2,4-Trimethylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2-Dibromo-3-chloropropane	27	U	27	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,2-Dichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,3,5-Trimethylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,3-Dichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,4-Dichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	2,2-Dichloropropane	2.7	U	2.7	UJ	MS-L	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	2,4,4-Trimethyl-1-pentene	5.4	U	5.4	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	2,4,4-Trimethyl-2-Pentene	5.4	U	5.4	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	2-Chlorotoluene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	4-Chlorotoluene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	4-iso-Propyltoluene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Acetone	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Bromobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Carbon tetrachloride	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Chlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Cyclohexane	27	U	27	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Dichlorodifluoromethane	5.4	U *	5.4	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Ethyl benzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Hexachlorobutadiene	2.7	U		R	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Isopropylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Methyl cyclohexane	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Naphthalene	27	U	27	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	n-Butylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Propylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	sec-Butylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Styrene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	tert-Butylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Tetrachloroethene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Toluene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Trichlorofluoromethane	5.4	U	5.4	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Xylene, m/p	5.4	U	5.4	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8260	OC-SB-451-2.5/4.5-DUP	Xylene, o	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-09	360-24365-1	SW8260	OC-SB-442-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-1	SW8260	OC-SB-442-0.0/1.0-XXX	Acetic acid, methyl ester	52	U	52	UJ	CCV%D	ug/kg
OCRI-09	360-24365-1	SW8260	OC-SB-442-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-09	360-24365-1	SW8260	OC-SB-442-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	1,4-Dioxane	250	U *		R	ICVRRF	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	2,4,4-Trimethyl-1-pentene	4.9	U	4.9	UJ	CCV%D	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	2-Butanone	25	U	25	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	Acetone	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	Tetrahydrofuran	25	U	25	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-10	SW8260	OC-SB-452-5.0/7.0-XXX	Trichlorofluoromethane	4.9	U *	4.9	UJ	LCS-L	ug/kg
OCRI-09	360-24365-13	SW8260	OC-SB-458-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-13	SW8260	OC-SB-458-0.0/1.0-XXX	Acetic acid, methyl ester	52	U	52	UJ	CCV%D	ug/kg
OCRI-09	360-24365-13	SW8260	OC-SB-458-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-09	360-24365-13	SW8260	OC-SB-458-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	1,4-Dioxane	270	U *		R	ICVRRF	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	2,4,4-Trimethyl-1-pentene	5.3	U	5.3	UJ	CCV%D	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	2-Butanone	27	U	27	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	Acetone	270	U *	270	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	Tetrahydrofuran	27	U	27	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-15	SW8260	OC-SB-458-5.0/7.0-XXX	Trichlorofluoromethane	5.3	U *	5.3	UJ	LCS-L	ug/kg
OCRI-09	360-24365-16	SW8260	OC-SB-460-0.0/1.0-XXX	1,4-Dioxane	280	U	280	UJ	ICVRRF	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-09	360-24365-16	SW8260	OC-SB-460-0.0/1.0-XXX	Acetic acid, methyl ester	55	U	55	UJ	CCV%D	ug/kg
OCRI-09	360-24365-16	SW8260	OC-SB-460-0.0/1.0-XXX	Acetone	280	U	280	UJ	ICV%D	ug/kg
OCRI-09	360-24365-16	SW8260	OC-SB-460-0.0/1.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	1,4-Dioxane	290	U *		R	ICVRRF	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	2,4,4-Trimethyl-1-pentene	5.8	U	5.8	UJ	CCV%D	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	2-Butanone	29	U	29	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	Acetone	290	U *	290	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	Dichlorodifluoromethane	5.8	U *	5.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	Tetrahydrofuran	29	U	29	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-18	SW8260	OC-SB-460-5.5/7.5-XXX	Trichlorofluoromethane	5.8	U *	5.8	UJ	LCS-L	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	1,4-Dioxane	210	U *		R	ICVRRF	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	2,4,4-Trimethyl-1-pentene	4.1	U	4.1	UJ	CCV%D	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	2-Butanone	21	U	21	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	Acetone	210	U *	210	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	Dichlorodifluoromethane	4.1	U *	4.1	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	Tetrahydrofuran	21	U	21	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-3	SW8260	OC-SB-442-8.0/10-DUP	Trichlorofluoromethane	4.1	U *	4.1	UJ	LCS-L	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	1,4-Dioxane	230	U *		R	ICVRRF	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	2,4,4-Trimethyl-1-pentene	4.6	U	4.6	UJ	CCV%D	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	2-Butanone	23	U	23	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	Acetone	230	U *	230	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	Tetrahydrofuran	23	U	23	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-4	SW8260	OC-SB-442-8.0/10-XXX	Trichlorofluoromethane	4.6	U *	4.6	UJ	LCS-L	ug/kg
OCRI-09	360-24365-5	SW8260	OC-SB-447-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-5	SW8260	OC-SB-447-0.0/1.0-XXX	Acetic acid, methyl ester	60	U	60	UJ	CCV%D	ug/kg
OCRI-09	360-24365-5	SW8260	OC-SB-447-0.0/1.0-XXX	Acetone	300	U	300	UJ	ICV%D	ug/kg
OCRI-09	360-24365-5	SW8260	OC-SB-447-0.0/1.0-XXX	Dichlorodifluoromethane	6	U *	6	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-09	360-24365-6	SW8260	OC-SB-447-18/20-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-6	SW8260	OC-SB-447-18/20-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-09	360-24365-6	SW8260	OC-SB-447-18/20-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	1,4-Dioxane	430	U *		R	ICVRRF, CCV%D	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	2-Butanone	43	U	43	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	Acetone	430	U	430	UJ	ICV%D	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	Dichlorodifluoromethane	8.6	U *	8.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	Hexachlorobutadiene	4.3	U *	4.3	UJ	CCV%D	ug/kg
OCRI-09	360-24365-7	SW8260	OC-SB-447-3.0/5.0-XXX	Tetrahydrofuran	43	U	43	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-8	SW8260	OC-SB-452-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-09	360-24365-8	SW8260	OC-SB-452-0.0/1.0-XXX	Acetic acid, methyl ester	55	U	55	UJ	CCV%D	ug/kg
OCRI-09	360-24365-8	SW8260	OC-SB-452-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-09	360-24365-8	SW8260	OC-SB-452-0.0/1.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-10	360-24417-1	SW8260	OC-SB-463-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-1	SW8260	OC-SB-463-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-10	360-24417-1	SW8260	OC-SB-463-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-1	SW8260	OC-SB-463-0.0/1.0-XXX	Tetrahydrofuran	6.4	J	24	U	BL	ug/kg
OCRI-10	360-24417-10	SW8260	OC-SB-465-8.0/10-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-10	SW8260	OC-SB-465-8.0/10-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-10	360-24417-10	SW8260	OC-SB-465-8.0/10-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-10	360-24417-10	SW8260	OC-SB-465-8.0/10-XXX	Methylene chloride	5.2	J B	10	U	BL	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-10	360-24417-10	SW8260	OC-SB-465-8.0/10-XXX	Tetrahydrofuran	9.3	J	25	U	BL	ug/kg
OCRI-10	360-24417-11	SW8260	OC-SB-468-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-11	SW8260	OC-SB-468-0.0/1.0-XXX	Acetone	19	J	19	J	ICV%D	ug/kg
OCRI-10	360-24417-11	SW8260	OC-SB-468-0.0/1.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-11	SW8260	OC-SB-468-0.0/1.0-XXX	Tetrahydrofuran	6.9	J	26	U	BL	ug/kg
OCRI-10	360-24417-13	SW8260	OC-SB-468-8.0/10-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-13	SW8260	OC-SB-468-8.0/10-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-10	360-24417-13	SW8260	OC-SB-468-8.0/10-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-14	SW8260	OC-SB-471-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-14	SW8260	OC-SB-471-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-10	360-24417-14	SW8260	OC-SB-471-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-15	SW8260	OC-SB-471-3.0/5.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-15	SW8260	OC-SB-471-3.0/5.0-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-10	360-24417-15	SW8260	OC-SB-471-3.0/5.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-3	SW8260	OC-SB-463-6.0/8.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-3	SW8260	OC-SB-463-6.0/8.0-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-10	360-24417-3	SW8260	OC-SB-463-6.0/8.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-4	SW8260	OC-SB-464-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-4	SW8260	OC-SB-464-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-10	360-24417-4	SW8260	OC-SB-464-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-4	SW8260	OC-SB-464-0.0/1.0-XXX	Tetrahydrofuran	10	J	26	U	BL	ug/kg
OCRI-10	360-24417-6	SW8260	OC-SB-464-5.0/7.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-6	SW8260	OC-SB-464-5.0/7.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-10	360-24417-6	SW8260	OC-SB-464-5.0/7.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-7	SW8260	OC-SB-465-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-7	SW8260	OC-SB-465-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-10	360-24417-7	SW8260	OC-SB-465-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-8	SW8260	OC-SB-465-16/18-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-8	SW8260	OC-SB-465-16/18-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-10	360-24417-8	SW8260	OC-SB-465-16/18-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-10	360-24417-9	SW8260	OC-SB-465-8.0/10-DUP	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-10	360-24417-9	SW8260	OC-SB-465-8.0/10-DUP	Acetone	220	U	220	UJ	ICV%D	ug/kg
OCRI-10	360-24417-9	SW8260	OC-SB-465-8.0/10-DUP	Dichlorodifluoromethane	4.3	U *	4.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-11	360-24444-1	SW8260	OC-SB-459-6.0/8.0-DUP	1,4-Dioxane	13000	U	13000	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-1	SW8260	OC-SB-459-6.0/8.0-DUP	Acetone	13000	U	13000	UJ	ICV%D	ug/kg
OCRI-11	360-24444-1	SW8260	OC-SB-459-6.0/8.0-DUP	Dichlorodifluoromethane	270	U *	270	UJ	ICV%D, LCS-L	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	630	U	630	UJ	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	1,4-Dioxane	13000	U	13000	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	420		420	J	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	2,4,4-Trimethyl-2-Pentene	190	J	190	J	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Acetic acid, methyl ester	2500	U *	2500	UJ	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Acetone	13000	U	13000	UJ	ICV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Cyclohexane	1300	U	1300	UJ	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Dichlorodifluoromethane	250	U *	250	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Methyl cyclohexane	130	U	130	UJ	CCV%D	ug/kg
OCRI-11	360-24444-12	SW8260	OC-SB-459-0.0/1.0-XXX	Trichlorofluoromethane	250	U	250	UJ	CCV%D	ug/kg
OCRI-11	360-24444-13	SW8260	OC-SB-459-26/28-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-13	SW8260	OC-SB-459-26/28-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-13	SW8260	OC-SB-459-26/28-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D	ug/kg
OCRI-11	360-24444-2	SW8260	OC-SB-459-6.0/8.0-XXX	1,4-Dioxane	14000	U *	14000	UJ	ICVRRF, LCS-L	ug/kg
OCRI-11	360-24444-2	SW8260	OC-SB-459-6.0/8.0-XXX	Acetone	14000	U	14000	UJ	ICV%D	ug/kg
OCRI-11	360-24444-2	SW8260	OC-SB-459-6.0/8.0-XXX	Dichlorodifluoromethane	270	U *	270	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-11	360-24444-3	SW8260	OC-SB-462-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-3	SW8260	OC-SB-462-0.0/1.0-XXX	Acetone	230	U	230	UJ	ICV%D, CCV%D	ug/kg
OCRI-11	360-24444-3	SW8260	OC-SB-462-0.0/1.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-11	360-24444-4	SW8260	OC-SB-462-31/33-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-4	SW8260	OC-SB-462-31/33-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-11	360-24444-4	SW8260	OC-SB-462-31/33-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	ICV%D	ug/kg
OCRI-11	360-24444-5	SW8260	OC-SB-462-4.0/6.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-5	SW8260	OC-SB-462-4.0/6.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-11	360-24444-5	SW8260	OC-SB-462-4.0/6.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-11	360-24444-5	SW8260	OC-SB-462-4.0/6.0-XXX	Tetrahydrofuran	7	J	26	U	BL	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1,1,2-Tetrachloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1,1-Trichloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1,2,2-Tetrachloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	U H	11	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1,2-Trichloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1-Dichloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1-Dichloroethene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,1-Dichloropropene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2,3-Trichlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2,3-Trichloropropane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2,4-Trichlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2,4-Trimethylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2-Dibromo-3-chloropropane	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2-Dibromoethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2-Dichlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2-Dichloroethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,2-Dichloropropane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,3,5-Trimethylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,3-Dichlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,3-Dichloropropane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,4-Dichlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	1,4-Dioxane	230	U H	230	UJ	HT, ICVRRF	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2,2-Dichloropropane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2,4,4-Trimethyl-1-pentene	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2,4,4-Trimethyl-2-Pentene	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2-Butanone	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2-Chlorotoluene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	2-Hexanone	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	4-Chlorotoluene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	4-iso-Propyltoluene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	4-Methyl-2-pentanone	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Acetic acid, methyl ester	45	U H	45	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Acetone	230	U H	230	UJ	HT, ICV%D	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Benzene	2.3	U H	2.3	UJ	HT	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Bromobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Bromochloromethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Bromodichloromethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Bromoform	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Bromomethane	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Butane, 2-methoxy-2-methyl-	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Carbon disulfide	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Carbon tetrachloride	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Chlorobenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Chlorodibromomethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Chloroethane	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Chloroform	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Chloromethane	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Cis-1,2-Dichloroethene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	cis-1,3-Dichloropropene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Cyclohexane	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Dibromomethane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Dichlorodifluoromethane	4.5	U H *	4.5	UJ	HT, ICV%D	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Diethyl ether	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Diisopropylether	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Ethyl benzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Ethyl-t-Butyl Ether	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Hexachlorobutadiene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Isopropylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Methyl cyclohexane	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Methyl Tertbutyl Ether	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Methylene chloride	9.1	U H	9.1	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Naphthalene	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	n-Butylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Propylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	sec-Butylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Styrene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	tert-Butylbenzene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Tetrachloroethene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Tetrahydrofuran	23	U H	23	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Toluene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	trans-1,2-Dichloroethene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	trans-1,3-Dichloropropene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Trichloroethene	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Trichlorofluoromethane	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Vinyl chloride	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Xylene, m/p	4.5	U H	4.5	UJ	HT	ug/kg
OCRI-11	360-24444-7	SW8260	OC-SB-467-30/32-XXX	Xylene, o	2.3	U H	2.3	UJ	HT	ug/kg
OCRI-11	360-24444-8	SW8260	OC-SB-467-6.0/8.0-DUP	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-11	360-24444-8	SW8260	OC-SB-467-6.0/8.0-DUP	Acetic acid, methyl ester	50	U	50	UJ	CCV%D	ug/kg
OCRI-11	360-24444-8	SW8260	OC-SB-467-6.0/8.0-DUP	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-11	360-24444-8	SW8260	OC-SB-467-6.0/8.0-DUP	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-11	360-24444-8	SW8260	OC-SB-467-6.0/8.0-DUP	Tetrahydrofuran	9	J	25	U	BL	ug/kg
OCRI-11	360-24444-9	SW8260	OC-SB-467-6.0/8.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-9	SW8260	OC-SB-467-6.0/8.0-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-11	360-24444-9	SW8260	OC-SB-467-6.0/8.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-11	360-24444-9	SW8260	OC-SB-467-6.0/8.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, CCV%D, LCS-L, MS-L	ug/kg
OCRI-11	360-24444-9	SW8260	OC-SB-467-6.0/8.0-XXX	Tetrahydrofuran	7.4	J	27	U	BL	ug/kg
OCRI-12	360-24454-2	SW8260	OC-SB-461-28/30-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-2	SW8260	OC-SB-461-28/30-XXX	Acetone	220	U	220	UJ	ICV%D, CCV%D	ug/kg
OCRI-12	360-24454-2	SW8260	OC-SB-461-28/30-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-12	360-24454-3	SW8260	OC-SB-461-5.0/7.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-3	SW8260	OC-SB-461-5.0/7.0-XXX	Acetic acid, methyl ester	49	U	49	UJ	CCV%D	ug/kg
OCRI-12	360-24454-3	SW8260	OC-SB-461-5.0/7.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-12	360-24454-3	SW8260	OC-SB-461-5.0/7.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-12	360-24454-4	SW8260	OC-SB-470-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-4	SW8260	OC-SB-470-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-12	360-24454-4	SW8260	OC-SB-470-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-12	360-24454-5	SW8260	OC-SB-470-31/33-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-5	SW8260	OC-SB-470-31/33-XXX	Acetone	240	U	240	UJ	ICV%D, CCV%D	ug/kg
OCRI-12	360-24454-5	SW8260	OC-SB-470-31/33-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-12	360-24454-6	SW8260	OC-SB-470-7.0/9.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-6	SW8260	OC-SB-470-7.0/9.0-XXX	Acetic acid, methyl ester	53	U	53	UJ	CCV%D	ug/kg
OCRI-12	360-24454-6	SW8260	OC-SB-470-7.0/9.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-12	360-24454-6	SW8260	OC-SB-470-7.0/9.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-12	360-24454-7	SW8260	OC-SB-472-0.0/1.0-XXX	1,4-Dioxane	280	U	280	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-7	SW8260	OC-SB-472-0.0/1.0-XXX	Acetone	280	U	280	UJ	ICV%D	ug/kg
OCRI-12	360-24454-7	SW8260	OC-SB-472-0.0/1.0-XXX	Dichlorodifluoromethane	5.6	U *	5.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-12	360-24454-8	SW8260	OC-SB-472-30/32-XXX	1,4-Dioxane	200	U	200	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-8	SW8260	OC-SB-472-30/32-XXX	Acetone	200	U	200	UJ	ICV%D	ug/kg
OCRI-12	360-24454-8	SW8260	OC-SB-472-30/32-XXX	Dichlorodifluoromethane	4	U *	4	UJ	ICV%D, LCS-L	ug/kg
OCRI-12	360-24454-9	SW8260	OC-SB-472-8.0/10-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-12	360-24454-9	SW8260	OC-SB-472-8.0/10-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-12	360-24454-9	SW8260	OC-SB-472-8.0/10-XXX	Cyclohexane	25	U	25	UJ	CCV%D	ug/kg
OCRI-12	360-24454-9	SW8260	OC-SB-472-8.0/10-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-1	SW8260	OC-SB-466-6.0/8.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-1	SW8260	OC-SB-466-6.0/8.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-13	360-24499-1	SW8260	OC-SB-466-6.0/8.0-XXX	Cyclohexane	24	U	24	UJ	CCV%D	ug/kg
OCRI-13	360-24499-1	SW8260	OC-SB-466-6.0/8.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-14	SW8260	OC-SB-417-0.0/1.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-14	SW8260	OC-SB-417-0.0/1.0-XXX	Acetone	220	U	220	UJ	ICV%D	ug/kg
OCRI-13	360-24499-14	SW8260	OC-SB-417-0.0/1.0-XXX	Cyclohexane	22	U	22	UJ	CCV%D	ug/kg
OCRI-13	360-24499-14	SW8260	OC-SB-417-0.0/1.0-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-16	SW8260	OC-SB-417-8.0/10-XXX	1,4-Dioxane	12000	U *	12000	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-16	SW8260	OC-SB-417-8.0/10-XXX	Acetone	12000	U	12000	UJ	ICV%D	ug/kg
OCRI-13	360-24499-16	SW8260	OC-SB-417-8.0/10-XXX	Dichlorodifluoromethane	240	U *	240	UJ	ICV%D, CCV%D, LCS-L	ug/kg
OCRI-13	360-24499-17	SW8260	OC-SB-434-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-17	SW8260	OC-SB-434-0.0/1.0-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-13	360-24499-17	SW8260	OC-SB-434-0.0/1.0-XXX	Cyclohexane	23	U	23	UJ	CCV%D	ug/kg
OCRI-13	360-24499-17	SW8260	OC-SB-434-0.0/1.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-19	SW8260	OC-SB-434-7.0/9.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-19	SW8260	OC-SB-434-7.0/9.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-13	360-24499-19	SW8260	OC-SB-434-7.0/9.0-XXX	Cyclohexane	26	U	26	UJ	CCV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-13	360-24499-19	SW8260	OC-SB-434-7.0/9.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-2	SW8260	OC-SB-469-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-2	SW8260	OC-SB-469-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-13	360-24499-2	SW8260	OC-SB-469-0.0/1.0-XXX	Cyclohexane	25	U	25	UJ	CCV%D	ug/kg
OCRI-13	360-24499-2	SW8260	OC-SB-469-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-20	SW8260	OC-SB-450-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-20	SW8260	OC-SB-450-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-13	360-24499-20	SW8260	OC-SB-450-0.0/1.0-XXX	Cyclohexane	25	U	25	UJ	CCV%D	ug/kg
OCRI-13	360-24499-20	SW8260	OC-SB-450-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-22	SW8260	OC-SB-450-8.0/10-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-22	SW8260	OC-SB-450-8.0/10-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-13	360-24499-22	SW8260	OC-SB-450-8.0/10-XXX	Cyclohexane	26	U	26	UJ	CCV%D	ug/kg
OCRI-13	360-24499-22	SW8260	OC-SB-450-8.0/10-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	Acetic acid, methyl ester	47	U *	47	UJ	LCS-L	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	Diethyl ether	2.3	U	2.3	UJ	CCV%D	ug/kg
OCRI-13	360-24499-3	SW8260	OC-SB-469-28/30-XXX	Methyl Tertbutyl Ether	2.3	U	2.3	UJ	CCV%D	ug/kg
OCRI-13	360-24499-4	SW8260	OC-SB-469-36/37-XXX	1,4-Dioxane	200	U	200	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-4	SW8260	OC-SB-469-36/37-XXX	Acetone	45	J	45	J	ICV%D	ug/kg
OCRI-13	360-24499-4	SW8260	OC-SB-469-36/37-XXX	Dichlorodifluoromethane	4.1	U *	4.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-5	SW8260	OC-SB-469-7.0/9.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-5	SW8260	OC-SB-469-7.0/9.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-13	360-24499-5	SW8260	OC-SB-469-7.0/9.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-6	SW8260	OC-SB-466-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-6	SW8260	OC-SB-466-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-13	360-24499-6	SW8260	OC-SB-466-0.0/1.0-XXX	Cyclohexane	25	U	25	UJ	CCV%D	ug/kg
OCRI-13	360-24499-6	SW8260	OC-SB-466-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-13	360-24499-7	SW8260	OC-SB-466-30/32-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-13	360-24499-7	SW8260	OC-SB-466-30/32-XXX	Acetone	220	U	220	UJ	ICV%D	ug/kg
OCRI-13	360-24499-7	SW8260	OC-SB-466-30/32-XXX	Cyclohexane	22	U	22	UJ	CCV%D	ug/kg
OCRI-13	360-24499-7	SW8260	OC-SB-466-30/32-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-1	SW8260	OC-SB-427-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-1	SW8260	OC-SB-427-0.0/1.0-XXX	2-Butanone	7.6	J	27	U	BL	ug/kg
OCRI-14	360-24563-1	SW8260	OC-SB-427-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-14	360-24563-1	SW8260	OC-SB-427-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-1	SW8260	OC-SB-427-0.0/1.0-XXX	Tetrahydrofuran	27	J	27	U	BL	ug/kg
OCRI-14	360-24563-11	SW8260	OC-SB-456-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-11	SW8260	OC-SB-456-0.0/1.0-XXX	2-Butanone	9	J	27	U	BL	ug/kg
OCRI-14	360-24563-11	SW8260	OC-SB-456-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg
OCRI-14	360-24563-11	SW8260	OC-SB-456-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-11	SW8260	OC-SB-456-0.0/1.0-XXX	Tetrahydrofuran	29		29	U	BL	ug/kg
OCRI-14	360-24563-12	SW8260	OC-SB-456-16/18-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-12	SW8260	OC-SB-456-16/18-XXX	2-Butanone	11	J	26	U	BL	ug/kg
OCRI-14	360-24563-12	SW8260	OC-SB-456-16/18-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-14	360-24563-12	SW8260	OC-SB-456-16/18-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-12	SW8260	OC-SB-456-16/18-XXX	Tetrahydrofuran	29		29	U	BL	ug/kg
OCRI-14	360-24563-13	SW8260	OC-SB-456-7.0/9.0-DUP	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-13	SW8260	OC-SB-456-7.0/9.0-DUP	2-Butanone	8	J	26	U	BL	ug/kg
OCRI-14	360-24563-13	SW8260	OC-SB-456-7.0/9.0-DUP	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-14	360-24563-13	SW8260	OC-SB-456-7.0/9.0-DUP	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-13	SW8260	OC-SB-456-7.0/9.0-DUP	Tetrahydrofuran	33		33	U	BL	ug/kg
OCRI-14	360-24563-14	SW8260	OC-SB-456-7.0/9.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF, MS-RPD	ug/kg
OCRI-14	360-24563-14	SW8260	OC-SB-456-7.0/9.0-XXX	Acetone	230	U	230	UJ	ICV%D, CCV%D	ug/kg
OCRI-14	360-24563-14	SW8260	OC-SB-456-7.0/9.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-14	360-24563-15	SW8260	OC-SB-457-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF, MS-RPD	ug/kg
OCRI-14	360-24563-15	SW8260	OC-SB-457-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-14	360-24563-15	SW8260	OC-SB-457-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-16	SW8260	OC-SB-457-8.0/10-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF, MS-RPD	ug/kg
OCRI-14	360-24563-16	SW8260	OC-SB-457-8.0/10-XXX	Acetone	220	U	220	UJ	ICV%D, CCV%D	ug/kg
OCRI-14	360-24563-16	SW8260	OC-SB-457-8.0/10-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	6700	U *	6700	UJ	CCV%D, LCS-L	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	1,4-Dioxane	130000	U	130000	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	Acetic acid, methyl ester	27000	U *	27000	UJ	CCV%D, LCS-L	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	Acetone	130000	U	130000	UJ	ICV%D	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	Chloroethane	2700	U *	2700	UJ	LCS-L	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	Dichlorodifluoromethane	2700	U *	2700	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-2	SW8260	OC-SB-427-12/14-XXX	Trichlorofluoromethane	2700	U *	2700	UJ	LCS-L	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	Acetic acid, methyl ester	50	U *	50	UJ	LCS-L	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	Diethyl ether	2.5	U	2.5	UJ	CCV%D	ug/kg
OCRI-14	360-24563-3	SW8260	OC-SB-427-17/19-XXX	Methyl Tertbutyl Ether	2.5	U	2.5	UJ	CCV%D	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	1,2,3-Trichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	2-Butanone	14	J	27	U	BL	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	Acetone	76	J	76	J	ICV%D	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	Dichlorodifluoromethane	5.5	U *	5.5	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	Hexachlorobutadiene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8260	OC-SB-427-8.0/10-DUP	n-Butylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	1,2,3-Trichlorobenzene	2.5	U	2.5	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	2-Butanone	8.8	J	25	U	BL	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	Acetone	60	J	60	J	ICV%D	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	Hexachlorobutadiene	2.5	U	2.5	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8260	OC-SB-427-8.0/10-XXX	n-Butylbenzene	2.5	U	2.5	UJ	MS-L	ug/kg
OCRI-14	360-24563-6	SW8260	OC-SB-428-0.0/1.0-XXX	1,4-Dioxane	220	U	220	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-6	SW8260	OC-SB-428-0.0/1.0-XXX	2-Butanone	11	J	22	U	BL	ug/kg
OCRI-14	360-24563-6	SW8260	OC-SB-428-0.0/1.0-XXX	Acetone	220	U	220	UJ	ICV%D	ug/kg
OCRI-14	360-24563-6	SW8260	OC-SB-428-0.0/1.0-XXX	Dichlorodifluoromethane	4.4	U *	4.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-6	SW8260	OC-SB-428-0.0/1.0-XXX	Tetrahydrofuran	26		26	U	BL	ug/kg
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	Acetic acid, methyl ester	53	U *	53	UJ	LCS-L	ug/kg
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	Acetone	270	U	270	UJ	ICV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	Diethyl ether	2.7	U	2.7	UJ	CCV%D	ug/kg
OCRI-14	360-24563-7	SW8260	OC-SB-428-23/25-XXX	Methyl Tertbutyl Ether	2.7	U	2.7	UJ	CCV%D	ug/kg
OCRI-14	360-24563-9	SW8260	OC-SB-428-8.0/10-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-14	360-24563-9	SW8260	OC-SB-428-8.0/10-XXX	2-Butanone	21	J	24	U	BL	ug/kg
OCRI-14	360-24563-9	SW8260	OC-SB-428-8.0/10-XXX	Acetone	97	J	97	J	ICV%D	ug/kg
OCRI-14	360-24563-9	SW8260	OC-SB-428-8.0/10-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-14	360-24563-9	SW8260	OC-SB-428-8.0/10-XXX	Tetrahydrofuran	27		27	U	BL	ug/kg
OCRI-15	360-24582-1	SW8260	OC-SB-457-28/30-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-1	SW8260	OC-SB-457-28/30-XXX	Acetone	210	U	210	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-1	SW8260	OC-SB-457-28/30-XXX	Dichlorodifluoromethane	4.1	U *	4.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-10	SW8260	OC-SS-405-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-10	SW8260	OC-SS-405-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-10	SW8260	OC-SS-405-0.0/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-11	SW8260	OC-SS-406-0.0/1.0.-XXX	1,4-Dioxane	370	U	370	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-11	SW8260	OC-SS-406-0.0/1.0.-XXX	Acetone	370	U	370	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-11	SW8260	OC-SS-406-0.0/1.0.-XXX	Dichlorodifluoromethane	7.5	U *	7.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-12	SW8260	OC-SS-407-0.0/1.0-XXX	1,4-Dioxane	370	U	370	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-12	SW8260	OC-SS-407-0.0/1.0-XXX	Acetone	370	U	370	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-12	SW8260	OC-SS-407-0.0/1.0-XXX	Dichlorodifluoromethane	7.4	U *	7.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-13	SW8260	OC-SS-408-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-13	SW8260	OC-SS-408-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-13	SW8260	OC-SS-408-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-14	SW8260	OC-SS-409-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-14	SW8260	OC-SS-409-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-14	SW8260	OC-SS-409-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-16	SW8260	OC-SS-411-0.0/1.0-XXX	1,4-Dioxane	990	U	990	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-16	SW8260	OC-SS-411-0.0/1.0-XXX	Acetone	990	U	990	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-16	SW8260	OC-SS-411-0.0/1.0-XXX	Dichlorodifluoromethane	20	U *	20	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-17	SW8260	OC-SS-412-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-17	SW8260	OC-SS-412-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-17	SW8260	OC-SS-412-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-19	SW8260	OC-SS-414-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-19	SW8260	OC-SS-414-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-19	SW8260	OC-SS-414-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-20	SW8260	OC-SS-415-0.0/1.0-XXX	1,4-Dioxane	790	U	790	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-20	SW8260	OC-SS-415-0.0/1.0-XXX	Acetone	790	U	790	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-20	SW8260	OC-SS-415-0.0/1.0-XXX	Dichlorodifluoromethane	16	U *	16	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	1,2,3-Trichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	1,2,4-Trichlorobenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	Acetone	270	U	270	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	Hexachlorobutadiene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	Naphthalene	27	U	27	UJ	MS-L	ug/kg
OCRI-15	360-24582-21	SW8260	OC-SS-416-0.0/1.0-DUP	n-Butylbenzene	2.7	U	2.7	UJ	MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	1,2,3-Trichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	1,2,4-Trichlorobenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	Dichlorodifluoromethane	5.3	U *	5.3	UJ	ICV%D, LCS-L, MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	Hexachlorobutadiene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	Naphthalene	26	U	26	UJ	MS-L	ug/kg
OCRI-15	360-24582-22	SW8260	OC-SS-416-0.0/1.0-XXX	n-Butylbenzene	2.6	U	2.6	UJ	MS-L	ug/kg
OCRI-15	360-24582-5	SW8260	OC-SS-400-0.0/1.0-XXX	1,4-Dioxane	480	U	480	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-5	SW8260	OC-SS-400-0.0/1.0-XXX	Acetone	480	U	480	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-5	SW8260	OC-SS-400-0.0/1.0-XXX	Dichlorodifluoromethane	9.6	U *	9.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-6	SW8260	OC-SS-401-0.1/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-6	SW8260	OC-SS-401-0.1/1.0-XXX	Acetone	250	U	250	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-6	SW8260	OC-SS-401-0.1/1.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-7	SW8260	OC-SS-402-0.0/1.0-XXX	1,4-Dioxane	520	U	520	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-7	SW8260	OC-SS-402-0.0/1.0-XXX	Acetone	520	U	520	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-7	SW8260	OC-SS-402-0.0/1.0-XXX	Dichlorodifluoromethane	10	U *	10	UJ	ICV%D, LCS-L	ug/kg
OCRI-15	360-24582-9	SW8260	OC-SS-404-0.0/1.0-XXX	1,4-Dioxane	270	U	270	UJ	ICVRRF	ug/kg
OCRI-15	360-24582-9	SW8260	OC-SS-404-0.0/1.0-XXX	Acetone	270	U	270	UJ	ICV%D, CCV%D	ug/kg
OCRI-15	360-24582-9	SW8260	OC-SS-404-0.0/1.0-XXX	Dichlorodifluoromethane	5.4	U *	5.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-1	SW8260	OC-SS-417-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-1	SW8260	OC-SS-417-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-16	360-24634-1	SW8260	OC-SS-417-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-10	SW8260	OC-SS-426-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-10	SW8260	OC-SS-426-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-16	360-24634-10	SW8260	OC-SS-426-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-11	SW8260	OC-SS-427-0.0/1.0-XXX	1,4-Dioxane	340	U	340	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-11	SW8260	OC-SS-427-0.0/1.0-XXX	Acetone	340	U	340	UJ	ICV%D	ug/kg
OCRI-16	360-24634-11	SW8260	OC-SS-427-0.0/1.0-XXX	Dichlorodifluoromethane	6.9	U *	6.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-12	SW8260	OC-SS-428-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-12	SW8260	OC-SS-428-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-16	360-24634-12	SW8260	OC-SS-428-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-13	SW8260	OC-SS-429-0.0/1.0-XXX	1,4-Dioxane	330	U	330	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-13	SW8260	OC-SS-429-0.0/1.0-XXX	Acetone	330	U	330	UJ	ICV%D	ug/kg
OCRI-16	360-24634-13	SW8260	OC-SS-429-0.0/1.0-XXX	Dichlorodifluoromethane	6.5	U *	6.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-14	SW8260	OC-SS-430-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-14	SW8260	OC-SS-430-0.0/1.0-XXX	Acetone	300	U	300	UJ	ICV%D	ug/kg
OCRI-16	360-24634-14	SW8260	OC-SS-430-0.0/1.0-XXX	Dichlorodifluoromethane	6	U *	6	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-15	SW8260	OC-SS-431-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-15	SW8260	OC-SS-431-0.0/1.0-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-16	360-24634-15	SW8260	OC-SS-431-0.0/1.0-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-16	SW8260	OC-SS-432-0.0/1.0-XXX	1,4-Dioxane	310	U	310	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-16	SW8260	OC-SS-432-0.0/1.0-XXX	Acetone	310	U	310	UJ	ICV%D	ug/kg
OCRI-16	360-24634-16	SW8260	OC-SS-432-0.0/1.0-XXX	Dichlorodifluoromethane	6.3	U *	6.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-2	SW8260	OC-SS-418-0.0/1.0-XXX	1,4-Dioxane	280	U	280	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-2	SW8260	OC-SS-418-0.0/1.0-XXX	Acetone	280	U	280	UJ	ICV%D	ug/kg
OCRI-16	360-24634-2	SW8260	OC-SS-418-0.0/1.0-XXX	Dichlorodifluoromethane	5.5	U *	5.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-3	SW8260	OC-SS-419-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-3	SW8260	OC-SS-419-0.0/1.0-XXX	Acetone	260	U	260	UJ	ICV%D	ug/kg
OCRI-16	360-24634-3	SW8260	OC-SS-419-0.0/1.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-4	SW8260	OC-SS-420-0.0/1.0-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-4	SW8260	OC-SS-420-0.0/1.0-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-16	360-24634-4	SW8260	OC-SS-420-0.0/1.0-XXX	Dichlorodifluoromethane	4.6	U *	4.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-5	SW8260	OC-SS-421-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-5	SW8260	OC-SS-421-0.0/1.0-XXX	Acetone	300	U	300	UJ	ICV%D	ug/kg
OCRI-16	360-24634-5	SW8260	OC-SS-421-0.0/1.0-XXX	Dichlorodifluoromethane	6	U *	6	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-6	SW8260	OC-SS-422-0.0/1.0-XXX	1,4-Dioxane	290	U	290	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-6	SW8260	OC-SS-422-0.0/1.0-XXX	Acetone	290	U	290	UJ	ICV%D	ug/kg
OCRI-16	360-24634-6	SW8260	OC-SS-422-0.0/1.0-XXX	Dichlorodifluoromethane	5.8	U *	5.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-7	SW8260	OC-SS-423-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-7	SW8260	OC-SS-423-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-16	360-24634-7	SW8260	OC-SS-423-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-8	SW8260	OC-SS-424-0.0/1.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-8	SW8260	OC-SS-424-0.0/1.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-16	360-24634-8	SW8260	OC-SS-424-0.0/1.0-XXX	Dichlorodifluoromethane	4.9	U *	4.9	UJ	ICV%D, LCS-L	ug/kg
OCRI-16	360-24634-9	SW8260	OC-SS-425-0.0/1.0-XXX	1,4-Dioxane	240	U	240	UJ	ICVRRF	ug/kg
OCRI-16	360-24634-9	SW8260	OC-SS-425-0.0/1.0-XXX	Acetone	240	U	240	UJ	ICV%D	ug/kg
OCRI-16	360-24634-9	SW8260	OC-SS-425-0.0/1.0-XXX	Dichlorodifluoromethane	4.8	U *	4.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-1	SW8260	OC-SS-434-0.0/1.0-XXX	1,4-Dioxane	310	U	310	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-1	SW8260	OC-SS-434-0.0/1.0-XXX	Acetone	310	U	310	UJ	ICV%D	ug/kg
OCRI-17	360-24665-1	SW8260	OC-SS-434-0.0/1.0-XXX	Dichlorodifluoromethane	6.1	U *	6.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-10	SW8260	OC-SS-454-0.0/1.0-XXX	1,4-Dioxane	290	U	290	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-10	SW8260	OC-SS-454-0.0/1.0-XXX	Acetone	290	U	290	UJ	ICV%D	ug/kg
OCRI-17	360-24665-10	SW8260	OC-SS-454-0.0/1.0-XXX	Dichlorodifluoromethane	5.7	U *	5.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-11	SW8260	OC-SS-455-0.0/1.0-XXX	1,4-Dioxane	300	U	300	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-11	SW8260	OC-SS-455-0.0/1.0-XXX	Acetone	35	J	35	J	ICV%D	ug/kg
OCRI-17	360-24665-11	SW8260	OC-SS-455-0.0/1.0-XXX	Dichlorodifluoromethane	6.1	U *	6.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-11	SW8260	OC-SS-455-0.0/1.0-XXX	Diethyl ether	3	U	3	UJ	CCV%D	ug/kg
OCRI-17	360-24665-11	SW8260	OC-SS-455-0.0/1.0-XXX	Methyl Tertbutyl Ether	3	U	3	UJ	CCV%D	ug/kg
OCRI-17	360-24665-12	SW8260	OC-SS-460-0.0/1.0-XXX	1,4-Dioxane	320	U	320	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-12	SW8260	OC-SS-460-0.0/1.0-XXX	Acetone	34	J	34	J	ICV%D	ug/kg
OCRI-17	360-24665-12	SW8260	OC-SS-460-0.0/1.0-XXX	Dichlorodifluoromethane	6.4	U *	6.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-13	SW8260	OC-SB-406-0.0/1.0-XXX	1,4-Dioxane	590	U	590	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-13	SW8260	OC-SB-406-0.0/1.0-XXX	Acetone	68	J	68	J	ICV%D	ug/kg
OCRI-17	360-24665-13	SW8260	OC-SB-406-0.0/1.0-XXX	Dichlorodifluoromethane	12	U *	12	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-15	SW8260	OC-SB-406-8.0/10-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-15	SW8260	OC-SB-406-8.0/10-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg
OCRI-17	360-24665-15	SW8260	OC-SB-406-8.0/10-XXX	Dichlorodifluoromethane	4.5	U *	4.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-16	SW8260	OC-SB-413-0.0/1.0-XXX	1,4-Dioxane	460	U	460	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-16	SW8260	OC-SB-413-0.0/1.0-XXX	Acetone	39	J	39	J	ICV%D	ug/kg
OCRI-17	360-24665-16	SW8260	OC-SB-413-0.0/1.0-XXX	Dichlorodifluoromethane	9.1	U *	9.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-17	SW8260	OC-SB-413-1.0/5.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-17	SW8260	OC-SB-413-1.0/5.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-17	360-24665-17	SW8260	OC-SB-413-1.0/5.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	970	U	970	UJ	CCV%D	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	1,4-Dioxane	19000	U	19000	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	2,2-Dichloropropane	190	U	190	UJ	CCV%D	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	2,4,4-Trimethyl-1-pentene	390	U	390	UJ	CCV%D	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	Acetic acid, methyl ester	3900	U *	3900	UJ	CCV%D	ug/kg
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	Acetone	19000	U	19000	UJ	ICV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-17	360-24665-2	SW8260	OC-SS-435-0.0/1.0-XXX	Dichlorodifluoromethane	390	U *	390	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-3	SW8260	OC-SS-436-0.0/1.0-XXX	1,4-Dioxane	320	U	320	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-3	SW8260	OC-SS-436-0.0/1.0-XXX	Acetone	320	U	320	UJ	ICV%D	ug/kg
OCRI-17	360-24665-3	SW8260	OC-SS-436-0.0/1.0-XXX	Dichlorodifluoromethane	6.3	U *	6.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-4	SW8260	OC-SS-437-0.0/1.0-XXX	1,4-Dioxane	340	U	340	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-4	SW8260	OC-SS-437-0.0/1.0-XXX	Acetone	340	U	340	UJ	ICV%D	ug/kg
OCRI-17	360-24665-4	SW8260	OC-SS-437-0.0/1.0-XXX	Dichlorodifluoromethane	6.8	U *	6.8	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-5	SW8260	OC-SS-440-0.0/1.0-XXX	1,4-Dioxane	420	U	420	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-5	SW8260	OC-SS-440-0.0/1.0-XXX	Acetone	420	U	420	UJ	ICV%D	ug/kg
OCRI-17	360-24665-5	SW8260	OC-SS-440-0.0/1.0-XXX	Dichlorodifluoromethane	8.5	U *	8.5	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-6	SW8260	OC-SS-442-0.0/1.0-XXX	1,4-Dioxane	600	U	600	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-6	SW8260	OC-SS-442-0.0/1.0-XXX	Acetone	600	U	600	UJ	ICV%D	ug/kg
OCRI-17	360-24665-6	SW8260	OC-SS-442-0.0/1.0-XXX	Dichlorodifluoromethane	12	U *	12	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-7	SW8260	OC-SS-449-0.0/1.0-XXX	1,4-Dioxane	350	U	350	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-7	SW8260	OC-SS-449-0.0/1.0-XXX	Acetone	350	U	350	UJ	ICV%D	ug/kg
OCRI-17	360-24665-7	SW8260	OC-SS-449-0.0/1.0-XXX	Dichlorodifluoromethane	7.1	U *	7.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-8	SW8260	OC-SS-450-0.0/1.0-XXX	1,4-Dioxane	370	U	370	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-8	SW8260	OC-SS-450-0.0/1.0-XXX	Acetone	34	J	34	J	ICV%D	ug/kg
OCRI-17	360-24665-8	SW8260	OC-SS-450-0.0/1.0-XXX	Dichlorodifluoromethane	7.4	U *	7.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-17	360-24665-9	SW8260	OC-SS-451-0.0/1.0-XXX	1,4-Dioxane	310	U	310	UJ	ICVRRF	ug/kg
OCRI-17	360-24665-9	SW8260	OC-SS-451-0.0/1.0-XXX	Acetone	310	U	310	UJ	ICV%D	ug/kg
OCRI-17	360-24665-9	SW8260	OC-SS-451-0.0/1.0-XXX	Dichlorodifluoromethane	6.2	U *	6.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-10	SW8260	OC-SS-453-0.0/1.0-XXX	1,4-Dioxane	380	U	380	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-10	SW8260	OC-SS-453-0.0/1.0-XXX	Acetone	380	U	380	UJ	ICV%D	ug/kg
OCRI-18	360-24686-10	SW8260	OC-SS-453-0.0/1.0-XXX	Dichlorodifluoromethane	7.6	U *	7.6	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-10	SW8260	OC-SS-453-0.0/1.0-XXX	Diethyl ether	3.8	U	3.8	UJ	CCV%D	ug/kg
OCRI-18	360-24686-10	SW8260	OC-SS-453-0.0/1.0-XXX	Methyl Tertbutyl Ether	3.8	U	3.8	UJ	CCV%D	ug/kg
OCRI-18	360-24686-11	SW8260	OC-SS-457-0.0/1.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-11	SW8260	OC-SS-457-0.0/1.0-XXX	Acetone	21	J	21	J	ICV%D	ug/kg
OCRI-18	360-24686-11	SW8260	OC-SS-457-0.0/1.0-XXX	Dichlorodifluoromethane	5.2	U *	5.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-11	SW8260	OC-SS-457-0.0/1.0-XXX	Diethyl ether	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-11	SW8260	OC-SS-457-0.0/1.0-XXX	Methyl Tertbutyl Ether	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-13	SW8260	OC-SS-456-0.0/1.0-XXX	1,4-Dioxane	320	U	320	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-13	SW8260	OC-SS-456-0.0/1.0-XXX	Acetone	320	U	320	UJ	ICV%D	ug/kg
OCRI-18	360-24686-13	SW8260	OC-SS-456-0.0/1.0-XXX	Dichlorodifluoromethane	6.4	U *	6.4	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-14	SW8260	OC-SS-458-0.0/1.0-XXX	1,4-Dioxane	360	U	360	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-14	SW8260	OC-SS-458-0.0/1.0-XXX	Acetone	360	U	360	UJ	ICV%D	ug/kg
OCRI-18	360-24686-14	SW8260	OC-SS-458-0.0/1.0-XXX	Dichlorodifluoromethane	7.2	U *	7.2	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-15	SW8260	OC-SS-459-0.0/1.0-XXX	1,4-Dioxane	340	U	340	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-15	SW8260	OC-SS-459-0.0/1.0-XXX	Acetone	340	U	340	UJ	ICV%D	ug/kg
OCRI-18	360-24686-15	SW8260	OC-SS-459-0.0/1.0-XXX	Dichlorodifluoromethane	6.7	U *	6.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-16	SW8260	OC-SS-461-0.0/1.0-XXX	1,4-Dioxane	360	U	360	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-16	SW8260	OC-SS-461-0.0/1.0-XXX	Acetone	81	J	81	J	ICV%D	ug/kg
OCRI-18	360-24686-16	SW8260	OC-SS-461-0.0/1.0-XXX	Dichlorodifluoromethane	7.1	U *	7.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-2	SW8260	OC-SB-435-0.0/1.0-XXX	1,4-Dioxane	2000	U	2000	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-2	SW8260	OC-SB-435-0.0/1.0-XXX	Acetone	2000	U	2000	UJ	ICV%D	ug/kg
OCRI-18	360-24686-2	SW8260	OC-SB-435-0.0/1.0-XXX	Dichlorodifluoromethane	39	U *	39	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-3	SW8260	OC-SB-435-11/15-XXX	1,4-Dioxane	230	U	230	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-3	SW8260	OC-SB-435-11/15-XXX	Acetone	230	U	230	UJ	ICV%D	ug/kg

TABLE 3.2 - VALIDATION CODE SUMMARY - VOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-18	360-24686-3	SW8260	OC-SB-435-11/15-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-4	SW8260	OC-SB-435-6.0/10-XXX	1,4-Dioxane	210	U	210	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-4	SW8260	OC-SB-435-6.0/10-XXX	Acetone	210	U	210	UJ	ICV%D	ug/kg
OCRI-18	360-24686-4	SW8260	OC-SB-435-6.0/10-XXX	Dichlorodifluoromethane	4.3	U *	4.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-5	SW8260	OC-SB-453-0.0/1.0-XXX	1,4-Dioxane	1900	U	1900	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-5	SW8260	OC-SB-453-0.0/1.0-XXX	Acetone	1900	U	1900	UJ	ICV%D	ug/kg
OCRI-18	360-24686-5	SW8260	OC-SB-453-0.0/1.0-XXX	Dichlorodifluoromethane	38	U *	38	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-5	SW8260	OC-SB-453-0.0/1.0-XXX	Diethyl ether	19	U	19	UJ	CCV%D	ug/kg
OCRI-18	360-24686-5	SW8260	OC-SB-453-0.0/1.0-XXX	Methyl Tertbutyl Ether	19	U	19	UJ	CCV%D	ug/kg
OCRI-18	360-24686-6	SW8260	OC-SB-453-1.0/6.0-XXX	1,4-Dioxane	260	U	260	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-6	SW8260	OC-SB-453-1.0/6.0-XXX	Acetone	89	J	89	J	ICV%D	ug/kg
OCRI-18	360-24686-6	SW8260	OC-SB-453-1.0/6.0-XXX	Dichlorodifluoromethane	5.1	U *	5.1	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-6	SW8260	OC-SB-453-1.0/6.0-XXX	Diethyl ether	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-6	SW8260	OC-SB-453-1.0/6.0-XXX	Methyl Tertbutyl Ether	2.6	U	2.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-7	SW8260	OC-SB-473-0.0/1.0-XXX	1,4-Dioxane	360	U	360	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-7	SW8260	OC-SB-473-0.0/1.0-XXX	Acetone	360	U	360	UJ	ICV%D	ug/kg
OCRI-18	360-24686-7	SW8260	OC-SB-473-0.0/1.0-XXX	Dichlorodifluoromethane	7.3	U *	7.3	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-7	SW8260	OC-SB-473-0.0/1.0-XXX	Diethyl ether	3.6	U	3.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-7	SW8260	OC-SB-473-0.0/1.0-XXX	Methyl Tertbutyl Ether	3.6	U	3.6	UJ	CCV%D	ug/kg
OCRI-18	360-24686-9	SW8260	OC-SB-473-4.0/6.0-XXX	1,4-Dioxane	250	U	250	UJ	ICVRRF	ug/kg
OCRI-18	360-24686-9	SW8260	OC-SB-473-4.0/6.0-XXX	Acetone	250	U	250	UJ	ICV%D	ug/kg
OCRI-18	360-24686-9	SW8260	OC-SB-473-4.0/6.0-XXX	Dichlorodifluoromethane	5	U *	5	UJ	ICV%D, LCS-L	ug/kg
OCRI-18	360-24686-9	SW8260	OC-SB-473-4.0/6.0-XXX	Diethyl ether	2.5	U	2.5	UJ	CCV%D	ug/kg
OCRI-18	360-24686-9	SW8260	OC-SB-473-4.0/6.0-XXX	Methyl Tertbutyl Ether	2.5	U	2.5	UJ	CCV%D	ug/kg

Notes:
Samples analyzed by SW-846 Method 8260B
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated
R = rejected

Validation Reason Codes:
BL = QC Blank Qualifier
CCV%D = Continuing calibration %D
HT = Holding time for prep or analysis exceeded
ICV%D = Initial calibration verification 2nd source recovery outside limit
ICVRRF = Initial calibration RRF
LCS-H = LCS recovery high
LCS-L = LCS recovery low
MS-L = MS and/or MSD recovery low
MS-RPD = MS/MSD RPD limit exc

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Benzoic Acid	170	J	170	JEB	BL, CCV%D	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Biphenyl	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	35	J	35	JEB	BL	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Diphenyl ether	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-1	SW8270	OC-SB-405-0.0/1.0-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	1-Methylnaphthalene	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	2,3,4,6-Tetrachlorophenol	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	2,4-Dimethylphenol	38	U	38	UJ	CCV%D	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	4,6-Dinitro-2-methylphenol	190	U	190	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Aniline	38	U *	38	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Anthracene	15	J	15	JEB	BL	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Atrazine	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Benzoic Acid	160	J	160	JEB	BL, CCV%D	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Biphenyl	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	1500		1500	EB	BL	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Caprolactum	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Diphenyl ether	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-11	SW8270	OC-SB-412-6.0/7.0-XXX	Diphenylmethanone	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	1-Methylnaphthalene	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	34	U *		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,4,5-Trichlorophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,4,6-Trichlorophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,4-Dichlorophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,4-Dimethylphenol	610		610	J	CCV%D, SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2,4-Dinitrophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2-Chlorophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	2-Nitrophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	4-Chloro-3-methylphenol	68	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	4-Nitrophenol	170	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Atrazine	34	U *	34	UJ	LCS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Benzoic Acid	170	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Biphenyl	170	*	170	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1500		1500	EB	BL	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Caprolactum	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Diphenyl ether	540		540	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Diphenylmethanone	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	N-Nitrosodiphenylamine	44		44	EB	BL	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Pentachlorophenol	34	U		R	SS-L	ug/kg
OCRI-01	360-24173-12	SW8270	OC-SB-420-0.0/1.0-XXX	Phenol	32000		32000	J	IS-H	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Biphenyl	71	*	71	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Bis(2-Ethylhexyl)phthalate	28000		28000	JEB	BL, IS-H	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Di-n-butylphthalate	110	B	110	U	BL	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Diphenyl ether	3100		3100	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-14	SW8270	OC-SB-420-6.5/8.5-XXX	N-Nitrosodiphenylamine	18	J	18	JEB	BL	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Benzoic Acid	170	U	170	UJ	CCV%D	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Biphenyl	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	630		630	EB	BL	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Diphenyl ether	18	J *	18	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-15	SW8270	OC-SB-423-0.0/1.0-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Biphenyl	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Bis(2-Ethylhexyl)phthalate	320		320	EB	BL	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Diphenyl ether	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-17	SW8270	OC-SB-423-5.0/6.0-XXX	N-Nitrosodiphenylamine	11	J	11	JEB	BL	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Biphenyl	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	28000		28000	EB	BL	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Di-n-butylphthalate	35	B	35	U	BL	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Diphenyl ether	30	J *	30	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-3	SW8270	OC-SB-405-8.0/9.0-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	1-Methylnaphthalene	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	2,4-Dimethylphenol	34	U	34	UJ	CCV%D	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Atrazine	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Benzoic Acid	170	U	170	UJ	CCV%D	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Biphenyl	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	4500		4500	EB	BL	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Caprolactum	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Diphenyl ether	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-4	SW8270	OC-SB-416-0.0/1.0-XXX	Diphenylmethanone	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Biphenyl	17	J *	17	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	35000		35000	JEB	BL, IS-H	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Diphenyl ether	360	*	360	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-6	SW8270	OC-SB-416-8.0/9.0-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	1-Methylnaphthalene	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	2,4-Dimethylphenol	34	U	34	UJ	CCV%D	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	ICVRSD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Atrazine	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Benzoic Acid	170	U	170	UJ	CCV%D	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Biphenyl	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	33	J	33	JEB	BL	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Caprolactum	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Diphenyl ether	21	J *	21	J	LCS-H, LCS-RPD	ug/kg
OCRI-01	360-24173-9	SW8270	OC-SB-412-0.0/1.0-XXX	Diphenylmethanone	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	1-Methylnaphthalene	43	*	43	J	LCS-H, LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	2,3,4,6-Tetrachlorophenol	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	2,4-Dimethylphenol	37	U	37	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	2,4-Dinitrophenol	37	U	37	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Aniline	37	U *	37	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Atrazine	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Biphenyl	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Bis(2-Ethylhexyl)phthalate	15	J	15	JEB	BL	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Caprolactum	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Diphenyl ether	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-10	SW8270	OC-SB-412-12/13-XXX	Diphenylmethanone	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	1-Methylnaphthalene	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	2,3,4,6-Tetrachlorophenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	2,4-Dimethylphenol	36	U	36	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Aniline	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Atrazine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Biphenyl	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Bis(2-Ethylhexyl)phthalate	74		74	EB	BL	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Caprolactum	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Di-n-butylphthalate	13	J B	36	U	BL	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Diphenyl ether	19	J *	19	J	LCS-H, LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	Diphenylmethanone	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-13	SW8270	OC-SB-420-12/14-XXX	N-Nitrosodiphenylamine	13	J	13	JEB	BL	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	1-Methylnaphthalene	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	2,3,4,6-Tetrachlorophenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	2,4-Dimethylphenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Acetophenone	5.4	J B	35	U	BL	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Aniline	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Atrazine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Biphenyl	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Bis(2-Ethylhexyl)phthalate	110		110	EB	BL	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Caprolactum	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Diphenyl ether	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-16	SW8270	OC-SB-423-13/14-XXX	Diphenylmethanone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	1-Methylnaphthalene	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	2,3,4,6-Tetrachlorophenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	2,4-Dimethylphenol	36	U	36	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Aniline	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Atrazine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Benzoic Acid	140	J	140	JEB	BL, CCV%D	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Biphenyl	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Bis(2-Ethylhexyl)phthalate	360		360	EB	BL	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Caprolactum	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Di-n-butylphthalate	11	J B	36	U	BL	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Diphenyl ether	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-2	SW8270	OC-SB-405-14/15-XXX	Diphenylmethanone	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	1-Methylnaphthalene	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	2,3,4,6-Tetrachlorophenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	2,4-Dimethylphenol	36	U	36	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Aniline	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Atrazine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Biphenyl	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Bis(2-Ethylhexyl)phthalate	53		53	EB	BL	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Caprolactum	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Di-n-butylphthalate	14	J B	36	U	BL	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Diphenyl ether	14	J *	14	J	LCS-H, LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	Diphenylmethanone	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-01A	360-24173-5	SW8270	OC-SB-416-13/14-XXX	N-Nitrosodiphenylamine	45		45	EB	BL	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	1-Methylnaphthalene	350	U *	350	UJ	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	350	U *	350	UJ	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	2,4-Dimethylphenol	350	U	350	UJ	CCV%D	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	2,4-Dinitrophenol	350	U	350	UJ	ICVRSD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	1700	U	1700	UJ	ICVRSD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Aniline	690	*	690	J	LCS-L, LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Atrazine	350	U *	350	UJ	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Benzoic Acid	1700	U	1700	UJ	CCV%D	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Biphenyl	390	*	390	J	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	21000		21000	EB	BL	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Caprolactum	350	U *	350	UJ	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Diphenyl ether	1700	*	1700	J	LCS-H, LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	Diphenylmethanone	350	U *	350	UJ	LCS-RPD	ug/kg
OCRI-02	360-24194-1	SW8270	OC-SB-421-0.0/1.0-XXX	N-Nitrosodiphenylamine	750		750	EB	BL	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	1,3-Dichlorobenzene	350	U	350	UJ	LCS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	2,4-Dinitrophenol	350	U	350	UJ	ICVRSD	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	3,3`-Dichlorobenzidine	710	U	710	UJ	LCS-L, MS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Benzoic Acid	1800	U	1800	UJ	LCS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Benzyl alcohol	710	U	710	UJ	MS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Bis(2-Chloroethyl)ether	350	U	350	UJ	LCS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	890		890	JEB	BL, MS-L	ug/kg
OCRI-02	360-24194-3	SW8270	OC-SB-421-8.0/10-XXX	Hexachlorocyclopentadiene	710	U		R	MS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	1,3-Dichlorobenzene	34	U *	34	UJ	LCS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	3,3`-Dichlorobenzidine	68	U *	68	UJ	LCS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	Benzoic Acid	130	J *	130	JEB	BL, LCS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	34	U *	34	UJ	LCS-L	ug/kg
OCRI-02	360-24194-4	SW8270	OC-SB-424-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	31	J	31	JEB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	1,3-Dichlorobenzene	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	2,4-Dinitrophenol	35	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	3,3`-Dichlorobenzidine	69	U *	69	UJ	LCS-L	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	4,6-Dinitro-2-methylphenol	170	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Acetophenone	34	J	34	JEB	BL	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	17	J	17	JEB	BL, CCV%D	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Butylbenzylphthalate	35	U	35	UJ	CCV%D	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Di-n-octylphthalate	35	U	35	UJ	CCV%D	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	Hexachlorocyclopentadiene	69	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-6	SW8270	OC-SB-424-7.0/9.0-XXX	N-Nitrosodiphenylamine	170		170	EB	BL	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1,2,4,5-Tetrachlorobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1,2,4-Trichlorobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1,2-Dichlorobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1,3-Dichlorobenzene	170	U *	170	UJ	LCS-L, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1,4-Dichlorobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	1-Methylnaphthalene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4,5-Trichlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4,6-Trichlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4-Dichlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4-Dimethylphenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4-Dinitrophenol	170	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,4-Dinitrotoluene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2,6-Dinitrotoluene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Chloronaphthalene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Chlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Methylnaphthalene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Methylphenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Nitroaniline	850	U	850	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	2-Nitrophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	3 & 4 Methylphenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	3,3`-Dichlorobenzidine	340	U *	340	UJ	LCS-L, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	3-Nitroaniline	850	U	850	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	850	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Bromophenyl phenyl ether	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Chloro-3-methylphenol	340	U	340	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Chloroaniline	340	U	340	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Chlorophenyl phenyl ether	170	U	170	UJ	IS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Nitroaniline	850	U	850	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	4-Nitrophenol	850	U	850	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Acenaphthene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Acenaphthylene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Acetophenone	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Aniline	150	J *	150	J	LCS-L, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Anthracene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Atrazine	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Azobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzaldehyde	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzo(a)anthracene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzo(a)pyrene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzo(b)fluoranthene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzo(ghi)perylene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzo(k)fluoranthene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzoic Acid	850	U *	850	UJ	LCS-L, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Benzyl alcohol	340	U	340	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Biphenyl	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Bis(2-Chloroethoxy)methane	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	170	U *	170	UJ	LCS-L, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Bis(2-Chloroisopropyl)ether	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	4300		4300	JEB	BL, CCV%D, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Butylbenzylphthalate	170	U	170	UJ	CCV%D, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Caprolactum	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Carbazole	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Chrysene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Dibenz(a,h)anthracene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Dibenzofuran	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Diethylphthalate	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Dimethylphthalate	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Di-n-butylphthalate	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Di-n-octylphthalate	170	U	170	UJ	CCV%D, IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Diphenyl ether	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Diphenylmethanone	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Fluoranthene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Fluorene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Hexachlorobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Hexachlorobutadiene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Hexachlorocyclopentadiene	340	U		R	CCVRSD	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Hexachloroethane	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	170	U	170	UJ	IS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Isophorone	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Naphthalene	410	U	410	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Nitrobenzene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	N-Nitrosodiphenylamine	470		470	EB	BL	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Pentachlorophenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Phenanthrene	200	U	200	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Phenol	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-7	SW8270	OC-SB-425-0.0/1.0-XXX	Pyrene	170	U	170	UJ	IS-L	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	1,3-Dichlorobenzene	180	U *	180	UJ	LCS-L	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	2,4-Dinitrophenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	3,3`-Dichlorobenzidine	360	U *	360	UJ	LCS-L	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	Aniline	180	U *	180	UJ	LCS-L	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	Benzoic Acid	900	U *	900	UJ	LCS-L	ug/kg
OCRI-02	360-24194-9	SW8270	OC-SB-425-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	180	U *	180	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	1-Methylnaphthalene	58	*	58	J	LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	2,3,4,6-Tetrachlorophenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	2,4-Dimethylphenol	35	J	35	J	CCV%D	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	4,6-Dinitro-2-methylphenol	180	U	180	UJ	ICVRSD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Acetophenone	8.5	J B	36	U	BL	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Aniline	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Atrazine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Benzoic Acid	180	U	180	UJ	CCV%D	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Biphenyl	11000		11000	J	LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Bis(2-Ethylhexyl)phthalate	420000		420000	EB	BL	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Caprolactum	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Diphenyl ether	74000		74000	J	LCS-H, LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	Diphenylmethanone	3.5	J *	3.5	J	LCS-H, LCS-RPD	ug/kg
OCRI-02A	360-24194-2	SW8270	OC-SB-421-10.5/12.5-XXX	N-Nitrosodiphenylamine	670		670	EB	BL	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	1,3-Dichlorobenzene	37	U *	37	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	2,4-Dinitrophenol	37	U	37	UJ	ICVRSD	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	3,3`-Dichlorobenzidine	74	U *	74	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	Benzoic Acid	56	J *	56	JEB	BL, LCS-L	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	Bis(2-Chloroethyl)ether	37	U *	37	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	Bis(2-Ethylhexyl)phthalate	1100		1100	EB	BL	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	Di-n-butylphthalate	14	J B	37	U	BL	ug/kg
OCRI-02A	360-24194-5	SW8270	OC-SB-424-17/19-XXX	N-Nitrosodiphenylamine	18	J	18	JEB	BL	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	1,3-Dichlorobenzene	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	Bis(2-Ethylhexyl)phthalate	62		62	EB	BL	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	Di-n-butylphthalate	24	J B	35	U	BL	ug/kg
OCRI-02A	360-24194-8	SW8270	OC-SB-425-18/20-XXX	N-Nitrosodiphenylamine	170		170	EB	BL	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	2-Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	3 & 4 Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	Acetophenone	15	J *	15	JEB	BL, LCS-RPD	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	29	J B	35	U	BL	ug/kg
OCRI-03	360-24223-1	SW8270	OC-SB-415-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	1,2-Dichlorobenzene	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	1,3-Dichlorobenzene	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	2,4-Dinitrophenol	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	2-Methylphenol	39	U *	39	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	3 & 4 Methylphenol	39	U *	39	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Acetophenone	39	U *	39	UJ	LCS-RPD, MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Aniline	39	U *	39	UJ	LCS-L, MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Benzoic Acid	190	U *	190	UJ	LCS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Benzyl alcohol	77	U	77	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Bis(2-Chloroethyl)ether	39	U *	39	UJ	LCS-L, LCS-RPD, MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Hexachlorocyclopentadiene	77	U	77	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	Hexachloroethane	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-10	SW8270	OC-SB-426-5.0/7.0-DUP	N-Nitrosodi-n-propylamine	39	U *	39	UJ	LCS-RPD, MS-L	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	2-Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	3 & 4 Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	Acetophenone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-11	SW8270	OC-SB-431-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	2-Methylphenol	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	3 & 4 Methylphenol	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	Acetophenone	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	Bis(2-Chloroethyl)ether	37	U *	37	UJ	LCS-L, LCS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03	360-24223-12	SW8270	OC-SB-431-7.0/9.0-XXX	N-Nitrosodi-n-propylamine	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	2-Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	3 & 4 Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	Acetophenone	11	J *	11	JEB	BL, LCS-RPD	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	160	B	160	U	BL	ug/kg
OCRI-03	360-24223-13	SW8270	OC-SB-436-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	2-Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	3 & 4 Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	Acetophenone	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	N-Nitrosodi-n-propylamine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-15	SW8270	OC-SB-436-6.0/8.0-XXX	N-Nitrosodiphenylamine	12	J	12	JEB	BL	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	2-Methylphenol	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	3 & 4 Methylphenol	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	Acetophenone	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	Bis(2-Chloroethyl)ether	37	U *	37	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-3	SW8270	OC-SB-415-5.0/7.0-XXX	N-Nitrosodi-n-propylamine	37	U *	37	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,4,5-Trichlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,4,6-Trichlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,4-Dichlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,4-Dimethylphenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2-Chlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2-Methylphenol	34	U *	34	UJ	LCS-RPD, SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	2-Nitrophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	3 & 4 Methylphenol	34	U *	34	UJ	LCS-RPD, SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	4-Chloro-3-methylphenol	68	U	68	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	4-Nitrophenol	170	U	170	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Acetophenone	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Benzyl alcohol	68	U	68	UJ	SS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	34	U *	34	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	15	J B	34	U	BL	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Pentachlorophenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-4	SW8270	OC-SB-419-0.0/1.0-XXX	Phenol	34	U	34	UJ	SS-L	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	2-Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	3 & 4 Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	Acetophenone	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	Bis(2-Chloroethyl)ether	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-6	SW8270	OC-SB-419-3.0/5.0-XXX	N-Nitrosodi-n-propylamine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	2-Methylphenol	69	U *	69	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	3 & 4 Methylphenol	69	U *	69	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	Acetophenone	69	U *	69	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	Aniline	69	U *	69	UJ	LCS-L	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	Benzoic Acid	350	U *	350	UJ	LCS-L	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	69	U *	69	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	8300	B	8300	JEB	BL	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	69	U *	69	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-7	SW8270	OC-SB-426-0.0/1.0-XXX	N-Nitrosodiphenylamine	49	J	49	JEB	BL	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	1,2-Dichlorobenzene	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	1,3-Dichlorobenzene	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	2,4-Dinitrophenol	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	2-Methylphenol	39	U *	39	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	3 & 4 Methylphenol	39	U *	39	UJ	LCS-RPD	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Acetophenone	39	U *	39	UJ	LCS-RPD, MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Aniline	39	U *	39	UJ	LCS-L, MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Benzoic Acid	190	U *	190	UJ	LCS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Benzyl alcohol	77	U	77	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Bis(2-Chloroethyl)ether	39	U *	39	UJ	LCS-L, LCS-RPD, MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Hexachlorocyclopentadiene	77	U	77	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	Hexachloroethane	39	U	39	UJ	MS-L	ug/kg
OCRI-03	360-24223-9	SW8270	OC-SB-426-5.0/7.0-XXX	N-Nitrosodi-n-propylamine	39	U *	39	UJ	LCS-RPD, MS-L	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	2-Methylphenol	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	3 & 4 Methylphenol	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	Acetophenone	34	U *	34	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	Bis(2-Chloroethyl)ether	34	U *	34	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03A	360-24223-14	SW8270	OC-SB-436-13/15-XXX	N-Nitrosodi-n-propylamine	34	U *	34	UJ	LCS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	2-Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	3 & 4 Methylphenol	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	Acetophenone	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	Benzoic Acid	170	U *	170	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03A	360-24223-2	SW8270	OC-SB-415-16/18-XXX	N-Nitrosodi-n-propylamine	35	U *	35	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	2-Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	3 & 4 Methylphenol	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	Acetophenone	7.3	J *	7.3	JEB	BL, LCS-RPD	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	Bis(2-Chloroethyl)ether	36	U *	36	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03A	360-24223-5	SW8270	OC-SB-419-17/19-XXX	N-Nitrosodi-n-propylamine	36	U *	36	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	2-Methylphenol	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	3 & 4 Methylphenol	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	Acetophenone	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	Benzoic Acid	190	U *	190	UJ	LCS-L	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	Bis(2-Chloroethyl)ether	38	U *	38	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-03A	360-24223-8	SW8270	OC-SB-426-13/15-XXX	N-Nitrosodi-n-propylamine	38	U *	38	UJ	LCS-RPD	ug/kg
OCRI-04	360-24244-1	SW8270	OC-SB-432-0.0/1.0-XXX	Benzoic Acid	1700	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-1	SW8270	OC-SB-432-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	6600		6600	EB	BL	ug/kg
OCRI-04	360-24244-10	SW8270	OC-SB-437-0.0/1.0-XXX	Benzoic Acid	170	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-10	SW8270	OC-SB-437-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	190		190	EB	BL	ug/kg
OCRI-04	360-24244-12	SW8270	OC-SB-437-5.0/7.0-XXX	Benzoic Acid	190	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-2	SW8270	OC-SB-432-14/16-XXX	Benzoic Acid	1800	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-2	SW8270	OC-SB-432-14/16-XXX	Bis(2-Ethylhexyl)phthalate	600000		600000	EB	BL	ug/kg
OCRI-04	360-24244-3	SW8270	OC-SB-432-5.0/7.0-XXX	Benzoic Acid	1900	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-3	SW8270	OC-SB-432-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	39000		39000	EB	BL	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	340	U	340	UJ	MS-L	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	3,3`-Dichlorobenzidine	690	U *	690	UJ	MS-L	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Acetophenone	160	J	160	JEB	BL	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Aniline	340	U *	340	UJ	MS-L	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Azobenzene	340	U	340	UJ	MS-RPD	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Benzoic Acid	1700	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	4800		4800	EB	BL	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Caprolactum	340	U	340	UJ	MS-L, MS-RPD	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Carbazole	340	U	340	UJ	MS-L	ug/kg
OCRI-04	360-24244-4	SW8270	OC-SB-443-0.0/1.0-XXX	Hexachlorocyclopentadiene	690	U	690	UJ	MS-L	ug/kg
OCRI-04	360-24244-6	SW8270	OC-SB-443-6.0/8.0-XXX	Benzoic Acid	190	U *		R	ICVRRF, CCVRRF	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
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OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04	360-24244-6	SW8270	OC-SB-443-6.0/8.0-XXX	N-Nitrosodimethylamine	5.8	U	5.8	UJ	IS-L	ug/kg
OCRI-04	360-24244-7	SW8270	OC-SB-445-0.0/1.0-XXX	Benzoic Acid	170	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04	360-24244-7	SW8270	OC-SB-445-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1700		1700	EB	BL	ug/kg
OCRI-04	360-24244-9	SW8270	OC-SB-445-8.0/10-XXX	Benzoic Acid	190	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04A	360-24244-11	SW8270	OC-SB-437-21/23-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04A	360-24244-5	SW8270	OC-SB-443-18/20-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF	ug/kg
OCRI-04A	360-24244-5	SW8270	OC-SB-443-18/20-XXX	Bis(2-Ethylhexyl)phthalate	34	J	34	JEB	BL	ug/kg
OCRI-04A	360-24244-8	SW8270	OC-SB-445-25/27-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-04A	360-24244-8	SW8270	OC-SB-445-25/27-XXX	Bis(2-Ethylhexyl)phthalate	18	J	18	JEB	BL	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	Benzaldehyde	35	U *	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	Benzoic Acid	180	U *		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	470		470	EB	BL	ug/kg
OCRI-05	360-24251-1	SW8270	OC-SB-433-0.0/1.0-XXX	N-Nitrosodiphenylamine	41		41	EB	BL	ug/kg
OCRI-05	360-24251-10	SW8270	OC-SB-440-6.0/8.0-XXX	2,4-Dinitrophenol	36	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-10	SW8270	OC-SB-440-6.0/8.0-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-10	SW8270	OC-SB-440-6.0/8.0-XXX	3,3`-Dichlorobenzidine	72	U	72	UJ	LCS-L	ug/kg
OCRI-05	360-24251-10	SW8270	OC-SB-440-6.0/8.0-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-10	SW8270	OC-SB-440-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	55		55	EB	BL	ug/kg
OCRI-05	360-24251-12	SW8270	OC-SB-438-5.0/7.0-XXX	2,4-Dinitrophenol	37	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-12	SW8270	OC-SB-438-5.0/7.0-XXX	2-Nitroaniline	190	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-12	SW8270	OC-SB-438-5.0/7.0-XXX	3,3`-Dichlorobenzidine	75	U	75	UJ	LCS-L	ug/kg
OCRI-05	360-24251-12	SW8270	OC-SB-438-5.0/7.0-XXX	Benzoic Acid	190	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	2,4-Dinitrophenol	69	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	2-Nitroaniline	340	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	3,3`-Dichlorobenzidine	140	U	140	UJ	LCS-L	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	Benzoic Acid	340	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1300		1300	EB	BL	ug/kg
OCRI-05	360-24251-13	SW8270	OC-SB-441-0.0/1.0-XXX	N-Nitrosodiphenylamine	38	J	38	JEB	BL	ug/kg
OCRI-05	360-24251-15	SW8270	OC-SB-441-8.0/10-XXX	2,4-Dinitrophenol	37	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-15	SW8270	OC-SB-441-8.0/10-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-15	SW8270	OC-SB-441-8.0/10-XXX	3,3`-Dichlorobenzidine	74	U	74	UJ	LCS-L	ug/kg
OCRI-05	360-24251-15	SW8270	OC-SB-441-8.0/10-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-15	SW8270	OC-SB-441-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	13	J	13	JEB	BL	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	2,4-Dinitrophenol	35	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	3,3`-Dichlorobenzidine	70	U	70	UJ	LCS-L	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	Benzo(ghi)perylene	22	J	22	J	IS-H	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	430		430	EB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-16	SW8270	OC-SB-446-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	21	J	21	J	IS-H	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	2,4-Dinitrophenol	40	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	2-Nitroaniline	200	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	3,3`-Dichlorobenzidine	80	U	80	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	4-Nitrophenol	200	U		R	MS-L	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	Benzoic Acid	200	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-18	SW8270	OC-SB-446-5.0/7.0-DUP	Bis(2-Ethylhexyl)phthalate	29	J	29	JEB	BL	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	2,4-Dinitrophenol	42	U	42	UJ	CCV%D	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	3,3`-Dichlorobenzidine	85	U *	85	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	4-Nitrophenol	210	U		R	MS-L	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	Benzaldehyde	42	U *	42	UJ	CCV%D	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	Benzoic Acid	210	U		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-19	SW8270	OC-SB-446-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	21	J	21	JEB	BL	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	Benzaldehyde	35	U *	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	Benzoic Acid	180	U		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	690		690	EB	BL	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	Di-n-butylphthalate	43	B	43	U	BL	ug/kg
OCRI-05	360-24251-20	SW8270	OC-SB-448-0.0/1.0-XXX	N-Nitrosodiphenylamine	26	J	26	JEB	BL	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	2,4-Dinitrophenol	36	U	36	UJ	CCV%D	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	3,3`-Dichlorobenzidine	73	U *	73	UJ	LCS-L	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	Benzaldehyde	36	U *	36	UJ	CCV%D	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	Benzoic Acid	180	U		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-21	SW8270	OC-SB-448-17/19-XXX	Bis(2-Ethylhexyl)phthalate	29	J	29	JEB	BL	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	2,4-Dinitrophenol	38	U	38	UJ	CCV%D	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	3,3`-Dichlorobenzidine	75	U *	75	UJ	LCS-L	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	Anthracene	12	J	12	JEB	BL	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	Benzaldehyde	38	U *	38	UJ	CCV%D	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	Benzoic Acid	190	U		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-22	SW8270	OC-SB-448-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	44		44	EB	BL	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	Acetophenone	16	J	16	JEB	BL	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	Benzaldehyde	35	U *	35	UJ	CCV%D	ug/kg
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	Benzoic Acid	180	U		R	CCVRRF, LCS-L	ug/kg

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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-23	SW8270	OC-SB-438-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	28	J	28	JEB	BL	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	2,4-Dinitrophenol	39	U	39	UJ	CCV%D	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	3,3`-Dichlorobenzidine	77	U *	77	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	Aniline	39	U *	39	UJ	MS-L	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	Anthracene	17	J	17	JEB	BL	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	Benzaldehyde	39	U *	39	UJ	CCV%D	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	Benzoic Acid	190	U *		R	CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-3	SW8270	OC-SB-433-5.0/7.0-DUP	Hexachlorocyclopentadiene	77	U		R	MS-L	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	2,4-Dinitrophenol	38	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	2-Nitroaniline	190	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	3,3`-Dichlorobenzidine	77	U	77	UJ	LCS-L, MS-L	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	Aniline	38	U	38	UJ	MS-L	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	Benzoic Acid	190	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-4	SW8270	OC-SB-433-5.0/7.0-XXX	Hexachlorocyclopentadiene	77	U		R	MS-L	ug/kg
OCRI-05	360-24251-5	SW8270	OC-SB-439-0.0-1.0-XXX	2,4-Dinitrophenol	75	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-5	SW8270	OC-SB-439-0.0-1.0-XXX	2-Nitroaniline	380	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-5	SW8270	OC-SB-439-0.0-1.0-XXX	3,3`-Dichlorobenzidine	150	U	150	UJ	LCS-L	ug/kg
OCRI-05	360-24251-5	SW8270	OC-SB-439-0.0-1.0-XXX	Benzoic Acid	380	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-5	SW8270	OC-SB-439-0.0-1.0-XXX	Bis(2-Ethylhexyl)phthalate	53	J	53	JEB	BL	ug/kg
OCRI-05	360-24251-7	SW8270	OC-SB-439-8.0/10-XXX	2,4-Dinitrophenol	41	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-7	SW8270	OC-SB-439-8.0/10-XXX	2-Nitroaniline	210	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-7	SW8270	OC-SB-439-8.0/10-XXX	3,3`-Dichlorobenzidine	83	U	83	UJ	LCS-L	ug/kg
OCRI-05	360-24251-7	SW8270	OC-SB-439-8.0/10-XXX	Benzoic Acid	210	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-7	SW8270	OC-SB-439-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	51		51	EB	BL	ug/kg
OCRI-05	360-24251-8	SW8270	OC-SB-440-0.0/1.0-XXX	2,4-Dinitrophenol	34	U		R	ICVRRF, ICVRSD, CCVRRF	ug/kg
OCRI-05	360-24251-8	SW8270	OC-SB-440-0.0/1.0-XXX	2-Nitroaniline	170	U		R	ICVRRF	ug/kg
OCRI-05	360-24251-8	SW8270	OC-SB-440-0.0/1.0-XXX	3,3`-Dichlorobenzidine	68	U	68	UJ	LCS-L	ug/kg
OCRI-05	360-24251-8	SW8270	OC-SB-440-0.0/1.0-XXX	Benzoic Acid	170	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05	360-24251-8	SW8270	OC-SB-440-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	38		38	EB	BL	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	Benzo(ghi)perylene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	Bis(2-Ethylhexyl)phthalate	25	J	25	JEB	BL	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-14	SW8270	OC-SB-441-17/19-XXX	Indeno(1,2,3-cd)pyrene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	Benzo(ghi)perylene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	Bis(2-Ethylhexyl)phthalate	24	J	24	JEB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-17	SW8270	OC-SB-446-15/17-XXX	Indeno(1,2,3-cd)pyrene	36	U	36	UJ	IS-L	ug/kg
OCRI-05A	360-24251-2	SW8270	OC-SB-433-20/22-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-05A	360-24251-2	SW8270	OC-SB-433-20/22-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-05A	360-24251-2	SW8270	OC-SB-433-20/22-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05A	360-24251-2	SW8270	OC-SB-433-20/22-XXX	Bis(2-Ethylhexyl)phthalate	44		44	EB	BL	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Benzo(ghi)perylene	35	U	35	UJ	IS-L	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Bis(2-Ethylhexyl)phthalate	21	J	21	JEB	BL	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-05A	360-24251-24	SW8270	OC-SB-438-20/22-XXX	Indeno(1,2,3-cd)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-05A	360-24251-9	SW8270	OC-SB-440-23/25-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-05A	360-24251-9	SW8270	OC-SB-440-23/25-XXX	Benzoic Acid	180	U *		R	ICVRRF, CCVRRF, LCS-L	ug/kg
OCRI-05A	360-24251-9	SW8270	OC-SB-440-23/25-XXX	Bis(2-Ethylhexyl)phthalate	23	J	23	JEB	BL	ug/kg
OCRI-06	360-24309-1	SW8270	OC-SB-400-0.0/1.0-XXX	2,4-Dinitrophenol	34	U		R	ICVRSD, CCVRRF	ug/kg
OCRI-06	360-24309-1	SW8270	OC-SB-400-0.0/1.0-XXX	Benzoic Acid	170	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-1	SW8270	OC-SB-400-0.0/1.0-XXX	Pentachlorophenol	34	U		R	CCVRRF	ug/kg
OCRI-06	360-24309-10	SW8270	OC-SB-408-0.0/1.0-XXX	2,4-Dinitrophenol	37	U	37	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-10	SW8270	OC-SB-408-0.0/1.0-XXX	3,3`-Dichlorobenzidine	75	U	75	UJ	LCS-L	ug/kg
OCRI-06	360-24309-10	SW8270	OC-SB-408-0.0/1.0-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-06	360-24309-10	SW8270	OC-SB-408-0.0/1.0-XXX	Benzoic Acid	140	J		R	BL, ICVRRF	ug/kg
OCRI-06	360-24309-10	SW8270	OC-SB-408-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	11	J	11	JEB	BL	ug/kg
OCRI-06	360-24309-11	SW8270	OC-SB-408-7.0/9.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-11	SW8270	OC-SB-408-7.0/9.0-XXX	3,3`-Dichlorobenzidine	77	U	77	UJ	LCS-L	ug/kg
OCRI-06	360-24309-11	SW8270	OC-SB-408-7.0/9.0-XXX	Aniline	38	U	38	UJ	LCS-L	ug/kg
OCRI-06	360-24309-11	SW8270	OC-SB-408-7.0/9.0-XXX	Benzoic Acid	190	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-11	SW8270	OC-SB-408-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	12	J	12	JEB	BL	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	3,3`-Dichlorobenzidine	69	U *	69	UJ	LCS-L	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	4-Nitrophenol	170	U	170	UJ	CCV%D	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	Benzoic Acid	52	J B		R	BL, ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-12	SW8270	OC-SB-414-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	2,4-Dinitrophenol	37	U	37	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	3,3`-Dichlorobenzidine	74	U	74	UJ	LCS-L	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	Anthracene	29	J	29	JEB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	Benzoic Acid	63	J B		R	BL, ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	37	U	37	UJ	LCS-L	ug/kg
OCRI-06	360-24309-14	SW8270	OC-SB-414-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	78		78	EB	BL, LCS-L	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	3,3`-Dichlorobenzidine	69	U	69	UJ	LCS-L	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	4-Nitrophenol	170	U	170	UJ	CCV%D	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	Aniline	34	U	34	UJ	LCS-L	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	Benzoic Acid	50	J B		R	BL, ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	34	U	34	UJ	LCS-L	ug/kg
OCRI-06	360-24309-15	SW8270	OC-SB-422-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	48		48	EB	BL, LCS-L	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	3,3`-Dichlorobenzidine	75	U	75	UJ	LCS-L	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	Aniline	38	U	38	UJ	LCS-L	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	Benzoic Acid	44	J B		R	BL, ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-17	SW8270	OC-SB-422-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	38	U	38	UJ	LCS-L	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	2,4-Dinitrophenol	38	U	38	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	3,3`-Dichlorobenzidine	76	U	76	UJ	LCS-L	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	Aniline	38	U	38	UJ	LCS-L	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	Benzoic Acid	190	U		R	ICVRRF	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	38	U	38	UJ	LCS-L	ug/kg
OCRI-06	360-24309-19	SW8270	OC-SB-429-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	170		170	JEB	BL	ug/kg
OCRI-06	360-24309-2	SW8270	OC-SB-400-5.0/7.0-XXX	2,4-Dinitrophenol	35	U		R	ICVRSD, CCVRRF	ug/kg
OCRI-06	360-24309-2	SW8270	OC-SB-400-5.0/7.0-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-2	SW8270	OC-SB-400-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	14	J	14	JEB	BL	ug/kg
OCRI-06	360-24309-2	SW8270	OC-SB-400-5.0/7.0-XXX	Pentachlorophenol	35	U		R	CCVRRF	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	2,4-Dinitrophenol	34	U	34	UJ	ICVRSD, MS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	3,3`-Dichlorobenzidine	67	U	67	UJ	LCS-L, MS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	4-Nitrophenol	170	U	170	UJ	CCV%D	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Aniline	34	U	34	UJ	LCS-L, MS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Benzo(a)pyrene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Benzo(b)fluoranthene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Benzo(ghi)perylene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Benzo(k)fluoranthene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Benzoic Acid	170	U		R	ICVRRF	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	34	U	34	UJ	LCS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	18	J	18	JEB	BL	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Dibenz(a,h)anthracene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Di-n-octylphthalate	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Hexachlorocyclopentadiene	67	U	67	UJ	MS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-20	SW8270	OC-SB-430-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	34	U	34	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD, MS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	3,3`-Dichlorobenzidine	70	U	70	UJ	LCS-L, MS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Aniline	35	U	35	UJ	LCS-L, MS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Benzo(a)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Benzo(b)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Benzo(ghi)perylene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Benzo(k)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Benzoic Acid	180	U		R	ICVRRF	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Bis(2-Chloroethyl)ether	35	U	35	UJ	LCS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Bis(2-Ethylhexyl)phthalate	13	J	13	JEB	BL	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Di-n-octylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Hexachlorocyclopentadiene	70	U	70	UJ	MS-L	ug/kg
OCRI-06	360-24309-22	SW8270	OC-SB-430-8.0/10-DUP	Indeno(1,2,3-cd)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	2,4-Dinitrophenol	35	U	35	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L, IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzo(a)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzo(a)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzo(b)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzo(ghi)perylene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzo(k)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Benzoic Acid	180	U		R	ICVRRF	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL, IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Butylbenzylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Chrysene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Di-n-octylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Indeno(1,2,3-cd)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-23	SW8270	OC-SB-430-8.0/10-XXX	Pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-06	360-24309-3	SW8270	OC-SB-401-0.0/1.0-XXX	2,4-Dinitrophenol	35	U		R	ICVRSD, CCVRRF	ug/kg
OCRI-06	360-24309-3	SW8270	OC-SB-401-0.0/1.0-XXX	Benzoic Acid	170	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-3	SW8270	OC-SB-401-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	12	J	12	JEB	BL	ug/kg
OCRI-06	360-24309-3	SW8270	OC-SB-401-0.0/1.0-XXX	Pentachlorophenol	35	U		R	CCVRRF	ug/kg
OCRI-06	360-24309-4	SW8270	OC-SB-401-7.5/9.5-XXX	2,4-Dinitrophenol	35	U		R	ICVRSD, CCVRRF	ug/kg
OCRI-06	360-24309-4	SW8270	OC-SB-401-7.5/9.5-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-4	SW8270	OC-SB-401-7.5/9.5-XXX	Pentachlorophenol	35	U		R	CCVRRF	ug/kg

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WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-5	SW8270	OC-SB-402-0.0/1.0-XXX	2,4-Dinitrophenol	35	U		R	ICVRSD, CCVRRF	ug/kg
OCRI-06	360-24309-5	SW8270	OC-SB-402-0.0/1.0-XXX	Benzoic Acid	170	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-5	SW8270	OC-SB-402-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	130		130	EB	BL	ug/kg
OCRI-06	360-24309-5	SW8270	OC-SB-402-0.0/1.0-XXX	Pentachlorophenol	35	U		R	CCVRRF	ug/kg
OCRI-06	360-24309-6	SW8270	OC-SB-402-7.5/9.5-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-6	SW8270	OC-SB-402-7.5/9.5-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-06	360-24309-6	SW8270	OC-SB-402-7.5/9.5-XXX	Bis(2-Ethylhexyl)phthalate	51		51	EB	BL	ug/kg
OCRI-06	360-24309-7	SW8270	OC-SB-407-0.0/1.0-XXX	2,4-Dinitrophenol	36	U	36	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-7	SW8270	OC-SB-407-0.0/1.0-XXX	Acetophenone	43		43	EB	BL	ug/kg
OCRI-06	360-24309-7	SW8270	OC-SB-407-0.0/1.0-XXX	Benzoic Acid	200		200	JEB	BL, ICVRRF	ug/kg
OCRI-06	360-24309-7	SW8270	OC-SB-407-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	72		72	EB	BL	ug/kg
OCRI-06	360-24309-9	SW8270	OC-SB-407-8.0/10-XXX	2,4-Dinitrophenol	40	U	40	UJ	ICVRSD	ug/kg
OCRI-06	360-24309-9	SW8270	OC-SB-407-8.0/10-XXX	Benzoic Acid	98	J	98	JEB	BL, ICVRRF	ug/kg
OCRI-06A	360-24309-13	SW8270	OC-SB-414-20/22-XXX	3,3`-Dichlorobenzidine	72	U *	72	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-13	SW8270	OC-SB-414-20/22-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-06A	360-24309-13	SW8270	OC-SB-414-20/22-XXX	Acetophenone	9	J	9	JEB	BL	ug/kg
OCRI-06A	360-24309-13	SW8270	OC-SB-414-20/22-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-13	SW8270	OC-SB-414-20/22-XXX	Bis(2-Chloroethyl)ether	36	U *	36	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-16	SW8270	OC-SB-422-13/15-XXX	3,3`-Dichlorobenzidine	77	U *	77	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-16	SW8270	OC-SB-422-13/15-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-06A	360-24309-16	SW8270	OC-SB-422-13/15-XXX	Acetophenone	4.9	J	4.9	JEB	BL	ug/kg
OCRI-06A	360-24309-16	SW8270	OC-SB-422-13/15-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-16	SW8270	OC-SB-422-13/15-XXX	Bis(2-Chloroethyl)ether	38	U *	38	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-18	SW8270	OC-SB-429-16/18-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-18	SW8270	OC-SB-429-16/18-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-06A	360-24309-18	SW8270	OC-SB-429-16/18-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-18	SW8270	OC-SB-429-16/18-XXX	Bis(2-Chloroethyl)ether	36	U *	36	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-18	SW8270	OC-SB-429-16/18-XXX	Bis(2-Ethylhexyl)phthalate	27	J	27	JEB	BL	ug/kg
OCRI-06A	360-24309-21	SW8270	OC-SB-430-19/21-XXX	3,3`-Dichlorobenzidine	69	U *	69	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-21	SW8270	OC-SB-430-19/21-XXX	4-Nitrophenol	170	U	170	UJ	CCV%D	ug/kg
OCRI-06A	360-24309-21	SW8270	OC-SB-430-19/21-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-21	SW8270	OC-SB-430-19/21-XXX	Bis(2-Chloroethyl)ether	34	U *	34	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-21	SW8270	OC-SB-430-19/21-XXX	Bis(2-Ethylhexyl)phthalate	17	J	17	JEB	BL	ug/kg
OCRI-06A	360-24309-8	SW8270	OC-SB-407-26/28-XXX	3,3`-Dichlorobenzidine	73	U *	73	UJ	LCS-L	ug/kg
OCRI-06A	360-24309-8	SW8270	OC-SB-407-26/28-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Benzo(a)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Benzo(b)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Benzo(ghi)perylene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Benzo(k)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	100		100	EB	BL	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Chrysene	35	U	35	UJ	IS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Di-n-octylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-1	SW8270	OC-SB-403-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	2,4-Dinitrophenol	43	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	2-Nitroaniline	220	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	3,3`-Dichlorobenzidine	87	U *	87	UJ	LCS-L, MS-L	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	4,6-Dinitro-2-methylphenol	220	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	4-Nitrophenol	220	U	220	UJ	CCV%D	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	Aniline	43	U *	43	UJ	LCS-L, MS-L	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	Benzoic Acid	220	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-11	SW8270	OC-SB-410-6.0/8.0-DUP	Dibenz(a,h)anthracene	43	U	43	UJ	CCV%D	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	2,4-Dinitrophenol	42	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	2-Nitroaniline	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	3,3`-Dichlorobenzidine	85	U *	85	UJ	LCS-L, MS-L	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	4-Nitrophenol	210	U	210	UJ	CCV%D	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	Aniline	42	U *	42	UJ	LCS-L, MS-L	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	Benzoic Acid	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-12	SW8270	OC-SB-410-6.0/8.0-XXX	Dibenz(a,h)anthracene	42	U	42	UJ	CCV%D	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	2,4-Dinitrophenol	36	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	2-Nitroaniline	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	Benzoic Acid	110	J B		R	BL, CCVRRF	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	330		330	EB	BL	ug/kg
OCRI-07	360-24327-13	SW8270	OC-SB-411-0.0/1.0-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	2,4-Dinitrophenol	34	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	2-Nitroaniline	170	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	3,3`-Dichlorobenzidine	68	U *	68	UJ	LCS-L	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	4,6-Dinitro-2-methylphenol	170	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	4-Nitrophenol	170	U	170	UJ	CCV%D	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	Benzoic Acid	170	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	Bis(2-Ethylhexyl)phthalate	670		670	EB	BL	ug/kg
OCRI-07	360-24327-14	SW8270	OC-SB-411-4.7/6.7-XXX	Dibenz(a,h)anthracene	34	U	34	UJ	CCV%D	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	2,4-Dinitrophenol	36	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	2-Nitroaniline	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	3,3`-Dichlorobenzidine	72	U *	72	UJ	LCS-L	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	Benzoic Acid	82	J B		R	BL, CCVRRF	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	270		270	EB	BL	ug/kg
OCRI-07	360-24327-15	SW8270	OC-SB-418-0.0/1.0-XXX	Dibenz(a,h)anthracene	15	J	15	J	CCV%D	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	2,4-Dinitrophenol	36	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	2-Nitroaniline	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	3,3`-Dichlorobenzidine	73	U *	73	UJ	LCS-L	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	Benzoic Acid	180	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-17	SW8270	OC-SB-418-8/10-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Acetophenone	170	J	170	JEB	BL	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Benzo(a)pyrene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Benzo(b)fluoranthene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Benzo(ghi)perylene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Benzo(k)fluoranthene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Chrysene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Dibenz(a,h)anthracene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Di-n-octylphthalate	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-3	SW8270	OC-SB-403-6.0/8.0-XXX	Indeno(1,2,3-cd)pyrene	540	U	540	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	2-Nitroaniline	190	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Benzo(a)pyrene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Benzo(b)fluoranthene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Benzo(ghi)perylene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Benzo(k)fluoranthene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Benzoic Acid	190	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	13	J	13	JEB	BL	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Chrysene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Dibenz(a,h)anthracene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Di-n-octylphthalate	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-5	SW8270	OC-SB-404-5.0/7.0-XXX	Indeno(1,2,3-cd)pyrene	38	U	38	UJ	IS-L	ug/kg
OCRI-07	360-24327-6	SW8270	OC-SB-409-0.0/1.0-XXX	2-Nitroaniline	170	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-6	SW8270	OC-SB-409-0.0/1.0-XXX	Benzoic Acid	80	J		R	BL, CCVRRF	ug/kg
OCRI-07	360-24327-6	SW8270	OC-SB-409-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	110		110	EB	BL	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	2,4-Dinitrophenol	42	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	2-Nitroaniline	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	3,3`-Dichlorobenzidine	84	U *	84	UJ	LCS-L	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	4-Nitrophenol	210	U	210	UJ	CCV%D	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	Benzoic Acid	210	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-8	SW8270	OC-SB-409-6.0/8.0-XXX	Dibenz(a,h)anthracene	42	U	42	UJ	CCV%D	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	2,4-Dinitrophenol	360	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	2-Nitroaniline	1800	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	3,3`-Dichlorobenzidine	720	U *	720	UJ	LCS-L	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	1800	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	4-Nitrophenol	1800	U	1800	UJ	CCV%D	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Acetophenone	120	J	120	JEB	BL	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Aniline	360	U *	360	UJ	LCS-L	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Anthracene	5300		5300	EB	BL	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Benzoic Acid	1800	U		R	CCVRRF	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	360		360	EB	BL	ug/kg
OCRI-07	360-24327-9	SW8270	OC-SB-410-0.0/1.0-XXX	Dibenz(a,h)anthracene	4800		4800	J	CCV%D	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	2,4-Dinitrophenol	36	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	2-Nitroaniline	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	3,3`-Dichlorobenzidine	72	U *	72	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	Benzoic Acid	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-10	SW8270	OC-SB-410-17/19-XXX	Di-n-butylphthalate	16	J B	36	U	BL	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	2,4-Dinitrophenol	37	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	2-Nitroaniline	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	3,3`-Dichlorobenzidine	74	U *	74	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	Benzoic Acid	180	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-16	SW8270	OC-SB-418-15/17-XXX	Dibenz(a,h)anthracene	37	U	37	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-2	SW8270	OC-SB-403-13/15-XXX	3,3`-Dichlorobenzidine	84	U *	84	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-2	SW8270	OC-SB-403-13/15-XXX	4-Nitrophenol	210	U	210	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-2	SW8270	OC-SB-403-13/15-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-2	SW8270	OC-SB-403-13/15-XXX	Bis(2-Chloroethyl)ether	42	U *	42	UJ	LCS-L, LCS-RPD	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	2,4-Dinitrophenol	35	U		R	ICVRRF, ICVRSD	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	2-Nitroaniline	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-07A	360-24327-4	SW8270	OC-SB-404-13/15-XXX	Bis(2-Chloroethyl)ether	35	U *	35	UJ	LCS-L, LCS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	2,4-Dinitrophenol	37	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	2-Nitroaniline	190	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	3,3`-Dichlorobenzidine	74	U *	74	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	4,6-Dinitro-2-methylphenol	190	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	Acetophenone	5.6	J	5.6	JEB	BL	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	Benzoic Acid	190	U		R	CCVRRF	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	Dibenz(a,h)anthracene	37	U	37	UJ	CCV%D	ug/kg
OCRI-07A	360-24327-7	SW8270	OC-SB-409-15/17-XXX	Di-n-butylphthalate	15	J B	37	U	BL	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	2,4-Dinitrophenol	340	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	2-Nitroaniline	1700	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	3,3`-Dichlorobenzidine	690	U *	690	UJ	LCS-L	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	1700	U		R	CCVRRF	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	4-Nitrophenol	1700	U	1700	UJ	CCV%D	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	Aniline	340	U *	340	UJ	LCS-L	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	Benzoic Acid	1700	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	4300		4300	EB	BL	ug/kg
OCRI-08	360-24343-1	SW8270	OC-SB-444-0.0/1.0-XXX	Dibenz(a,h)anthracene	340	U	340	UJ	CCV%D	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	3,3`-Dichlorobenzidine	68	U *	68	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	4-Chloroaniline	68	U	68	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Aniline	34	U *	34	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Benzo(a)pyrene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Benzo(b)fluoranthene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Benzo(ghi)perylene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Benzo(k)fluoranthene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Benzoic Acid	41	J B *	170	UJ	BL, LCS-L	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Bis(2-Ethylhexyl)phthalate	150		150	EB	BL	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Dibenz(a,h)anthracene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Di-n-octylphthalate	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Hexachlorocyclopentadiene	68	U	68	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8270	OC-SB-451-2.5/4.5-XXX	Indeno(1,2,3-cd)pyrene	12	J B	12	J	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-11	SW8270	OC-SB-454-0.0/1.0-XXX	3,3`-Dichlorobenzidine	69	U	69	UJ	LCS-L	ug/kg
OCRI-08	360-24343-11	SW8270	OC-SB-454-0.0/1.0-XXX	Aniline	34	U	34	UJ	LCS-L	ug/kg
OCRI-08	360-24343-11	SW8270	OC-SB-454-0.0/1.0-XXX	Benzoic Acid	170	U	170	UJ	LCS-L	ug/kg
OCRI-08	360-24343-13	SW8270	OC-SB-454-6.0/8.0-XXX	3,3`-Dichlorobenzidine	77	U	77	UJ	LCS-L	ug/kg
OCRI-08	360-24343-13	SW8270	OC-SB-454-6.0/8.0-XXX	Aniline	39	U	39	UJ	LCS-L	ug/kg
OCRI-08	360-24343-13	SW8270	OC-SB-454-6.0/8.0-XXX	Benzoic Acid	190	U	190	UJ	LCS-L	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1,2,4,5-Tetrachlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1,2,4-Trichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1,2-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1,3-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1,4-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	1-Methylnaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,3,4,6-Tetrachlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4,5-Trichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4,6-Trichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4-Dichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4-Dimethylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4-Dinitrophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,4-Dinitrotoluene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2,6-Dinitrotoluene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Chloronaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Chlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Methylnaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Methylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Nitroaniline	210	U	210	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	2-Nitrophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	3 & 4 Methylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	3,3`-Dichlorobenzidine	85	U	85	UJ	LCS-L, MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	3-Nitroaniline	210	U	210	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4,6-Dinitro-2-methylphenol	210	U	210	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Bromophenyl phenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Chloro-3-methylphenol	85	U	85	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Chloroaniline	85	U	85	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Chlorophenyl phenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Nitroaniline	210	U	210	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	4-Nitrophenol	210	U	210	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Acenaphthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Acenaphthylene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Acetophenone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Aniline	43	U	43	UJ	LCS-L, MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Atrazine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Azobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzaldehyde	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzo(a)anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzo(a)pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzo(b)fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzo(ghi)perylene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzo(k)fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzoic Acid	210	U	210	UJ	LCS-L, MS-L, MS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Benzyl alcohol	85	U	85	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Biphenyl	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Bis(2-Chloroethoxy)methane	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Bis(2-Chloroethyl)ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Bis(2-Chloroisopropyl)ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Bis(2-Ethylhexyl)phthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Butylbenzylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Caprolactum	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Carbazole	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Chrysene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Dibenz(a,h)anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Dibenzofuran	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Diethylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Dimethylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Di-n-butylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Di-n-octylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Diphenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Diphenylmethanone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Fluorene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Hexachlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Hexachlorobutadiene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Hexachlorocyclopentadiene	85	U	85	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Hexachloroethane	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Indeno(1,2,3-cd)pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Isophorone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Naphthalene	100	U	100	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Nitrobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	N-Nitrosodimethylamine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	N-Nitrosodi-n-propylamine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	N-Nitrosodiphenylamine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Pentachlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Phenanthrene	51	U	51	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Phenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-16	SW8270	OC-SB-455-6.0/8.0-DUP	Pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1,2,4,5-Tetrachlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1,2,4-Trichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1,2-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1,3-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1,4-Dichlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	1-Methylnaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,3,4,6-Tetrachlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4,5-Trichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4,6-Trichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4-Dichlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4-Dimethylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4-Dinitrophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,4-Dinitrotoluene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2,6-Dinitrotoluene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Chloronaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Chlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Methylnaphthalene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Methylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Nitroaniline	220	U	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	2-Nitrophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	3 & 4 Methylphenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	3,3`-Dichlorobenzidine	87	U *	87	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	3-Nitroaniline	220	U	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	220	U	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Bromophenyl phenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Chloro-3-methylphenol	87	U	87	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Chloroaniline	87	U	87	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Chlorophenyl phenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Nitroaniline	220	U	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	4-Nitrophenol	220	U	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Acenaphthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Acenaphthylene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Acetophenone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Aniline	43	U *	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Atrazine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Azobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzaldehyde	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzo(a)anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzo(a)pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzo(b)fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzo(ghi)perylene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzo(k)fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzoic Acid	220	U *	220	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Benzyl alcohol	87	U	87	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Biphenyl	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Bis(2-Chloroethoxy)methane	43	U	43	UJ	MS-L, MS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Bis(2-Chloroethyl)ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Bis(2-Chloroisopropyl)ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Butylbenzylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Caprolactum	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Carbazole	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Chrysene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Dibenz(a,h)anthracene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Dibenzofuran	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Diethylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Dimethylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Di-n-butylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Di-n-octylphthalate	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Diphenyl ether	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Diphenylmethanone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Fluoranthene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Fluorene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Hexachlorobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Hexachlorobutadiene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Hexachlorocyclopentadiene	87	U	87	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Hexachloroethane	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Indeno(1,2,3-cd)pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Isophorone	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Naphthalene	100	U	100	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Nitrobenzene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	N-Nitrosodimethylamine	43	U *	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	N-Nitrosodi-n-propylamine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	N-Nitrosodiphenylamine	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Pentachlorophenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Phenanthrene	52	U	52	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Phenol	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-17	SW8270	OC-SB-455-6.0/8.0-XXX	Pyrene	43	U	43	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	2,4-Dinitrophenol	37	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	3,3`-Dichlorobenzidine	74	U *	74	UJ	LCS-L	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	Benzoic Acid	180	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-3	SW8270	OC-SB-444-5.0/7.0-XXX	Dibenz(a,h)anthracene	37	U	37	UJ	CCV%D	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	2,4-Dinitrophenol	35	U		R	ICVRRF	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	Benzoic Acid	85	J B		R	BL, ICVRRF	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL	ug/kg
OCRI-08	360-24343-4	SW8270	OC-SB-449-0.0/1.0-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	CCV%D	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	2,4-Dinitrophenol	40	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	2-Nitroaniline	200	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	3,3`-Dichlorobenzidine	79	U *	79	UJ	LCS-L	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	4,6-Dinitro-2-methylphenol	200	U		R	CCVRRF	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	4-Nitrophenol	200	U	200	UJ	CCV%D	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	Aniline	40	U *	40	UJ	LCS-L	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	Benzoic Acid	200	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	39	J	39	JEB	BL	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	Dibenz(a,h)anthracene	40	U	40	UJ	CCV%D	ug/kg
OCRI-08	360-24343-6	SW8270	OC-SB-449-6.0/8.0-XXX	N-Nitrosodiphenylamine	13	J	13	JEB	BL	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	2,4-Dinitrophenol	340	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	2-Nitroaniline	1700	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	3,3`-Dichlorobenzidine	680	U *	680	UJ	LCS-L	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	1700	U		R	CCVRRF	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	4-Nitrophenol	1700	U	1700	UJ	CCV%D	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	Aniline	340	U *	340	UJ	LCS-L	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	Anthracene	480		480	EB	BL	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	Benzoic Acid	1700	U		R	ICVRRF	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	200	J	200	JEB	BL	ug/kg
OCRI-08	360-24343-7	SW8270	OC-SB-451-0.0/1.0-XXX	Dibenz(a,h)anthracene	290	J	290	J	CCV%D	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	4-Chloroaniline	70	U	70	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Aniline	35	U *	35	UJ	LCS-L, MS-L	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Benzo(a)pyrene	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Benzo(b)fluoranthene	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Benzo(ghi)perylene	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Benzo(k)fluoranthene	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Benzoic Acid	54	J B *	180	UJ	BL, LCS-L	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Bis(2-Ethylhexyl)phthalate	150		150	EB	BL	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Dibenz(a,h)anthracene	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Di-n-octylphthalate	35	U	35	UJ	MS-L, MS-RPD	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Hexachlorocyclopentadiene	70	U	70	UJ	MS-L	ug/kg
OCRI-08	360-24343-9	SW8270	OC-SB-451-2.5/4.5-DUP	Indeno(1,2,3-cd)pyrene	13	J	13	J	MS-L, MS-RPD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08A	360-24343-12	SW8270	OC-SB-454-18/20-XXX	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-12	SW8270	OC-SB-454-18/20-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-12	SW8270	OC-SB-454-18/20-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-15	SW8270	OC-SB-455-28/30-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-15	SW8270	OC-SB-455-28/30-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-15	SW8270	OC-SB-455-28/30-XXX	Benzoic Acid	180	U *	180	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	2,4-Dinitrophenol	35	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	2-Nitroaniline	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	3,3`-Dichlorobenzidine	70	U *	70	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	4,6-Dinitro-2-methylphenol	180	U		R	CCVRRF	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	Acetophenone	4.1	J	4.1	JEB	BL	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	CCV%D	ug/kg
OCRI-08A	360-24343-2	SW8270	OC-SB-444-12/14-XXX	N-Nitrosodiphenylamine	26	J	26	JEB	BL	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	2,4-Dinitrophenol	37	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	2-Nitroaniline	190	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	3,3`-Dichlorobenzidine	75	U *	75	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	4,6-Dinitro-2-methylphenol	190	U		R	CCVRRF	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	Acetophenone	4.4	J	4.4	JEB	BL	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	Benzoic Acid	190	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-08A	360-24343-5	SW8270	OC-SB-449-11/13-XXX	Dibenz(a,h)anthracene	37	U	37	UJ	CCV%D	ug/kg
OCRI-08A	360-24343-8	SW8270	OC-SB-451-18/20-XXX	3,3`-Dichlorobenzidine	74	U *	74	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-8	SW8270	OC-SB-451-18/20-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-08A	360-24343-8	SW8270	OC-SB-451-18/20-XXX	Benzoic Acid	190	U *	190	UJ	LCS-L	ug/kg
OCRI-09	360-24365-1	SW8270	OC-SB-442-0.0/1.0-XXX	3,3`-Dichlorobenzidine	700	U *	700	UJ	LCS-L	ug/kg
OCRI-09	360-24365-1	SW8270	OC-SB-442-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-09	360-24365-1	SW8270	OC-SB-442-0.0/1.0-XXX	Benzoic Acid	650	J B *	1800	UJ	BL, LCS-L	ug/kg
OCRI-09	360-24365-1	SW8270	OC-SB-442-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2100		2100	EB	BL	ug/kg
OCRI-09	360-24365-1	SW8270	OC-SB-442-0.0/1.0-XXX	N-Nitrosodiphenylamine	250	J	250	JEB	BL	ug/kg
OCRI-09	360-24365-13	SW8270	OC-SB-458-0.0/1.0-XXX	Benzoic Acid	54	J	180	U	BL	ug/kg
OCRI-09	360-24365-13	SW8270	OC-SB-458-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	310		310	EB	BL	ug/kg
OCRI-09	360-24365-15	SW8270	OC-SB-458-5.0/7.0-XXX	Aniline	40	U *	40	UJ	LCS-L	ug/kg
OCRI-09	360-24365-16	SW8270	OC-SB-460-0.0/1.0-XXX	Benzoic Acid	78	J	180	U	BL	ug/kg
OCRI-09	360-24365-16	SW8270	OC-SB-460-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	860		860	EB	BL	ug/kg
OCRI-09	360-24365-18	SW8270	OC-SB-460-5.5/7.5-XXX	Benzoic Acid	58	J	200	U	BL	ug/kg
OCRI-09	360-24365-18	SW8270	OC-SB-460-5.5/7.5-XXX	Bis(2-Ethylhexyl)phthalate	19	J	19	JEB	BL	ug/kg
OCRI-09	360-24365-20	SW8270	OC-PE-SS1039-SVOC	Anthracene	410		410	EB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-09	360-24365-3	SW8270	OC-SB-442-8.0/10-DUP	3,3`-Dichlorobenzidine	74	U	74	UJ	LCS-L	ug/kg
OCRI-09	360-24365-3	SW8270	OC-SB-442-8.0/10-DUP	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-09	360-24365-3	SW8270	OC-SB-442-8.0/10-DUP	Benzoic Acid	190	U	190	UJ	LCS-L	ug/kg
OCRI-09	360-24365-4	SW8270	OC-SB-442-8.0/10-XXX	Aniline	38	U	38	UJ	MS-L	ug/kg
OCRI-09	360-24365-4	SW8270	OC-SB-442-8.0/10-XXX	Benzoic Acid	190	U	190	UJ	MS-L. MS-RPD	ug/kg
OCRI-09	360-24365-4	SW8270	OC-SB-442-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	13	J	13	JEB	BL	ug/kg
OCRI-09	360-24365-4	SW8270	OC-SB-442-8.0/10-XXX	Hexachlorocyclopentadiene	76	U	76	UJ	MS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	3,3`-Dichlorobenzidine	780	U	780	UJ	LCS-L, IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Aniline	390	U	390	UJ	LCS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Anthracene	9100		9100	EB	BL	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzo(a)anthracene	28000		28000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzo(a)pyrene	21000		21000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzo(b)fluoranthene	29000		29000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzo(ghi)perylene	16000		16000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzo(k)fluoranthene	11000		11000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Benzoic Acid	1900	U	1900	UJ	LCS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2000		2000	JEB	BL, IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Butylbenzylphthalate	390	U	390	UJ	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Chrysene	26000		26000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Dibenz(a,h)anthracene	4400		4400	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Di-n-octylphthalate	390	U	390	UJ	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	14000		14000	J	IS-L	ug/kg
OCRI-09	360-24365-5	SW8270	OC-SB-447-0.0/1.0-XXX	Pyrene	3900	U	3900	UJ	IS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1,2,4,5-Tetrachlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1,2,4-Trichlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1,2-Dichlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1,3-Dichlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1,4-Dichlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	1-Methylnaphthalene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	2,4-Dinitrotoluene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	2,6-Dinitrotoluene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	2-Chloronaphthalene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	2-Methylnaphthalene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	2-Nitroaniline	1900	U	1900	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	3,3`-Dichlorobenzidine	750	U	750	UJ	LCS-L, SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	3-Nitroaniline	1900	U	1900	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	4-Bromophenyl phenyl ether	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	4-Chloroaniline	750	U	750	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	4-Chlorophenyl phenyl ether	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	4-Nitroaniline	1900	U	1900	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Acenaphthene	370	U	370	UJ	SS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Acenaphthylene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Acetophenone	1500		1500	JEB	BL, SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Aniline	370	U	370	UJ	LCS-L, SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Anthracene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Atrazine	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Azobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzaldehyde	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzo(a)anthracene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzo(a)pyrene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzo(b)fluoranthene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzo(ghi)perylene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzo(k)fluoranthene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzoic Acid	1900	U	1900	UJ	LCS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Benzyl alcohol	750	U	750	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Biphenyl	770		770	J	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Bis(2-Chloroethoxy)methane	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Bis(2-Chloroethyl)ether	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Bis(2-Chloroisopropyl)ether	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Bis(2-Ethylhexyl)phthalate	4600		4600	JEB	BL, SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Butylbenzylphthalate	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Caprolactum	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Carbazole	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Chrysene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Dibenz(a,h)anthracene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Dibenzofuran	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Diethylphthalate	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Dimethylphthalate	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Di-n-butylphthalate	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Di-n-octylphthalate	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Diphenyl ether	3800		3800	J	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Diphenylmethanone	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Fluoranthene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Fluorene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Hexachlorobenzene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Hexachlorobutadiene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Hexachlorocyclopentadiene	750	U	750	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Hexachloroethane	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Indeno(1,2,3-cd)pyrene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Isophorone	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Naphthalene	900	U	900	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Nitrobenzene	370	U	370	UJ	SS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	N-Nitrosodimethylamine	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	N-Nitrosodi-n-propylamine	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	N-Nitrosodiphenylamine	280	J	280	JEB	BL, SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Phenanthrene	450	U	450	UJ	SS-L	ug/kg
OCRI-09	360-24365-7	SW8270	OC-SB-447-3.0/5.0-XXX	Pyrene	370	U	370	UJ	SS-L	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	3,3`-Dichlorobenzidine	68	U	68	UJ	LCS-L	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Acetophenone	23	J	23	JEB	BL	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Aniline	34	U	34	UJ	LCS-L	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Benzo(a)anthracene	27	J	27	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Benzo(a)pyrene	19	J	19	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Benzo(b)fluoranthene	27	J	27	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Benzo(k)fluoranthene	14	J	14	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Benzoic Acid	150	J	170	UJ	BL, LCS-L	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	260		260	JEB	BL, IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Chrysene	34	J	34	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Diphenylamine	48		48	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Fluoranthene	56		56	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	11	J	11	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	N-Nitrosodiphenylamine	15	J	15	JEB	BL, IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Phenanthrene	25	J	25	J	IS-H	ug/kg
OCRI-09	360-24365-8	SW8270	OC-SB-452-0.0/1.0-XXX	Pyrene	47		47	J	IS-H	ug/kg
OCRI-09A	360-24365-14	SW8270	OC-SB-458-22/24-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-17	SW8270	OC-SB-460-30/32-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-17	SW8270	OC-SB-460-30/32-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL	ug/kg
OCRI-09A	360-24365-2	SW8270	OC-SB-442-20/22-XXX	3,3`-Dichlorobenzidine	71	U *	71	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-2	SW8270	OC-SB-442-20/22-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-2	SW8270	OC-SB-442-20/22-XXX	Benzoic Acid	180	U *	180	UJ	ICVRSD, LCS-L	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	2,4-Dinitrophenol	37	U	37	UJ	ICVRSD	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	3,3`-Dichlorobenzidine	73	U	73	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	Benzoic Acid	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL	ug/kg
OCRI-09A	360-24365-6	SW8270	OC-SB-447-18/20-XXX	Phenol	18	J	18	J	IS-H	ug/kg
OCRI-09A	360-24365-9	SW8270	OC-SB-452-13/15-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-09A	360-24365-9	SW8270	OC-SB-452-13/15-XXX	Bis(2-Ethylhexyl)phthalate	23	J	23	JEB	BL	ug/kg
OCRI-10	360-24417-1	SW8270	OC-SB-463-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-10	360-24417-1	SW8270	OC-SB-463-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	50		50	EB	BL	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	1-Methylnaphthalene	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	2,3,4,6-Tetrachlorophenol	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	2,4-Dinitrophenol	38	U	38	UJ	MS-L	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	4,6-Dinitro-2-methylphenol	190	U	190	UJ	MS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Aniline	38	U	38	UJ	MS-L	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Atrazine	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Benzoic Acid	190	U	190	UJ	MS-L	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Biphenyl	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	28	J	38	U	BL	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Caprolactum	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Diphenyl ether	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Diphenylmethanone	38	U	38	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-10	SW8270	OC-SB-465-8.0/10-XXX	Hexachlorocyclopentadiene	75	U	75	UJ	MS-L	ug/kg
OCRI-10	360-24417-11	SW8270	OC-SB-468-0.0/1.0-XXX	Aniline	38	U	38	UJ	LCS-L	ug/kg
OCRI-10	360-24417-11	SW8270	OC-SB-468-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	86		86	EB	BL	ug/kg
OCRI-10	360-24417-13	SW8270	OC-SB-468-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	55		55	U	BL	ug/kg
OCRI-10	360-24417-14	SW8270	OC-SB-471-0.0/1.0-XXX	Benzoic Acid	35	J	35	JEB	BL	ug/kg
OCRI-10	360-24417-14	SW8270	OC-SB-471-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	180		180	U	BL	ug/kg
OCRI-10	360-24417-15	SW8270	OC-SB-471-3.0/5.0-XXX	Bis(2-Ethylhexyl)phthalate	290		290	EB	BL	ug/kg
OCRI-10	360-24417-3	SW8270	OC-SB-463-6.0/8.0-XXX	Aniline	39	U	39	UJ	LCS-L	ug/kg
OCRI-10	360-24417-4	SW8270	OC-SB-464-0.0/1.0-XXX	Aniline	35	U	35	UJ	LCS-L	ug/kg
OCRI-10	360-24417-4	SW8270	OC-SB-464-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	87		87	EB	BL	ug/kg
OCRI-10	360-24417-6	SW8270	OC-SB-464-5.0/7.0-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-10	360-24417-6	SW8270	OC-SB-464-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	200		200	EB	BL	ug/kg
OCRI-10	360-24417-7	SW8270	OC-SB-465-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	110	B	110	U	BL	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	1-Methylnaphthalene	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	2,3,4,6-Tetrachlorophenol	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	2,4-Dinitrophenol	37	U	37	UJ	MS-L	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	4,6-Dinitro-2-methylphenol	190	U	190	UJ	MS-L	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Aniline	37	U	37	UJ	MS-L	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Atrazine	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Benzoic Acid	190	U	190	UJ	MS-L	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Biphenyl	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Bis(2-Ethylhexyl)phthalate	48		48	U	BL	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Caprolactum	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Diphenyl ether	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Diphenylmethanone	37	U	37	UJ	MS-RPD	ug/kg
OCRI-10	360-24417-9	SW8270	OC-SB-465-8.0/10-DUP	Hexachlorocyclopentadiene	75	U	75	UJ	MS-L	ug/kg
OCRI-10A	360-24417-12	SW8270	OC-SB-468-31/33-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-10A	360-24417-12	SW8270	OC-SB-468-31/33-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-10A	360-24417-12	SW8270	OC-SB-468-31/33-XXX	Benzoic Acid	180	U	180	UJ	ICVRSD	ug/kg
OCRI-10A	360-24417-16	SW8270	OC-SB-471-26/28-XXX	Aniline	36	U	36	UJ	LCS-L	ug/kg
OCRI-10A	360-24417-16	SW8270	OC-SB-471-26/28-XXX	Bis(2-Ethylhexyl)phthalate	83		83	U	BL	ug/kg
OCRI-10A	360-24417-2	SW8270	OC-SB-463-28/30-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-10A	360-24417-2	SW8270	OC-SB-463-28/30-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-10A	360-24417-2	SW8270	OC-SB-463-28/30-XXX	Benzoic Acid	180	U	180	UJ	ICVRSD	ug/kg
OCRI-10A	360-24417-5	SW8270	OC-SB-464-26/28-XXX	2-Nitroaniline	180	U		R	ICVRRF	ug/kg
OCRI-10A	360-24417-5	SW8270	OC-SB-464-26/28-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-10A	360-24417-5	SW8270	OC-SB-464-26/28-XXX	Benzoic Acid	180	U	180	UJ	ICVRSD	ug/kg
OCRI-10A	360-24417-8	SW8270	OC-SB-465-16/18-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-10A	360-24417-8	SW8270	OC-SB-465-16/18-XXX	Bis(2-Ethylhexyl)phthalate	41		41	U	BL	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	2-Nitroaniline	1900	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	3,3`-Dichlorobenzidine	760	U		R	MS-L, IS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Aniline	380	U *	380	UJ	LCS-L, MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Atrazine	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Benzo(a)anthracene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Benzo(b)fluoranthene	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Benzo(k)fluoranthene	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Benzoic Acid	1900	U	1900	UJ	ICVRSD	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Bis(2-Ethylhexyl)phthalate	900000		900000	EB	BL	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Butylbenzylphthalate	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Chrysene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Hexachlorocyclopentadiene	760	U		R	MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	N-Nitrosodimethylamine	57	U	57	UJ	MS-L	ug/kg
OCRI-11	360-24444-1	SW8270	OC-SB-459-6.0/8.0-DUP	Pyrene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1,2,4,5-Tetrachlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1,2,4-Trichlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1,2-Dichlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1,3-Dichlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1,4-Dichlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	1-Methylnaphthalene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,3,4,6-Tetrachlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4,5-Trichlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4,6-Trichlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4-Dichlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4-Dimethylphenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4-Dinitrophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,4-Dinitrotoluene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2,6-Dinitrotoluene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Chloronaphthalene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Chlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Methylnaphthalene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Methylphenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Nitroaniline	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	2-Nitrophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	3 & 4 Methylphenol	35	U		R	SS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	3,3`-Dichlorobenzidine	69	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	3-Nitroaniline	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4,6-Dinitro-2-methylphenol	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Bromophenyl phenyl ether	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Chloro-3-methylphenol	69	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Chloroaniline	69	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Chlorophenyl phenyl ether	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Nitroaniline	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	4-Nitrophenol	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Acenaphthene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Acenaphthylene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Acetophenone	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Aniline	35	U *		R	LCS-L, SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Anthracene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Atrazine	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Azobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzaldehyde	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzo(a)anthracene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzo(a)pyrene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzo(b)fluoranthene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzo(ghi)perylene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzo(k)fluoranthene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzoic Acid	170	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Benzyl alcohol	69	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Biphenyl	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Bis(2-Chloroethoxy)methane	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Bis(2-Chloroethyl)ether	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Bis(2-Chloroisopropyl)ether	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	8300		8300	JEB	BL, LCS-H, SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Butylbenzylphthalate	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Caprolactum	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Carbazole	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Chrysene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Dibenz(a,h)anthracene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Dibenzofuran	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Diethylphthalate	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Dimethylphthalate	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Di-n-butylphthalate	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Di-n-octylphthalate	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Diphenyl ether	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Diphenylamine	35	U		R	SS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Diphenylmethanone	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Fluoranthene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Fluorene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Hexachlorobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Hexachlorobutadiene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Hexachlorocyclopentadiene	69	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Hexachloroethane	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Isophorone	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Naphthalene	83	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Nitrobenzene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	N-Nitrosodi-n-propylamine	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	N-Nitrosodiphenylamine	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Pentachlorophenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Phenanthrene	41	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Phenol	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-12	SW8270	OC-SB-459-0.0/1.0-XXX	Pyrene	35	U		R	SS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	2-Nitroaniline	1900	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	3,3`-Dichlorobenzidine	760	U		R	MS-L, IS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Aniline	380	U	380	UJ	LCS-L, MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Atrazine	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Benzo(a)anthracene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Benzo(b)fluoranthene	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Benzo(k)fluoranthene	380	U		R	MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Benzoic Acid	1900	U	1900	UJ	ICVRSD	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	720000		720000	EB	BL	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Butylbenzylphthalate	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Chrysene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Hexachlorocyclopentadiene	760	U		R	MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	N-Nitrosodimethylamine	57	U	57	UJ	MS-L	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	N-Nitrosodiphenylamine	120	J	120	JEB	BL	ug/kg
OCRI-11	360-24444-2	SW8270	OC-SB-459-6.0/8.0-XXX	Pyrene	380	U	380	UJ	IS-L	ug/kg
OCRI-11	360-24444-3	SW8270	OC-SB-462-0.0/1.0-XXX	2-Nitroaniline	170	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11	360-24444-3	SW8270	OC-SB-462-0.0/1.0-XXX	Aniline	34	U	34	UJ	LCS-L	ug/kg
OCRI-11	360-24444-3	SW8270	OC-SB-462-0.0/1.0-XXX	Benzoic Acid	170	U	170	UJ	ICVRSD	ug/kg
OCRI-11	360-24444-3	SW8270	OC-SB-462-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	210		210	EB	BL	ug/kg
OCRI-11	360-24444-5	SW8270	OC-SB-462-4.0/6.0-XXX	2-Nitroaniline	1900	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11	360-24444-5	SW8270	OC-SB-462-4.0/6.0-XXX	Aniline	390	U	390	UJ	LCS-L	ug/kg
OCRI-11	360-24444-5	SW8270	OC-SB-462-4.0/6.0-XXX	Benzoic Acid	1900	U	1900	UJ	ICVRSD	ug/kg
OCRI-11	360-24444-5	SW8270	OC-SB-462-4.0/6.0-XXX	Bis(2-Ethylhexyl)phthalate	7200		7200	EB	BL	ug/kg
OCRI-11	360-24444-8	SW8270	OC-SB-467-6.0/8.0-DUP	2-Nitroaniline	200	U		R	ICVRRF, CCVRRF	ug/kg

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2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-11	360-24444-8	SW8270	OC-SB-467-6.0/8.0-DUP	Aniline	39	U	39	UJ	LCS-L, MS-L	ug/kg
OCRI-11	360-24444-8	SW8270	OC-SB-467-6.0/8.0-DUP	Benzoic Acid	200	U	200	UJ	ICVRSD, MS-L	ug/kg
OCRI-11	360-24444-8	SW8270	OC-SB-467-6.0/8.0-DUP	Bis(2-Ethylhexyl)phthalate	430		430	JEB	BL, MS-L	ug/kg
OCRI-11	360-24444-8	SW8270	OC-SB-467-6.0/8.0-DUP	Hexachlorocyclopentadiene	78	U	78	UJ	MS-L	ug/kg
OCRI-11	360-24444-9	SW8270	OC-SB-467-6.0/8.0-XXX	2-Nitroaniline	200	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11	360-24444-9	SW8270	OC-SB-467-6.0/8.0-XXX	Aniline	40	U	40	UJ	LCS-L, MS-L	ug/kg
OCRI-11	360-24444-9	SW8270	OC-SB-467-6.0/8.0-XXX	Benzoic Acid	200	U	200	UJ	ICVRSD, MS-L	ug/kg
OCRI-11	360-24444-9	SW8270	OC-SB-467-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	520		520	JEB	BL, MS-L	ug/kg
OCRI-11	360-24444-9	SW8270	OC-SB-467-6.0/8.0-XXX	Hexachlorocyclopentadiene	79	U	79	UJ	MS-L	ug/kg
OCRI-11A	360-24444-13	SW8270	OC-SB-459-26/28-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-11A	360-24444-13	SW8270	OC-SB-459-26/28-XXX	Bis(2-Ethylhexyl)phthalate	110	B *	110	U	BL	ug/kg
OCRI-11A	360-24444-4	SW8270	OC-SB-462-31/33-XXX	2-Nitroaniline	180	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11A	360-24444-4	SW8270	OC-SB-462-31/33-XXX	Aniline	36	U	36	UJ	LCS-L	ug/kg
OCRI-11A	360-24444-4	SW8270	OC-SB-462-31/33-XXX	Benzoic Acid	180	U	180	UJ	ICVRSD	ug/kg
OCRI-11A	360-24444-4	SW8270	OC-SB-462-31/33-XXX	Bis(2-Ethylhexyl)phthalate	110		110	U	BL	ug/kg
OCRI-11A	360-24444-7	SW8270	OC-SB-467-30/32-XXX	2-Nitroaniline	190	U		R	ICVRRF, CCVRRF	ug/kg
OCRI-11A	360-24444-7	SW8270	OC-SB-467-30/32-XXX	Aniline	37	U	37	UJ	LCS-L	ug/kg
OCRI-11A	360-24444-7	SW8270	OC-SB-467-30/32-XXX	Benzoic Acid	190	U	190	UJ	ICVRSD	ug/kg
OCRI-11A	360-24444-7	SW8270	OC-SB-467-30/32-XXX	Bis(2-Ethylhexyl)phthalate	75		75	U	BL	ug/kg
OCRI-12	360-24454-3	SW8270	OC-SB-461-5.0/7.0-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-12	360-24454-3	SW8270	OC-SB-461-5.0/7.0-XXX	Bis(2-Ethylhexyl)phthalate	140	B *	140	U	BL	ug/kg
OCRI-12	360-24454-4	SW8270	OC-SB-470-0.0/1.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-12	360-24454-4	SW8270	OC-SB-470-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	130	B *	130	U	BL	ug/kg
OCRI-12	360-24454-6	SW8270	OC-SB-470-7.0/9.0-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-12	360-24454-6	SW8270	OC-SB-470-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	78	B *	78	U	BL	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	3,3`-Dichlorobenzidine	71	U	71	UJ	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Benzo(a)anthracene	16	J	16	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Benzo(a)pyrene	16	J	16	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Benzo(b)fluoranthene	38		38	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Benzo(ghi)perylene	15	J	15	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Benzo(k)fluoranthene	13	J	13	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	110	B *	110	UJ	BL, IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Butylbenzylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Chrysene	21	J	21	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Di-n-octylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	15	J	15	J	IS-L	ug/kg
OCRI-12	360-24454-7	SW8270	OC-SB-472-0.0/1.0-XXX	Pyrene	20	J	20	J	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Benzo(a)pyrene	36	U	36	UJ	IS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Benzo(b)fluoranthene	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Benzo(ghi)perylene	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Benzo(k)fluoranthene	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Bis(2-Ethylhexyl)phthalate	110	B *	110	U	BL	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Dibenz(a,h)anthracene	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Di-n-octylphthalate	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-8	SW8270	OC-SB-472-30/32-XXX	Indeno(1,2,3-cd)pyrene	36	U	36	UJ	IS-L	ug/kg
OCRI-12	360-24454-9	SW8270	OC-SB-472-8.0/10-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-12	360-24454-9	SW8270	OC-SB-472-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	170	B *	170	U	BL	ug/kg
OCRI-12A	360-24454-2	SW8270	OC-SB-461-28/30-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-12A	360-24454-2	SW8270	OC-SB-461-28/30-XXX	Bis(2-Ethylhexyl)phthalate	140	B *	140	U	BL	ug/kg
OCRI-12A	360-24454-5	SW8270	OC-SB-470-31/33-XXX	Aniline	36	U	36	UJ	LCS-L	ug/kg
OCRI-12A	360-24454-5	SW8270	OC-SB-470-31/33-XXX	Bis(2-Ethylhexyl)phthalate	87		87	U	BL	ug/kg
OCRI-13	360-24499-1	SW8270	OC-SB-466-6.0/8.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-13	360-24499-1	SW8270	OC-SB-466-6.0/8.0-XXX	Bis(2-Ethylhexyl)phthalate	190	B *	190	U	BL	ug/kg
OCRI-13	360-24499-14	SW8270	OC-SB-417-0.0/1.0-XXX	Aniline	33	U	33	UJ	LCS-L	ug/kg
OCRI-13	360-24499-14	SW8270	OC-SB-417-0.0/1.0-XXX	Benzoic Acid	25	J	170	U	BL	ug/kg
OCRI-13	360-24499-14	SW8270	OC-SB-417-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	360		360	U	BL	ug/kg
OCRI-13	360-24499-14	SW8270	OC-SB-417-0.0/1.0-XXX	N-Nitrosodiphenylamine	25	J	25	JEB	BL	ug/kg
OCRI-13	360-24499-16	SW8270	OC-SB-417-8.0/10-XXX	Aniline	33	U *	33	UJ	LCS-L	ug/kg
OCRI-13	360-24499-16	SW8270	OC-SB-417-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	340	B *	340	U	BL	ug/kg
OCRI-13	360-24499-17	SW8270	OC-SB-434-0.0/1.0-XXX	Aniline	120	J *	120	J	LCS-L	ug/kg
OCRI-13	360-24499-17	SW8270	OC-SB-434-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	9100		9100	U	BL	ug/kg
OCRI-13	360-24499-17	SW8270	OC-SB-434-0.0/1.0-XXX	N-Nitrosodiphenylamine	300	J	300	JEB	BL	ug/kg
OCRI-13	360-24499-19	SW8270	OC-SB-434-7.0/9.0-XXX	Aniline	35	U *	35	UJ	LCS-L	ug/kg
OCRI-13	360-24499-19	SW8270	OC-SB-434-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	380	B *	380	U	BL	ug/kg
OCRI-13	360-24499-2	SW8270	OC-SB-469-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-13	360-24499-2	SW8270	OC-SB-469-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1700	B *	1700	U	BL	ug/kg
OCRI-13	360-24499-20	SW8270	OC-SB-450-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-13	360-24499-20	SW8270	OC-SB-450-0.0/1.0-XXX	Anthracene	230	J	230	JEB	BL	ug/kg
OCRI-13	360-24499-20	SW8270	OC-SB-450-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	480	B *	480	U	BL	ug/kg
OCRI-13	360-24499-20	SW8270	OC-SB-450-0.0/1.0-XXX	Di-n-butylphthalate	380	B	380	U	BL	ug/kg
OCRI-13	360-24499-22	SW8270	OC-SB-450-8.0/10-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-13	360-24499-22	SW8270	OC-SB-450-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	300	B *	300	U	BL	ug/kg
OCRI-13	360-24499-4	SW8270	OC-SB-469-36/37-XXX	Aniline	35	U	35	UJ	LCS-L	ug/kg
OCRI-13	360-24499-4	SW8270	OC-SB-469-36/37-XXX	Bis(2-Ethylhexyl)phthalate	160		160	U	BL	ug/kg
OCRI-13	360-24499-5	SW8270	OC-SB-469-7.0/9.0-XXX	Aniline	34	U	34	UJ	LCS-L	ug/kg
OCRI-13	360-24499-5	SW8270	OC-SB-469-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	160		160	U	BL	ug/kg
OCRI-13	360-24499-6	SW8270	OC-SB-466-0.0/1.0-XXX	Aniline	340	U	340	UJ	LCS-L	ug/kg
OCRI-13	360-24499-6	SW8270	OC-SB-466-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	960		960	U	BL	ug/kg
OCRI-13	360-24499-7	SW8270	OC-SB-466-30/32-XXX	Aniline	36	U	36	UJ	LCS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-13	360-24499-7	SW8270	OC-SB-466-30/32-XXX	Bis(2-Ethylhexyl)phthalate	190		190	U	BL	ug/kg
OCRI-13A	360-24499-15	SW8270	OC-SB-417-20/22-XXX	Aniline	41	U *	41	UJ	LCS-L	ug/kg
OCRI-13A	360-24499-15	SW8270	OC-SB-417-20/22-XXX	Bis(2-Ethylhexyl)phthalate	390	B *	390	U	BL	ug/kg
OCRI-13A	360-24499-18	SW8270	OC-SB-434-15/16-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-13A	360-24499-18	SW8270	OC-SB-434-15/16-XXX	Bis(2-Ethylhexyl)phthalate	380	B *	380	U	BL	ug/kg
OCRI-13A	360-24499-21	SW8270	OC-SB-450-33/35-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-13A	360-24499-21	SW8270	OC-SB-450-33/35-XXX	Bis(2-Ethylhexyl)phthalate	340	B *	340	U	BL	ug/kg
OCRI-13A	360-24499-3	SW8270	OC-SB-469-28/30-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-13A	360-24499-3	SW8270	OC-SB-469-28/30-XXX	Bis(2-Ethylhexyl)phthalate	230	B *	230	U	BL	ug/kg
OCRI-14	360-24563-1	SW8270	OC-SB-427-0.0/1.0-XXX	Aniline	16	J *	16	J	LCS-L	ug/kg
OCRI-14	360-24563-1	SW8270	OC-SB-427-0.0/1.0-XXX	Benzoic Acid	89	J B	180	U	BL	ug/kg
OCRI-14	360-24563-1	SW8270	OC-SB-427-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	13000		13000	JEB	BL, LCS-H	ug/kg
OCRI-14	360-24563-1	SW8270	OC-SB-427-0.0/1.0-XXX	N-Nitrosodiphenylamine	180		180	EB	BL	ug/kg
OCRI-14	360-24563-11	SW8270	OC-SB-456-0.0/1.0-XXX	Aniline	34	U *	34	UJ	LCS-L	ug/kg
OCRI-14	360-24563-11	SW8270	OC-SB-456-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2700		2700	JEB	BL, LCS-H, IS-H	ug/kg
OCRI-14	360-24563-11	SW8270	OC-SB-456-0.0/1.0-XXX	Diphenylamine	26	J	26	J	IS-H	ug/kg
OCRI-14	360-24563-11	SW8270	OC-SB-456-0.0/1.0-XXX	N-Nitrosodiphenylamine	57		57	JEB	BL, IS-H	ug/kg
OCRI-14	360-24563-12	SW8270	OC-SB-456-16/18-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-14	360-24563-12	SW8270	OC-SB-456-16/18-XXX	Bis(2-Ethylhexyl)phthalate	340	B *	340	U	BL	ug/kg
OCRI-14	360-24563-13	SW8270	OC-SB-456-7.0/9.0-DUP	Aniline	36	U *	36	UJ	LCS-L, MS-L	ug/kg
OCRI-14	360-24563-13	SW8270	OC-SB-456-7.0/9.0-DUP	Bis(2-Ethylhexyl)phthalate	66	B	66	UJ	BL, MS-RPD	ug/kg
OCRI-14	360-24563-14	SW8270	OC-SB-456-7.0/9.0-XXX	Aniline	36	U *	36	UJ	LCS-L, MS-L	ug/kg
OCRI-14	360-24563-14	SW8270	OC-SB-456-7.0/9.0-XXX	Bis(2-Ethylhexyl)phthalate	72	B	72	UJ	BL, MS-RPD	ug/kg
OCRI-14	360-24563-15	SW8270	OC-SB-457-0.0/1.0-XXX	Aniline	340	U *	340	UJ	LCS-L	ug/kg
OCRI-14	360-24563-15	SW8270	OC-SB-457-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	390	B	390	EB	BL	ug/kg
OCRI-14	360-24563-16	SW8270	OC-SB-457-8.0/10-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-14	360-24563-16	SW8270	OC-SB-457-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	65	B	65	U	BL	ug/kg
OCRI-14	360-24563-2	SW8270	OC-SB-427-12/14-XXX	Aniline	740	U	740	UJ	LCS-L	ug/kg
OCRI-14	360-24563-2	SW8270	OC-SB-427-12/14-XXX	Bis(2-Ethylhexyl)phthalate	1E+07		1E+07	JEB	BL, LCS-H	ug/kg
OCRI-14	360-24563-2	SW8270	OC-SB-427-12/14-XXX	N-Nitrosodiphenylamine	160000		160000	EB	BL	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	2,4-Dinitrophenol	35	U	35	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	2-Nitroaniline	170	U	170	UJ	MS-L, MS-RPD	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	3,3`-Dichlorobenzidine	69	U	69	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	3-Nitroaniline	170	U	170	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	4,6-Dinitro-2-methylphenol	170	U	170	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	4-Chloroaniline	69	U		R	MS-L, MS-RPD	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	4-Nitrophenol	170	U		R	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Aniline	92	*	92	J	LCS-L, MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Benzo(a)pyrene	35	U	35	UJ	MS-L, MS-RPD, IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Benzo(b)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Benzo(ghi)perylene	35	U	35	UJ	IS-L	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
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OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Benzo(k)fluoranthene	35	U	35	UJ	IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Bis(2-Ethylhexyl)phthalate	26000		26000	JEB	BL, LCS-H, IS-H	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Dibenz(a,h)anthracene	35	U	35	UJ	IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Di-n-octylphthalate	35	U	35	UJ	IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Hexachlorocyclopentadiene	69	U		R	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Hexachloroethane	35	U	35	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	Indeno(1,2,3-cd)pyrene	35	U	35	UJ	IS-L	ug/kg
OCRI-14	360-24563-4	SW8270	OC-SB-427-8.0/10-DUP	N-Nitrosodiphenylamine	240		240	JEB	BL, MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	2,4-Dinitrophenol	34	U	34	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	2-Nitroaniline	170	U	170	UJ	MS-L, MS-RPD	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	3,3`-Dichlorobenzidine	69	U	69	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	3-Nitroaniline	170	U	170	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	4,6-Dinitro-2-methylphenol	170	U	170	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	4-Chloroaniline	69	U		R	MS-L, MS-RPD	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	4-Nitrophenol	170	U		R	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	Aniline	86	*	86	J	LCS-L, MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	Benzo(a)pyrene	34	U	34	UJ	MS-L, MS-RPD	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	19000		19000	JEB	BL, LCS-H	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	Hexachlorocyclopentadiene	69	U		R	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	Hexachloroethane	34	U	34	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	SW8270	OC-SB-427-8.0/10-XXX	N-Nitrosodiphenylamine	320		320	JEB	BL, MS-L	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Benzo(a)pyrene	130	J	130	J	IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Benzo(b)fluoranthene	220	J	220	J	IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Benzo(ghi)perylene	140	J	140	J	IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	4700	B *	4700	JEB	BL, LCS-H, IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Chrysene	210	J	210	J	IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	120	J	120	J	IS-H	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	N-Nitrosodiphenylamine	1000		1000	EB	BL	ug/kg
OCRI-14	360-24563-6	SW8270	OC-SB-428-0.0/1.0-XXX	Pyrene	310	J	310	J	IS-H	ug/kg
OCRI-14	360-24563-9	SW8270	OC-SB-428-8.0/10-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-14	360-24563-9	SW8270	OC-SB-428-8.0/10-XXX	Bis(2-Ethylhexyl)phthalate	1100	B *	1100	JEB	BL, LCS-H	ug/kg
OCRI-14A	360-24563-3	SW8270	OC-SB-427-17/19-XXX	Bis(2-Ethylhexyl)phthalate	13000		13000	JEB	BL, LCS-H	UG/KG
OCRI-14A	360-24563-3	SW8270	OC-SB-427-17/19-XXX	N-Nitrosodiphenylamine	110		110	EB	BL	ug/kg
OCRI-14A	360-24563-7	SW8270	OC-SB-428-23/25-XXX	Bis(2-Ethylhexyl)phthalate	420	B *	420	U	BL	ug/kg
OCRI-15	360-24582-1	SW8270	OC-SB-457-28/30-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
OCRI-15	360-24582-1	SW8270	OC-SB-457-28/30-XXX	Bis(2-Ethylhexyl)phthalate	75	B	75	U	BL	ug/kg
OCRI-15	360-24582-10	SW8270	OC-SS-405-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-15	360-24582-10	SW8270	OC-SS-405-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	580	B	580	U	BL	ug/kg
OCRI-15	360-24582-11	SW8270	OC-SS-406-0.0/1.0.-XXX	Aniline	440	U *	440	UJ	LCS-L	ug/kg
OCRI-15	360-24582-11	SW8270	OC-SS-406-0.0/1.0.-XXX	Benzoic Acid	840	J B	2200	U	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-15	360-24582-12	SW8270	OC-SS-407-0.0/1.0-XXX	Aniline	370	U *	370	UJ	LCS-L	ug/kg
OCRI-15	360-24582-12	SW8270	OC-SS-407-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1400	B	1400	U	BL	ug/kg
OCRI-15	360-24582-13	SW8270	OC-SS-408-0.0/1.0-XXX	Aniline	390	U *	390	UJ	LCS-L	ug/kg
OCRI-15	360-24582-13	SW8270	OC-SS-408-0.0/1.0-XXX	Benzoic Acid	440	J B	2000	U	BL	ug/kg
OCRI-15	360-24582-13	SW8270	OC-SS-408-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2500	B	2500	EB	BL	ug/kg
OCRI-15	360-24582-13	SW8270	OC-SS-408-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	160	J *	160	J	LCS-H	ug/kg
OCRI-15	360-24582-13	SW8270	OC-SS-408-0.0/1.0-XXX	N-Nitrosodiphenylamine	390	J	390	JEB	BL	ug/kg
OCRI-15	360-24582-14	SW8270	OC-SS-409-0.0/1.0-XXX	Aniline	340	U *	340	UJ	LCS-L	ug/kg
OCRI-15	360-24582-14	SW8270	OC-SS-409-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2200	B	2200	EB	BL	ug/kg
OCRI-15	360-24582-14	SW8270	OC-SS-409-0.0/1.0-XXX	N-Nitrosodiphenylamine	330	J	330	JEB	BL	ug/kg
OCRI-15	360-24582-16	SW8270	OC-SS-411-0.0/1.0-XXX	Aniline	4000	U *	4000	UJ	LCS-L	ug/kg
OCRI-15	360-24582-16	SW8270	OC-SS-411-0.0/1.0-XXX	Benzoic Acid	5500	J B	5500	JEB	BL	ug/kg
OCRI-15	360-24582-17	SW8270	OC-SS-412-0.0/1.0-XXX	Aniline	360	U *	360	UJ	LCS-L	ug/kg
OCRI-15	360-24582-17	SW8270	OC-SS-412-0.0/1.0-XXX	Benzoic Acid	420	J B	1800	U	BL	ug/kg
OCRI-15	360-24582-17	SW8270	OC-SS-412-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	880	B	880	U	BL	ug/kg
OCRI-15	360-24582-17	SW8270	OC-SS-412-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	320	J *	320	J	LCS-H	ug/kg
OCRI-15	360-24582-19	SW8270	OC-SS-414-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-15	360-24582-19	SW8270	OC-SS-414-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2100	B	2100	EB	BL	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	3,3`-Dichlorobenzidine	3100	U	3100	UJ	IS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Aniline	1600	U *	1600	UJ	LCS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Benzo(a)anthracene	1600	U	1600	UJ	IS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Benzoic Acid	2000	J B	2000	JEB	BL	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2900	B	2900	JEB	BL, IS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Butylbenzylphthalate	1600	U	1600	UJ	IS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Chrysene	1600	U	1600	UJ	IS-L	ug/kg
OCRI-15	360-24582-20	SW8270	OC-SS-415-0.0/1.0-XXX	Pyrene	1600	U	1600	UJ	IS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	2-Nitroaniline	1800	U		R	MS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	3,3`-Dichlorobenzidine	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	3-Nitroaniline	1800	U	1800	UJ	MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	4-Chloroaniline	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Aniline	360	U *		R	LCS-L, MS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Benzo(a)anthracene	410		410	J	FD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Benzo(a)pyrene	480		480	J	FD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Benzo(b)fluoranthene	640		640	J	FD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Benzoic Acid	500	J B	1800	U	BL	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Benzyl alcohol	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Bis(2-Ethylhexyl)phthalate	500		500	JEB	BL, MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Chrysene	620		620	J	FD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Di-n-butylphthalate	360	U		R	MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Fluoranthene	790		790	J	FD	ug/kg
OCRI-15	360-24582-21	SW8270	OC-SS-416-0.0/1.0-DUP	Indeno(1,2,3-cd)pyrene	260	J	260	J	FD	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	2-Nitroaniline	1800	U		R	MS-L	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	3,3`-Dichlorobenzidine	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	3-Nitroaniline	1800	U	1800	UJ	MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	4-Chloroaniline	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Aniline	360	U *		R	LCS-L, MS-L	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Benzo(a)anthracene	130	J	130	J	FD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Benzo(a)pyrene	170	J	170	J	FD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Benzo(b)fluoranthene	310	J	310	J	FD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Benzoic Acid	490	J B	1800	U	BL	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Benzyl alcohol	720	U		R	MS-L	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	550		550	JEB	BL, MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Chrysene	300	J	300	J	FD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Di-n-butylphthalate	360	U		R	MS-L, MS-RPD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Fluoranthene	430		430	J	FD	ug/kg
OCRI-15	360-24582-22	SW8270	OC-SS-416-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	130	J	130	J	FD	ug/kg
OCRI-15	360-24582-5	SW8270	OC-SS-400-0.0/1.0-XXX	Aniline	430	U *	430	UJ	LCS-L	ug/kg
OCRI-15	360-24582-5	SW8270	OC-SS-400-0.0/1.0-XXX	Benzoic Acid	720	J B	2200	U	BL	ug/kg
OCRI-15	360-24582-5	SW8270	OC-SS-400-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	270	J B	430	U	BL	ug/kg
OCRI-15	360-24582-5	SW8270	OC-SS-400-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	170	J *	170	J	LCS-H	ug/kg
OCRI-15	360-24582-6	SW8270	OC-SS-401-0.1/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-15	360-24582-6	SW8270	OC-SS-401-0.1/1.0-XXX	Bis(2-Ethylhexyl)phthalate	260	J B	350	U	BL	ug/kg
OCRI-15	360-24582-6	SW8270	OC-SS-401-0.1/1.0-XXX	Indeno(1,2,3-cd)pyrene	730	*	730	J	LCS-H	ug/kg
OCRI-15	360-24582-7	SW8270	OC-SS-402-0.0/1.0-XXX	Aniline	440	U *	440	UJ	LCS-L	ug/kg
OCRI-15	360-24582-7	SW8270	OC-SS-402-0.0/1.0-XXX	Benzoic Acid	900	J B	2200	U	BL	ug/kg
OCRI-15	360-24582-7	SW8270	OC-SS-402-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	250	J B	440	U	BL	ug/kg
OCRI-15	360-24582-9	SW8270	OC-SS-404-0.0/1.0-XXX	Aniline	350	U *	350	UJ	LCS-L	ug/kg
OCRI-15	360-24582-9	SW8270	OC-SS-404-0.0/1.0-XXX	Anthracene	280	J	280	JEB	BL	ug/kg
OCRI-15	360-24582-9	SW8270	OC-SS-404-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	2400	B	2400	EB	BL	ug/kg
OCRI-15	360-24582-9	SW8270	OC-SS-404-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	650	*	650	J	LCS-H	ug/kg
OCRI-16	360-24634-1	SW8270	OC-SS-417-0.0/1.0-XXX	Aniline	340	U *	340	UJ	LCS-L	ug/kg
OCRI-16	360-24634-1	SW8270	OC-SS-417-0.0/1.0-XXX	Benzoic Acid	450	J B	1700	U	BL	ug/kg
OCRI-16	360-24634-1	SW8270	OC-SS-417-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1100		1100	EB	BL	ug/kg
OCRI-16	360-24634-1	SW8270	OC-SS-417-0.0/1.0-XXX	N-Nitrosodiphenylamine	450		450	EB	BL	ug/kg
OCRI-16	360-24634-10	SW8270	OC-SS-426-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-16	360-24634-10	SW8270	OC-SS-426-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	620		620	EB	BL	ug/kg
OCRI-16	360-24634-10	SW8270	OC-SS-426-0.0/1.0-XXX	N-Nitrosodiphenylamine	14	J	14	JEB	BL	ug/kg
OCRI-16	360-24634-11	SW8270	OC-SS-427-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-11	SW8270	OC-SS-427-0.0/1.0-XXX	Benzoic Acid	300	B	300	U	BL	ug/kg
OCRI-16	360-24634-11	SW8270	OC-SS-427-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	14	J	14	JEB	BL	ug/kg
OCRI-16	360-24634-12	SW8270	OC-SS-428-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-12	SW8270	OC-SS-428-0.0/1.0-XXX	Benzoic Acid	81	J B	200	U	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-16	360-24634-12	SW8270	OC-SS-428-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	390		390	EB	BL	ug/kg
OCRI-16	360-24634-12	SW8270	OC-SS-428-0.0/1.0-XXX	Di-n-butylphthalate	36	J B	39	U	BL	ug/kg
OCRI-16	360-24634-12	SW8270	OC-SS-428-0.0/1.0-XXX	N-Nitrosodiphenylamine	37	J	37	JEB	BL	ug/kg
OCRI-16	360-24634-13	SW8270	OC-SS-429-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-13	SW8270	OC-SS-429-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	330		330	EB	BL	ug/kg
OCRI-16	360-24634-13	SW8270	OC-SS-429-0.0/1.0-XXX	N-Nitrosodiphenylamine	12	J	12	JEB	BL	ug/kg
OCRI-16	360-24634-14	SW8270	OC-SS-430-0.0/1.0-XXX	Aniline	44	U *	44	UJ	LCS-L	ug/kg
OCRI-16	360-24634-14	SW8270	OC-SS-430-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	400		400	EB	BL	ug/kg
OCRI-16	360-24634-14	SW8270	OC-SS-430-0.0/1.0-XXX	N-Nitrosodiphenylamine	55		55	EB	BL	ug/kg
OCRI-16	360-24634-15	SW8270	OC-SS-431-0.0/1.0-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-16	360-24634-15	SW8270	OC-SS-431-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1500		1500	EB	BL	ug/kg
OCRI-16	360-24634-15	SW8270	OC-SS-431-0.0/1.0-XXX	N-Nitrosodiphenylamine	36	J	36	JEB	BL	ug/kg
OCRI-16	360-24634-16	SW8270	OC-SS-432-0.0/1.0-XXX	Acetophenone	13	J	13	JEB	BL	ug/kg
OCRI-16	360-24634-16	SW8270	OC-SS-432-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-16	SW8270	OC-SS-432-0.0/1.0-XXX	Anthracene	20	J	20	JEB	BL	ug/kg
OCRI-16	360-24634-16	SW8270	OC-SS-432-0.0/1.0-XXX	Benzoic Acid	390	B	390	U	BL	ug/kg
OCRI-16	360-24634-16	SW8270	OC-SS-432-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	180		180	EB	BL	ug/kg
OCRI-16	360-24634-2	SW8270	OC-SS-418-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-16	360-24634-2	SW8270	OC-SS-418-0.0/1.0-XXX	Benzoic Acid	240	B	240	U	BL	ug/kg
OCRI-16	360-24634-2	SW8270	OC-SS-418-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	20	J	20	JEB	BL	ug/kg
OCRI-16	360-24634-3	SW8270	OC-SS-419-0.0/1.0-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-16	360-24634-3	SW8270	OC-SS-419-0.0/1.0-XXX	Benzoic Acid	210	B	210	U	BL	ug/kg
OCRI-16	360-24634-3	SW8270	OC-SS-419-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	210		210	EB	BL	ug/kg
OCRI-16	360-24634-4	SW8270	OC-SS-420-0.0/1.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-16	360-24634-4	SW8270	OC-SS-420-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	520		520	EB	BL	ug/kg
OCRI-16	360-24634-4	SW8270	OC-SS-420-0.0/1.0-XXX	N-Nitrosodiphenylamine	13	J	13	JEB	BL	ug/kg
OCRI-16	360-24634-5	SW8270	OC-SS-421-0.0/1.0-XXX	Aniline	42	U *	42	UJ	LCS-L	ug/kg
OCRI-16	360-24634-5	SW8270	OC-SS-421-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1600		1600	EB	BL	ug/kg
OCRI-16	360-24634-5	SW8270	OC-SS-421-0.0/1.0-XXX	N-Nitrosodiphenylamine	33	J	33	JEB	BL	ug/kg
OCRI-16	360-24634-6	SW8270	OC-SS-422-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-6	SW8270	OC-SS-422-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	410		410	EB	BL	ug/kg
OCRI-16	360-24634-7	SW8270	OC-SS-423-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-16	360-24634-7	SW8270	OC-SS-423-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	450		450	EB	BL	ug/kg
OCRI-16	360-24634-7	SW8270	OC-SS-423-0.0/1.0-XXX	N-Nitrosodiphenylamine	21	J	21	JEB	BL	ug/kg
OCRI-16	360-24634-8	SW8270	OC-SS-424-0.0/1.0-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-16	360-24634-8	SW8270	OC-SS-424-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	380		380	EB	BL	ug/kg
OCRI-16	360-24634-9	SW8270	OC-SS-425-0.0/1.0-XXX	Aniline	40	U *	40	UJ	LCS-L	ug/kg
OCRI-16	360-24634-9	SW8270	OC-SS-425-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	660		660	EB	BL	ug/kg
OCRI-16	360-24634-9	SW8270	OC-SS-425-0.0/1.0-XXX	N-Nitrosodiphenylamine	36	J	36	JEB	BL	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	2-Nitroaniline	200	U	200	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	3,3`-Dichlorobenzidine	80	U		R	MS-L	ug/kg

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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	3-Nitroaniline	200	U		R	MS-L	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	4-Chloroaniline	80	U		R	MS-L, MS-RPD	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Aniline	40	U *		R	LCS-L, MS-L, MS-RPD	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Azobenzene	40	U	40	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Benzoic Acid	140	J B *	200	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Hexachlorocyclopentadiene	80	U	80	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Hexachloroethane	40	U	40	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	40	U	40	UJ	MS-RPD	ug/kg
OCRI-17	360-24665-1	SW8270	OC-SS-434-0.0/1.0-XXX	N-Nitrosodiphenylamine	40	U	40	UJ	MS-L	ug/kg
OCRI-17	360-24665-10	SW8270	OC-SS-454-0.0/1.0-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-17	360-24665-10	SW8270	OC-SS-454-0.0/1.0-XXX	Benzoic Acid	180	J B *	190	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-11	SW8270	OC-SS-455-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-17	360-24665-11	SW8270	OC-SS-455-0.0/1.0-XXX	Benzoic Acid	85	J B *	190	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-11	SW8270	OC-SS-455-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	12	J	12	JEB	BL	ug/kg
OCRI-17	360-24665-12	SW8270	OC-SS-460-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-17	360-24665-12	SW8270	OC-SS-460-0.0/1.0-XXX	Benzoic Acid	140	J B *	200	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-12	SW8270	OC-SS-460-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	14	J	14	JEB	BL	ug/kg
OCRI-17	360-24665-13	SW8270	OC-SB-406-0.0/1.0-XXX	Acetophenone	38	J	38	JEB	BL	ug/kg
OCRI-17	360-24665-13	SW8270	OC-SB-406-0.0/1.0-XXX	Aniline	77	U *	77	UJ	LCS-L	ug/kg
OCRI-17	360-24665-13	SW8270	OC-SB-406-0.0/1.0-XXX	Benzoic Acid	420	B *	420	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-13	SW8270	OC-SB-406-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	36	J	36	JEB	BL	ug/kg
OCRI-17	360-24665-15	SW8270	OC-SB-406-8.0/10-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-17	360-24665-15	SW8270	OC-SB-406-8.0/10-XXX	Benzoic Acid	190	U *	190	UJ	LCS-RPD	ug/kg
OCRI-17	360-24665-16	SW8270	OC-SB-413-0.0/1.0-XXX	Aniline	46	U *	46	UJ	LCS-L	ug/kg
OCRI-17	360-24665-16	SW8270	OC-SB-413-0.0/1.0-XXX	Benzoic Acid	210	J B *	230	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-16	SW8270	OC-SB-413-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL	ug/kg
OCRI-17	360-24665-17	SW8270	OC-SB-413-1.0/5.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-17	360-24665-17	SW8270	OC-SB-413-1.0/5.0-XXX	Benzoic Acid	46	J B *	180	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-17	SW8270	OC-SB-413-1.0/5.0-XXX	Bis(2-Ethylhexyl)phthalate	17	J	17	JEB	BL	ug/kg
OCRI-17	360-24665-17	SW8270	OC-SB-413-1.0/5.0-XXX	Di-n-butylphthalate	39	B	39	U	BL	ug/kg
OCRI-17	360-24665-2	SW8270	OC-SS-435-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-17	360-24665-2	SW8270	OC-SS-435-0.0/1.0-XXX	Benzoic Acid	130	J B *	200	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-2	SW8270	OC-SS-435-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	12	J	12	JEB	BL	ug/kg
OCRI-17	360-24665-3	SW8270	OC-SS-436-0.0/1.0-XXX	Aniline	43	U *	43	UJ	LCS-L	ug/kg
OCRI-17	360-24665-3	SW8270	OC-SS-436-0.0/1.0-XXX	Benzoic Acid	140	J B *	220	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-4	SW8270	OC-SS-437-0.0/1.0-XXX	Aniline	45	U *	45	UJ	LCS-L	ug/kg
OCRI-17	360-24665-4	SW8270	OC-SS-437-0.0/1.0-XXX	Benzoic Acid	130	J B *	230	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-4	SW8270	OC-SS-437-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	27	J	27	JEB	BL	ug/kg
OCRI-17	360-24665-5	SW8270	OC-SS-440-0.0/1.0-XXX	Aniline	61	U *	61	UJ	LCS-L	ug/kg
OCRI-17	360-24665-5	SW8270	OC-SS-440-0.0/1.0-XXX	Benzoic Acid	96	J B *	300	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-5	SW8270	OC-SS-440-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	22	J	22	JEB	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-17	360-24665-6	SW8270	OC-SS-442-0.0/1.0-XXX	Acetophenone	21	J	21	JEB	BL	ug/kg
OCRI-17	360-24665-6	SW8270	OC-SS-442-0.0/1.0-XXX	Aniline	62	U *	62	UJ	LCS-L	ug/kg
OCRI-17	360-24665-6	SW8270	OC-SS-442-0.0/1.0-XXX	Benzoic Acid	440	B *	440	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-6	SW8270	OC-SS-442-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	31	J	31	JEB	BL	ug/kg
OCRI-17	360-24665-7	SW8270	OC-SS-449-0.0/1.0-XXX	Aniline	48	U *	48	UJ	LCS-L	ug/kg
OCRI-17	360-24665-7	SW8270	OC-SS-449-0.0/1.0-XXX	Benzoic Acid	92	J B *	240	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-7	SW8270	OC-SS-449-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	31	J	31	JEB	BL	ug/kg
OCRI-17	360-24665-8	SW8270	OC-SS-450-0.0/1.0-XXX	Aniline	50	U *	50	UJ	LCS-L	ug/kg
OCRI-17	360-24665-8	SW8270	OC-SS-450-0.0/1.0-XXX	Benzoic Acid	240	J B *	250	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-8	SW8270	OC-SS-450-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	16	J	16	JEB	BL	ug/kg
OCRI-17	360-24665-9	SW8270	OC-SS-451-0.0/1.0-XXX	Aniline	43	U *	43	UJ	LCS-L	ug/kg
OCRI-17	360-24665-9	SW8270	OC-SS-451-0.0/1.0-XXX	Benzoic Acid	130	J B *	210	UJ	BL, LCS-RPD	ug/kg
OCRI-17	360-24665-9	SW8270	OC-SS-451-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	20	J	20	JEB	BL	ug/kg
OCRI-17A	360-24665-14	SW8270	OC-SB-406-13/15-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-17A	360-24665-14	SW8270	OC-SB-406-13/15-XXX	Benzoic Acid	180	U *	180	UJ	LCS-RPD	ug/kg
OCRI-17A	360-24665-14	SW8270	OC-SB-406-13/15-XXX	Bis(2-Ethylhexyl)phthalate	37	J	37	JEB	BL	ug/kg
OCRI-17A	360-24665-14	SW8270	OC-SB-406-13/15-XXX	N-Nitrosodimethylamine	37	U	37	UJ	CCV%D	ug/kg
OCRI-17A	360-24665-18	SW8270	OC-SB-413-10/12-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-17A	360-24665-18	SW8270	OC-SB-413-10/12-XXX	Benzoic Acid	180	U *	180	UJ	LCS-RPD	ug/kg
OCRI-17A	360-24665-18	SW8270	OC-SB-413-10/12-XXX	Bis(2-Ethylhexyl)phthalate	16	J	16	JEB	BL	ug/kg
OCRI-17A	360-24665-18	SW8270	OC-SB-413-10/12-XXX	N-Nitrosodimethylamine	36	U	36	UJ	CCV%D	ug/kg
OCRI-18	360-24686-10	SW8270	OC-SS-453-0.0/1.0-XXX	Aniline	46	U *	46	UJ	LCS-L	ug/kg
OCRI-18	360-24686-10	SW8270	OC-SS-453-0.0/1.0-XXX	Benzoic Acid	240	B	240	U	BL	ug/kg
OCRI-18	360-24686-11	SW8270	OC-SS-457-0.0/1.0-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-18	360-24686-11	SW8270	OC-SS-457-0.0/1.0-XXX	Benzoic Acid	75	J B	180	U	BL	ug/kg
OCRI-18	360-24686-11	SW8270	OC-SS-457-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	37		37	EB	BL	ug/kg
OCRI-18	360-24686-13	SW8270	OC-SS-456-0.0/1.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-18	360-24686-13	SW8270	OC-SS-456-0.0/1.0-XXX	Benzoic Acid	2200		2200	U	BL	ug/kg
OCRI-18	360-24686-13	SW8270	OC-SS-456-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	19	J	19	JEB	BL	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Aniline	370	U *	370	UJ	LCS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Benzo(a)pyrene	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Benzo(b)fluoranthene	130	J	130	J	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Benzo(ghi)perylene	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Benzo(k)fluoranthene	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Benzoic Acid	1600	J B	1900	U	BL	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	120	J	120	JEB	BL	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Dibenz(a,h)anthracene	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Di-n-octylphthalate	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-14	SW8270	OC-SS-458-0.0/1.0-XXX	Indeno(1,2,3-cd)pyrene	370	U	370	UJ	IS-L	ug/kg
OCRI-18	360-24686-15	SW8270	OC-SS-459-0.0/1.0-XXX	Aniline	380	U *	380	UJ	LCS-L	ug/kg
OCRI-18	360-24686-15	SW8270	OC-SS-459-0.0/1.0-XXX	Benzoic Acid	1100	J B	1900	U	BL	ug/kg

TABLE 3.3 - VALIDATION CODE SUMMARY - SVOCs
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-18	360-24686-16	SW8270	OC-SS-461-0.0/1.0-XXX	Aniline	390	U *	390	UJ	LCS-L	ug/kg
OCRI-18	360-24686-16	SW8270	OC-SS-461-0.0/1.0-XXX	Benzoic Acid	1200	J B	2000	U	BL	ug/kg
OCRI-18	360-24686-2	SW8270	OC-SB-435-0.0/1.0-XXX	Aniline	1900	U *	1900	UJ	LCS-L	ug/kg
OCRI-18	360-24686-2	SW8270	OC-SB-435-0.0/1.0-XXX	Benzoic Acid	8100	J B	8100	JEB	BL	ug/kg
OCRI-18	360-24686-2	SW8270	OC-SB-435-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	1400	J	1400	JEB	BL	ug/kg
OCRI-18	360-24686-3	SW8270	OC-SB-435-11/15-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg
OCRI-18	360-24686-4	SW8270	OC-SB-435-6.0/10-XXX	Aniline	38	U *	38	UJ	LCS-L	ug/kg
OCRI-18	360-24686-5	SW8270	OC-SB-453-0.0/1.0-XXX	Aniline	17000	U *	17000	UJ	LCS-L	ug/kg
OCRI-18	360-24686-5	SW8270	OC-SB-453-0.0/1.0-XXX	Benzoic Acid	34000	J B	34000	JEB	BL	ug/kg
OCRI-18	360-24686-5	SW8270	OC-SB-453-0.0/1.0-XXX	Bis(2-Ethylhexyl)phthalate	17000	J	17000	JEB	BL	ug/kg
OCRI-18	360-24686-6	SW8270	OC-SB-453-1.0/6.0-XXX	Aniline	41	U *	41	UJ	LCS-L	ug/kg
OCRI-18	360-24686-6	SW8270	OC-SB-453-1.0/6.0-XXX	Benzoic Acid	80	J B	200	U	BL	ug/kg
OCRI-18	360-24686-7	SW8270	OC-SB-473-0.0/1.0-XXX	Aniline	410	U *	410	UJ	LCS-L	ug/kg
OCRI-18	360-24686-7	SW8270	OC-SB-473-0.0/1.0-XXX	Benzoic Acid	760	J B	2000	U	BL	ug/kg
OCRI-18	360-24686-9	SW8270	OC-SB-473-4.0/6.0-XXX	2-Nitroaniline	200	U	200	UJ	MS-L	ug/kg
OCRI-18	360-24686-9	SW8270	OC-SB-473-4.0/6.0-XXX	Aniline	39	U *	39	UJ	LCS-L	ug/kg
OCRI-18	360-24686-9	SW8270	OC-SB-473-4.0/6.0-XXX	Hexachlorocyclopentadiene	79	U	79	UJ	MS-L	ug/kg
OCRI-18	360-24686-9	SW8270	OC-SB-473-4.0/6.0-XXX	Hexachloroethane	39	U	39	UJ	MS-L	ug/kg
OCRI-18A	360-24686-1	SW8270	OC-SB-400-17/19-XXX	Aniline	37	U *	37	UJ	LCS-L	ug/kg
OCRI-18A	360-24686-1	SW8270	OC-SB-400-17/19-XXX	Benzoic Acid	65	J B	65	U	BL	ug/kg
OCRI-18A	360-24686-8	SW8270	OC-SB-473-13/15-XXX	Aniline	36	U *	36	UJ	LCS-L	ug/kg

Notes:
Samples analyzed by SW-846 Method
8270C - Low Level
Units: ug/kg = micrograms per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated
R = rejected

Validation Reason Codes:
BL = QC Blank Qualifier
CCV%D = Continuing calibration %D
CCVRRF = Continuing calibration RRF
FD = Field Duplicate limit exceeded
ICVRRF = Initial calibration RRF
IS-H = Internal Standard response above
IS-L = Internal Standard response below limit
LCS-H = LCS recovery high
LCS-L = LCS recovery low
LCS-RPD = LCS-LCSD RPD limit exceeded
MS-L = MS and/or MSD recovery low
MS-RPD = MS/MSD RPD limit exceeded
SS-L = Surrogate recovery below limits

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.5 - VALIDATION CODE SUMMARY - EPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-4	MAEPH	OC-SB-427-8.0/10-DUP	C19-C36 Aliphatics	39		39	J	MS-L	mg/kg
OCRI-14	360-24563-4	MAEPH	OC-SB-427-8.0/10-DUP	C9-C18 Aliphatics	17	U	17	UJ	MS-L	mg/kg
OCRI-14	360-24563-4	MAEPH	OC-SB-427-8.0/10-DUP	Extractable Petroleum Hydrocarbons, Total	39		39	J	MS-L	mg/kg
OCRI-14	360-24563-5	MAEPH	OC-SB-427-8.0/10-XXX	C19-C36 Aliphatics	45		45	J	MS-L	mg/kg
OCRI-14	360-24563-5	MAEPH	OC-SB-427-8.0/10-XXX	C9-C18 Aliphatics	18		18	J	MS-L	mg/kg
OCRI-14	360-24563-5	MAEPH	OC-SB-427-8.0/10-XXX	Extractable Petroleum Hydrocarbons, Total	63		63	J	MS-L	mg/kg

Notes:

Samples analyzed by MADEP Method EPH-98-1

Units: mg/kg = milligrams per lkilogram

Qualifiers:

J = estimated

U = not-detected

Validation Reason Codes:

MS-L = MS and/or MSD recovery low

Prepared by / Date: KJC 06/22/10

Checked by / Date: TLC 06/30/10

TABLE 3.6 - VALIDATION CODE SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	C5-C8 Aliphatics	6.4		6.4	J	SS-L	mg/kg
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	C5-C8 Aliphatics (unadj.)	6.4		6.4	J	SS-L	mg/kg
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	C9-C10 Aromatics	3.2		3.2	J	SS-L	mg/kg
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	C9-C12 Aliphatics	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	C9-C12 Aliphatics (unadj.)	5.8		5.8	J	SS-L	mg/kg
OCRI-02	360-24194-2	MAVPH	OC-SB-421-10.5/12.5-XXX	Volatile Petroleum Hydrocarbons, Total	9.6		9.6	J	SS-L	mg/kg
OCRI-02	360-24194-3	MAVPH	OC-SB-421-8.0/10-XXX	C9-C10 Aromatics	2.5	U	2.5	UJ	SS-L	mg/kg
OCRI-02	360-24194-3	MAVPH	OC-SB-421-8.0/10-XXX	Volatile Petroleum Hydrocarbons, Total	2.5	U	2.5	UJ	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	C5-C8 Aliphatics	3.2	U	3.2	UJ	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	C5-C8 Aliphatics (unadj.)	3.2	U	3.2	UJ	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	C9-C10 Aromatics	3.4		3.4	J	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	C9-C12 Aliphatics	3.2	U	3.2	UJ	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	C9-C12 Aliphatics (unadj.)	3.2	U	3.2	UJ	SS-L	mg/kg
OCRI-04	360-24244-1	MAVPH	OC-SB-432-0.0/1.0-XXX	Volatile Petroleum Hydrocarbons, Total	3.4		3.4	J	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	C5-C8 Aliphatics	23	U	23	UJ	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	C5-C8 Aliphatics (unadj.)	23	U	23	UJ	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	C9-C10 Aromatics	61		61	J	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	C9-C12 Aliphatics	23	U	23	UJ	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	C9-C12 Aliphatics (unadj.)	75		75	J	SS-L	mg/kg
OCRI-04	360-24244-2	MAVPH	OC-SB-432-14/16-XXX	Volatile Petroleum Hydrocarbons, Total	61		61	J	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	C5-C8 Aliphatics	28	U	28	UJ	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	C5-C8 Aliphatics (unadj.)	28	U	28	UJ	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	C9-C10 Aromatics	36		36	J	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	C9-C12 Aliphatics	28	U	28	UJ	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	C9-C12 Aliphatics (unadj.)	31		31	J	SS-L	mg/kg
OCRI-04	360-24244-3	MAVPH	OC-SB-432-5.0/7.0-XXX	Volatile Petroleum Hydrocarbons, Total	36		36	J	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	C5-C8 Aliphatics	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	C5-C8 Aliphatics (unadj.)	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	C9-C10 Aromatics	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	C9-C12 Aliphatics	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	C9-C12 Aliphatics (unadj.)	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-10	MAVPH	OC-SB-440-6.0/8.0-XXX	Volatile Petroleum Hydrocarbons, Total	3.1	U	3.1	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	C5-C8 Aliphatics	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	C5-C8 Aliphatics (unadj.)	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	C9-C10 Aromatics	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	C9-C12 Aliphatics	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	C9-C12 Aliphatics (unadj.)	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-8	MAVPH	OC-SB-440-0.0/1.0-XXX	Volatile Petroleum Hydrocarbons, Total	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	C5-C8 Aliphatics	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	C5-C8 Aliphatics (unadj.)	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	C9-C10 Aromatics	2.4	U	2.4	UJ	SS-L	mg/kg

TABLE 3.6 - VALIDATION CODE SUMMARY - VPH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	C9-C12 Aliphatics	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	C9-C12 Aliphatics (unadj.)	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-05	360-24251-9	MAVPH	OC-SB-440-23/25-XXX	Volatile Petroleum Hydrocarbons, Total	2.4	U	2.4	UJ	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	C5-C8 Aliphatics	1400		1400	J	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	C5-C8 Aliphatics (unadj.)	1400		1400	J	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	C9-C10 Aromatics	28		28	J	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	C9-C12 Aliphatics	27	U	27	UJ	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	C9-C12 Aliphatics (unadj.)	27	U	27	UJ	SS-L	mg/kg
OCRI-14	360-24563-2	MAVPH	OC-SB-427-12/14-XXX	Volatile Petroleum Hydrocarbons, Total	1400		1400	J	SS-L	mg/kg
OCRI-14	360-24563-5	MAVPH	OC-SB-427-8.0/10-XXX	C9-C10 Aromatics	2.7	U	2.7	UJ	SS-L	mg/kg
OCRI-14	360-24563-5	MAVPH	OC-SB-427-8.0/10-XXX	Volatile Petroleum Hydrocarbons, Total	2.7	U	2.7	UJ	SS-L	mg/kg
OCRI-14	360-24563-6	MAVPH	OC-SB-428-0.0/1.0-XXX	C5-C8 Aliphatics	2.3	U	2.3	UJ	SS-L	mg/kg
OCRI-14	360-24563-6	MAVPH	OC-SB-428-0.0/1.0-XXX	C5-C8 Aliphatics (unadj.)	2.3	U	2.3	UJ	SS-L	mg/kg
OCRI-14	360-24563-6	MAVPH	OC-SB-428-0.0/1.0-XXX	C9-C12 Aliphatics	2.3	U	2.3	UJ	SS-L	mg/kg
OCRI-14	360-24563-6	MAVPH	OC-SB-428-0.0/1.0-XXX	C9-C12 Aliphatics (unadj.)	2.3	U	2.3	UJ	SS-L	mg/kg
OCRI-14	360-24563-6	MAVPH	OC-SB-428-0.0/1.0-XXX	Volatile Petroleum Hydrocarbons, Total	2.3	U	2.3	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	C5-C8 Aliphatics	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	C5-C8 Aliphatics (unadj.)	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	C9-C10 Aromatics	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	C9-C12 Aliphatics	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	C9-C12 Aliphatics (unadj.)	2.6	U	2.6	UJ	SS-L	mg/kg
OCRI-14	360-24563-9	MAVPH	OC-SB-428-8.0/10-XXX	Volatile Petroleum Hydrocarbons, Total	2.6	U	2.6	UJ	SS-L	mg/kg

Notes:
Samples analyzed by MADEP Method VPH-98-1
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
U = not-detected

Validation Reason Codes:
SS-L = Surrogate recovery below limits

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-1	SW6010	OC-SB-405-0.0/1.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-01	360-24173-1	SW6010	OC-SB-405-0.0/1.0-XXX	Copper	5.9	B	5.9	EB	BL	mg/kg
OCRI-01	360-24173-1	SW6010	OC-SB-405-0.0/1.0-XXX	Tin	2.7	J B	2.7	J	QLS-L	mg/kg
OCRI-01	360-24173-11	SW6010	OC-SB-412-6.0/7.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-01	360-24173-11	SW6010	OC-SB-412-6.0/7.0-XXX	Copper	4.9	B	4.9	EB	BL	mg/kg
OCRI-01	360-24173-11	SW6010	OC-SB-412-6.0/7.0-XXX	Tin	8.7	B	8.7	J	QLS-L	mg/kg
OCRI-01	360-24173-12	SW6010	OC-SB-420-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-01	360-24173-12	SW6010	OC-SB-420-0.0/1.0-XXX	Copper	7.1	B	7.1	EB	BL	mg/kg
OCRI-01	360-24173-12	SW6010	OC-SB-420-0.0/1.0-XXX	Tin	5.8	B	5.8	J	QLS-L	mg/kg
OCRI-01	360-24173-14	SW6010	OC-SB-420-6.5/8.5-XXX	Antimony	0.35	J	0.35	J	MS-L	mg/kg
OCRI-01	360-24173-14	SW6010	OC-SB-420-6.5/8.5-XXX	Lead	2.1		2.1	EB	BL	mg/kg
OCRI-01	360-24173-14	SW6010	OC-SB-420-6.5/8.5-XXX	Tin	6	J B	6	J	QLS-L	mg/kg
OCRI-01	360-24173-15	SW6010	OC-SB-423-0.0/1.0-XXX	Antimony	0.53	U	0.53	UJ	MS-L	mg/kg
OCRI-01	360-24173-15	SW6010	OC-SB-423-0.0/1.0-XXX	Copper	4.3	B	4.3	EB	BL	mg/kg
OCRI-01	360-24173-15	SW6010	OC-SB-423-0.0/1.0-XXX	Tin	5.8	B	5.8	J	QLS-L	mg/kg
OCRI-01	360-24173-17	SW6010	OC-SB-423-5.0/6.0-XXX	Antimony	0.26	J	0.26	J	MS-L	mg/kg
OCRI-01	360-24173-17	SW6010	OC-SB-423-5.0/6.0-XXX	Tin	13	B	13	J	QLS-L	mg/kg
OCRI-01	360-24173-3	SW6010	OC-SB-405-8.0/9.0-XXX	Antimony	2.9	U	2.9	UJ	MS-L	mg/kg
OCRI-01	360-24173-3	SW6010	OC-SB-405-8.0/9.0-XXX	Tin	7.6	B	7.6	J	QLS-L	mg/kg
OCRI-01	360-24173-4	SW6010	OC-SB-416-0.0/1.0-XXX	Antimony	0.55	U	0.55	UJ	MS-L	mg/kg
OCRI-01	360-24173-4	SW6010	OC-SB-416-0.0/1.0-XXX	Copper	2.7	B	2.7	EB	BL	mg/kg
OCRI-01	360-24173-4	SW6010	OC-SB-416-0.0/1.0-XXX	Lead	1.4		1.4	EB	BL	mg/kg
OCRI-01	360-24173-4	SW6010	OC-SB-416-0.0/1.0-XXX	Tin	2.8	J B	2.8	J	QLS-L	mg/kg
OCRI-01	360-24173-6	SW6010	OC-SB-416-8.0/9.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-01	360-24173-6	SW6010	OC-SB-416-8.0/9.0-XXX	Lead	2.3		2.3	EB	BL	mg/kg
OCRI-01	360-24173-6	SW6010	OC-SB-416-8.0/9.0-XXX	Tin	5.6	J B	5.6	J	QLS-L	mg/kg
OCRI-01	360-24173-9	SW6010	OC-SB-412-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-01	360-24173-9	SW6010	OC-SB-412-0.0/1.0-XXX	Copper	2.7	B	2.7	EB	BL	mg/kg
OCRI-01	360-24173-9	SW6010	OC-SB-412-0.0/1.0-XXX	Lead	1.4		1.4	EB	BL	mg/kg
OCRI-01	360-24173-9	SW6010	OC-SB-412-0.0/1.0-XXX	Tin	8.8	B	8.8	J	QLS-L	mg/kg
OCRI-01A	360-24173-10	SW6010	OC-SB-412-12/13-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-01A	360-24173-10	SW6010	OC-SB-412-12/13-XXX	Tin	9.1	B ^	9.1	J	QLS-L	mg/kg
OCRI-01A	360-24173-13	SW6010	OC-SB-420-12/14-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-01A	360-24173-13	SW6010	OC-SB-420-12/14-XXX	Tin	2.6	J B ^	2.6	J	QLS-L	mg/kg
OCRI-01A	360-24173-16	SW6010	OC-SB-423-13/14-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-01A	360-24173-16	SW6010	OC-SB-423-13/14-XXX	Lead	1.6		1.6	EB	BL	mg/kg
OCRI-01A	360-24173-16	SW6010	OC-SB-423-13/14-XXX	Tin	4.9	J B ^	4.9	J	QLS-L	mg/kg
OCRI-01A	360-24173-2	SW6010	OC-SB-405-14/15-XXX	Antimony	1.4	U	1.4	UJ	MS-L	mg/kg
OCRI-01A	360-24173-2	SW6010	OC-SB-405-14/15-XXX	Lead	0.94	J	0.94	JEB	BL	mg/kg
OCRI-01A	360-24173-2	SW6010	OC-SB-405-14/15-XXX	Tin	12	J B ^	12	J	QLS-L	mg/kg
OCRI-01A	360-24173-5	SW6010	OC-SB-416-13/14-XXX	Antimony	3.1	U	3.1	UJ	MS-L	mg/kg
OCRI-01A	360-24173-5	SW6010	OC-SB-416-13/14-XXX	Lead	0.57	J	0.57	JEB	BL	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01A	360-24173-5	SW6010	OC-SB-416-13/14-XXX	Tin	12	J B ^	12	J	QLS-L	mg/kg
OCRI-02	360-24194-1	SW6010	OC-SB-421-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-02	360-24194-1	SW6010	OC-SB-421-0.0/1.0-XXX	Tin	14	B	14	J	QLS-L	mg/kg
OCRI-02	360-24194-3	SW6010	OC-SB-421-8.0/10-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-02	360-24194-3	SW6010	OC-SB-421-8.0/10-XXX	Tin	4	J B	4	J	QLS-L	mg/kg
OCRI-02	360-24194-4	SW6010	OC-SB-424-0.0/1.0-XXX	Antimony	0.53	U	0.53	UJ	MS-L	mg/kg
OCRI-02	360-24194-4	SW6010	OC-SB-424-0.0/1.0-XXX	Tin	8.9	B	8.9	J	QLS-L	mg/kg
OCRI-02	360-24194-6	SW6010	OC-SB-424-7.0/9.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-02	360-24194-6	SW6010	OC-SB-424-7.0/9.0-XXX	Tin	8.2	B	8.2	J	QLS-L	mg/kg
OCRI-02	360-24194-7	SW6010	OC-SB-425-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-02	360-24194-7	SW6010	OC-SB-425-0.0/1.0-XXX	Tin	7.4	B	7.4	J	QLS-L	mg/kg
OCRI-02	360-24194-9	SW6010	OC-SB-425-6.0/8.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-02	360-24194-9	SW6010	OC-SB-425-6.0/8.0-XXX	Tin	3.6	J B	3.6	J	QLS-L	mg/kg
OCRI-02A	360-24194-2	SW6010	OC-SB-421-10.5/12.5-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-02A	360-24194-2	SW6010	OC-SB-421-10.5/12.5-XXX	Tin	13	B ^	13	J	QLS-L	mg/kg
OCRI-02A	360-24194-5	SW6010	OC-SB-424-17/19-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-02A	360-24194-5	SW6010	OC-SB-424-17/19-XXX	Tin	33	B ^	33	J	QLS-L	mg/kg
OCRI-02A	360-24194-8	SW6010	OC-SB-425-18/20-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-02A	360-24194-8	SW6010	OC-SB-425-18/20-XXX	Tin	16	B ^	16	J	QLS-L	mg/kg
OCRI-03	360-24223-1	SW6010	OC-SB-415-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-03	360-24223-1	SW6010	OC-SB-415-0.0/1.0-XXX	Thallium	0.12	J B	1.1	U	BL	mg/kg
OCRI-03	360-24223-1	SW6010	OC-SB-415-0.0/1.0-XXX	Tin	3.4	J B	3.4	J	QLS-L	mg/kg
OCRI-03	360-24223-10	SW6010	OC-SB-426-5.0/7.0-DUP	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-03	360-24223-10	SW6010	OC-SB-426-5.0/7.0-DUP	Tin	50	B	50	J	QLS-L	mg/kg
OCRI-03	360-24223-11	SW6010	OC-SB-431-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-03	360-24223-11	SW6010	OC-SB-431-0.0/1.0-XXX	Thallium	0.091	J B	1.2	U	BL	mg/kg
OCRI-03	360-24223-11	SW6010	OC-SB-431-0.0/1.0-XXX	Tin	3.9	J B	3.9	J	QLS-L	mg/kg
OCRI-03	360-24223-12	SW6010	OC-SB-431-7.0/9.0-XXX	Antimony	1.2	U	1.2	UJ	MS-L	mg/kg
OCRI-03	360-24223-12	SW6010	OC-SB-431-7.0/9.0-XXX	Tin	19	B	19	J	QLS-L	mg/kg
OCRI-03	360-24223-13	SW6010	OC-SB-436-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-03	360-24223-13	SW6010	OC-SB-436-0.0/1.0-XXX	Tin	48	B	48	J	QLS-L	mg/kg
OCRI-03	360-24223-15	SW6010	OC-SB-436-6.0/8.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-03	360-24223-15	SW6010	OC-SB-436-6.0/8.0-XXX	Tin	8.8	B	8.8	J	QLS-L	mg/kg
OCRI-03	360-24223-3	SW6010	OC-SB-415-5.0/7.0-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-03	360-24223-3	SW6010	OC-SB-415-5.0/7.0-XXX	Tin	2.3	J B	2.3	J	QLS-L	mg/kg
OCRI-03	360-24223-4	SW6010	OC-SB-419-0.0/1.0-XXX	Antimony	0.54	U	0.54	UJ	MS-L	mg/kg
OCRI-03	360-24223-4	SW6010	OC-SB-419-0.0/1.0-XXX	Tin	2.2	J B	5.4	U	BL, QLS-L	mg/kg
OCRI-03	360-24223-6	SW6010	OC-SB-419-3.0/5.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-03	360-24223-6	SW6010	OC-SB-419-3.0/5.0-XXX	Thallium	0.098	J B	1.2	U	BL	mg/kg
OCRI-03	360-24223-6	SW6010	OC-SB-419-3.0/5.0-XXX	Tin	1.9	J B	5.9	U	BL, QLS-L	mg/kg
OCRI-03	360-24223-7	SW6010	OC-SB-426-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-03	360-24223-7	SW6010	OC-SB-426-0.0/1.0-XXX	Tin	80	B	80	J	QLS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03	360-24223-9	SW6010	OC-SB-426-5.0/7.0-XXX	Antimony	0.29	J	0.29	J	MS-L	mg/kg
OCRI-03	360-24223-9	SW6010	OC-SB-426-5.0/7.0-XXX	Thallium	0.15	J B	1.3	U	BL	mg/kg
OCRI-03	360-24223-9	SW6010	OC-SB-426-5.0/7.0-XXX	Tin	46	B	46	J	QLS-L	mg/kg
OCRI-03A	360-24223-14	SW6010	OC-SB-436-13/15-XXX	Antimony	1.3	U	1.3	UJ	MS-L	mg/kg
OCRI-03A	360-24223-14	SW6010	OC-SB-436-13/15-XXX	Tin	79	B ^	79	J	QLS-L	mg/kg
OCRI-03A	360-24223-2	SW6010	OC-SB-415-16/18-XXX	Antimony	0.46	J	0.46	J	MS-L	mg/kg
OCRI-03A	360-24223-2	SW6010	OC-SB-415-16/18-XXX	Tin	1.7	J B ^	13	UJ	BL, QLS-L	mg/kg
OCRI-03A	360-24223-5	SW6010	OC-SB-419-17/19-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-03A	360-24223-5	SW6010	OC-SB-419-17/19-XXX	Tin	57	B ^	57	J	QLS-L	mg/kg
OCRI-03A	360-24223-8	SW6010	OC-SB-426-13/15-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-03A	360-24223-8	SW6010	OC-SB-426-13/15-XXX	Tin	39	B ^	39	J	QLS-L	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Antimony	0.73		0.73	J	MS-L	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Barium	85	B	85	J	MS-L	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Lead	17		17	J	LD	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Magnesium	3300	B	3300	J	MS-H	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Nickel	20	B	20	J	LD	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Potassium	1800		1800	J	MS-H	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Thallium	0.13	J	0.13	J	MS-L	mg/kg
OCRI-04	360-24244-1	SW6010	OC-SB-432-0.0/1.0-XXX	Tin	17	B	17	J	QLS-L	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Barium	25	B	25	J	MS-L	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Lead	39		39	J	LD	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Magnesium	1600	B	1600	J	MS-H	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Nickel	7.6	B	7.6	J	LD	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Potassium	870		870	J	MS-H	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Thallium	1.3	U	1.3	UJ	MS-L	mg/kg
OCRI-04	360-24244-10	SW6010	OC-SB-437-0.0/1.0-XXX	Tin	8.4	B	8.4	J	QLS-L	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Barium	6.9	B	6.9	J	MS-L	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Lead	1.4		1.4	J	LD	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Magnesium	830	B	830	J	MS-H	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Nickel	5	B	5	J	LD	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Potassium	430		430	J	MS-H	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Thallium	1.3	U	1.3	UJ	MS-L	mg/kg
OCRI-04	360-24244-12	SW6010	OC-SB-437-5.0/7.0-XXX	Tin	2	J B	6.5	U	BL, QLS-L	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Barium	35	B	35	J	MS-L	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Lead	1.9		1.9	J	LD	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Magnesium	1400	B	1400	J	MS-H	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Nickel	4.3	B	4.3	J	LD	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Potassium	1000		1000	J	MS-H	mg/kg
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Thallium	1.2	U	1.2	UJ	MS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
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OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04	360-24244-2	SW6010	OC-SB-432-14/16-XXX	Tin	6.8	B	6.8	J	QLS-L	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Antimony	0.76	U	0.76	UJ	MS-L	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Barium	2.2	B	2.2	J	MS-L	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Lead	0.73	J	0.73	J	LD	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Magnesium	69	B	69	J	MS-H	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Nickel	0.93	J B	0.93	J	LD	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Potassium	270	J	270	J	MS-H	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Thallium	1.5	U	1.5	UJ	MS-L	mg/kg
OCRI-04	360-24244-3	SW6010	OC-SB-432-5.0/7.0-XXX	Tin	4.9	J B	4.9	J	QLS-L	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Barium	12	B	12	J	MS-L	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Lead	3		3	J	LD	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Magnesium	1200	B	1200	J	MS-H	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Nickel	10	B	10	J	LD	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Potassium	700		700	J	MS-H	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Thallium	1.4	U	1.4	UJ	MS-L	mg/kg
OCRI-04	360-24244-4	SW6010	OC-SB-443-0.0/1.0-XXX	Tin	24	B	24	J	QLS-L	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Barium	3.7	B	3.7	J	MS-L	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Copper	1.4		1.4	EB	BL	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Lead	0.81		0.81	J	LD	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Magnesium	290	B	290	J	MS-H	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Nickel	1.5	B	1.5	J	LD	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Potassium	410		410	J	MS-H	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Thallium	1.4	U	1.4	UJ	MS-L	mg/kg
OCRI-04	360-24244-6	SW6010	OC-SB-443-6.0/8.0-XXX	Tin	0.85	J B	6.8	U	BL, QLS-L	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Barium	26	B	26	J	MS-L	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Lead	5		5	J	LD	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Magnesium	2900	B	2900	J	MS-H	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Nickel	9.9	B	9.9	J	LD	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Potassium	1100		1100	J	MS-H	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Thallium	1.1	U	1.1	UJ	MS-L	mg/kg
OCRI-04	360-24244-7	SW6010	OC-SB-445-0.0/1.0-XXX	Tin	3.7	J B	3.7	J	QLS-L	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Barium	12	B	12	J	MS-L	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Lead	1.9		1.9	J	LD	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Magnesium	1100	B	1100	J	MS-H	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Nickel	5.4	B	5.4	J	LD	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Potassium	740		740	J	MS-H	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Thallium	1.5	U	1.5	UJ	MS-L	mg/kg
OCRI-04	360-24244-9	SW6010	OC-SB-445-8.0/10-XXX	Tin	5.5	J B	5.5	J	QLS-L	mg/kg

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WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Calcium	3200	B	3200	J	MS-H	mg/kg
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Lead	1.3		1.3	J	LD	mg/kg
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Magnesium	6200	B	6200	J	MS-H	mg/kg
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Nickel	15		15	J	LD	mg/kg
OCRI-04A	360-24244-11	SW6010	OC-SB-437-21/23-XXX	Tin	12	^ B	12	J	QLS-L	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Calcium	4700	B	4700	J	MS-H	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Lead	2.5		2.5	J	LD	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Magnesium	3000	B	3000	J	MS-H	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Nickel	9.3		9.3	J	LD	mg/kg
OCRI-04A	360-24244-5	SW6010	OC-SB-443-18/20-XXX	Tin	6.1	J ^ B	6.1	J	QLS-L	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Calcium	3000	B	3000	J	MS-H	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Lead	1.2		1.2	J	LD	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Magnesium	5100	B	5100	J	MS-H	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Nickel	17		17	J	LD	mg/kg
OCRI-04A	360-24244-8	SW6010	OC-SB-445-25/27-XXX	Tin	17	^ B	17	J	QLS-L	mg/kg
OCRI-05	360-24251-1	SW6010	OC-SB-433-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-05	360-24251-1	SW6010	OC-SB-433-0.0/1.0-XXX	Magnesium	1000	B	1000	J	SD	mg/kg
OCRI-05	360-24251-1	SW6010	OC-SB-433-0.0/1.0-XXX	Potassium	540	*	540	J	LCS-L	mg/kg
OCRI-05	360-24251-1	SW6010	OC-SB-433-0.0/1.0-XXX	Tin	4.2	J B	4.2	J	QLS-L	mg/kg
OCRI-05	360-24251-10	SW6010	OC-SB-440-6.0/8.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-05	360-24251-10	SW6010	OC-SB-440-6.0/8.0-XXX	Magnesium	1100	B	1100	J	SD	mg/kg
OCRI-05	360-24251-10	SW6010	OC-SB-440-6.0/8.0-XXX	Potassium	560	*	560	J	LCS-L	mg/kg
OCRI-05	360-24251-10	SW6010	OC-SB-440-6.0/8.0-XXX	Tin	3.5	J B	3.5	J	QLS-L	mg/kg
OCRI-05	360-24251-12	SW6010	OC-SB-438-5.0/7.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-05	360-24251-12	SW6010	OC-SB-438-5.0/7.0-XXX	Magnesium	970	B	970	J	SD	mg/kg
OCRI-05	360-24251-12	SW6010	OC-SB-438-5.0/7.0-XXX	Potassium	600	*	600	J	LCS-L	mg/kg
OCRI-05	360-24251-12	SW6010	OC-SB-438-5.0/7.0-XXX	Tin	2.1	J B	6.2	UJ	BL, QLS-L	mg/kg
OCRI-05	360-24251-13	SW6010	OC-SB-441-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-05	360-24251-13	SW6010	OC-SB-441-0.0/1.0-XXX	Magnesium	1500	B	1500	J	SD	mg/kg
OCRI-05	360-24251-13	SW6010	OC-SB-441-0.0/1.0-XXX	Potassium	610	*	610	J	LCS-L	mg/kg
OCRI-05	360-24251-13	SW6010	OC-SB-441-0.0/1.0-XXX	Tin	12	B	12	J	QLS-L	mg/kg
OCRI-05	360-24251-15	SW6010	OC-SB-441-8.0/10-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-05	360-24251-15	SW6010	OC-SB-441-8.0/10-XXX	Magnesium	1000	B	1000	J	SD	mg/kg
OCRI-05	360-24251-15	SW6010	OC-SB-441-8.0/10-XXX	Potassium	740	*	740	J	LCS-L	mg/kg
OCRI-05	360-24251-15	SW6010	OC-SB-441-8.0/10-XXX	Tin	3	J B	3	J	QLS-L	mg/kg
OCRI-05	360-24251-16	SW6010	OC-SB-446-0.0/1.0-XXX	Antimony	0.43	J	0.43	J	MS-L	mg/kg
OCRI-05	360-24251-16	SW6010	OC-SB-446-0.0/1.0-XXX	Magnesium	410	B	410	J	SD	mg/kg
OCRI-05	360-24251-16	SW6010	OC-SB-446-0.0/1.0-XXX	Potassium	370	*	370	J	LCS-L	mg/kg
OCRI-05	360-24251-16	SW6010	OC-SB-446-0.0/1.0-XXX	Tin	5.6	J B	5.6	J	QLS-L	mg/kg

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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-18	SW6010	OC-SB-446-5.0/7.0-DUP	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-05	360-24251-18	SW6010	OC-SB-446-5.0/7.0-DUP	Magnesium	71	B	71	J	SD	mg/kg
OCRI-05	360-24251-18	SW6010	OC-SB-446-5.0/7.0-DUP	Nickel	0.67	J B	1.3	U	BL	mg/kg
OCRI-05	360-24251-18	SW6010	OC-SB-446-5.0/7.0-DUP	Potassium	320	*	320	J	LCS-L	mg/kg
OCRI-05	360-24251-18	SW6010	OC-SB-446-5.0/7.0-DUP	Tin	0.82	J B	6.7	UJ	BL, QLS-L	mg/kg
OCRI-05	360-24251-19	SW6010	OC-SB-446-5.0/7.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-05	360-24251-19	SW6010	OC-SB-446-5.0/7.0-XXX	Magnesium	63	B	63	J	SD	mg/kg
OCRI-05	360-24251-19	SW6010	OC-SB-446-5.0/7.0-XXX	Nickel	0.64	J B	1.4	U	BL	mg/kg
OCRI-05	360-24251-19	SW6010	OC-SB-446-5.0/7.0-XXX	Potassium	330	*	330	J	LCS-L	mg/kg
OCRI-05	360-24251-19	SW6010	OC-SB-446-5.0/7.0-XXX	Tin	0.81	J B	6.9	UJ	BL, QLS-L	mg/kg
OCRI-05	360-24251-20	SW6010	OC-SB-448-0.0/1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-05	360-24251-20	SW6010	OC-SB-448-0.0/1.0-XXX	Magnesium	1200	B	1200	J	SD	mg/kg
OCRI-05	360-24251-20	SW6010	OC-SB-448-0.0/1.0-XXX	Potassium	510	*	510	J	LCS-L	mg/kg
OCRI-05	360-24251-20	SW6010	OC-SB-448-0.0/1.0-XXX	Tin	50	B	50	J	QLS-L	mg/kg
OCRI-05	360-24251-21	SW6010	OC-SB-448-17/19-XXX	Antimony	0.24	J	0.24	J	MS-L	mg/kg
OCRI-05	360-24251-21	SW6010	OC-SB-448-17/19-XXX	Magnesium	8100	B	8100	J	SD	mg/kg
OCRI-05	360-24251-21	SW6010	OC-SB-448-17/19-XXX	Tin	160	B	160	J	QLS-L	mg/kg
OCRI-05	360-24251-22	SW6010	OC-SB-448-8.0/10-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-05	360-24251-22	SW6010	OC-SB-448-8.0/10-XXX	Magnesium	2700	B	2700	J	SD	mg/kg
OCRI-05	360-24251-22	SW6010	OC-SB-448-8.0/10-XXX	Potassium	1800	*	1800	J	LCS-L	mg/kg
OCRI-05	360-24251-22	SW6010	OC-SB-448-8.0/10-XXX	Thallium	0.33	J	0.33	U	BL	mg/kg
OCRI-05	360-24251-22	SW6010	OC-SB-448-8.0/10-XXX	Tin	620	B	620	J	QLS-L	mg/kg
OCRI-05	360-24251-23	SW6010	OC-SB-438-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-05	360-24251-23	SW6010	OC-SB-438-0.0/1.0-XXX	Magnesium	1700	B	1700	J	SD	mg/kg
OCRI-05	360-24251-23	SW6010	OC-SB-438-0.0/1.0-XXX	Potassium	830	*	830	J	LCS-L	mg/kg
OCRI-05	360-24251-23	SW6010	OC-SB-438-0.0/1.0-XXX	Tin	3.7	J B	3.7	J	QLS-L	mg/kg
OCRI-05	360-24251-3	SW6010	OC-SB-433-5.0/7.0-DUP	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-05	360-24251-3	SW6010	OC-SB-433-5.0/7.0-DUP	Magnesium	960	B	960	J	SD	mg/kg
OCRI-05	360-24251-3	SW6010	OC-SB-433-5.0/7.0-DUP	Potassium	530	*	530	J	LCS-L	mg/kg
OCRI-05	360-24251-3	SW6010	OC-SB-433-5.0/7.0-DUP	Tin	2.1	J B	6.1	UJ	BL, QLS-L	mg/kg
OCRI-05	360-24251-4	SW6010	OC-SB-433-5.0/7.0-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-05	360-24251-4	SW6010	OC-SB-433-5.0/7.0-XXX	Magnesium	820	B	820	J	SD	mg/kg
OCRI-05	360-24251-4	SW6010	OC-SB-433-5.0/7.0-XXX	Potassium	430	*	430	J	LCS-L	mg/kg
OCRI-05	360-24251-4	SW6010	OC-SB-433-5.0/7.0-XXX	Tin	1.9	J B	7.2	UJ	BL, QLS-L	mg/kg
OCRI-05	360-24251-5	SW6010	OC-SB-439-0.0-1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-05	360-24251-5	SW6010	OC-SB-439-0.0-1.0-XXX	Magnesium	1600	B	1600	J	SD	mg/kg
OCRI-05	360-24251-5	SW6010	OC-SB-439-0.0-1.0-XXX	Potassium	400	*	400	J	LCS-L	mg/kg
OCRI-05	360-24251-5	SW6010	OC-SB-439-0.0-1.0-XXX	Thallium	0.35	J	0.35	U	BL	mg/kg
OCRI-05	360-24251-5	SW6010	OC-SB-439-0.0-1.0-XXX	Tin	400	B	400	J	QLS-L	mg/kg
OCRI-05	360-24251-7	SW6010	OC-SB-439-8.0/10-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-05	360-24251-7	SW6010	OC-SB-439-8.0/10-XXX	Magnesium	980	B	980	J	SD	mg/kg
OCRI-05	360-24251-7	SW6010	OC-SB-439-8.0/10-XXX	Potassium	610	*	610	J	LCS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-05	360-24251-7	SW6010	OC-SB-439-8.0/10-XXX	Tin	3.7	J B	3.7	J	QLS-L	mg/kg
OCRI-05	360-24251-8	SW6010	OC-SB-440-0.0/1.0-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-05	360-24251-8	SW6010	OC-SB-440-0.0/1.0-XXX	Magnesium	3100	B	3100	J	SD	mg/kg
OCRI-05	360-24251-8	SW6010	OC-SB-440-0.0/1.0-XXX	Potassium	1500	*	1500	J	LCS-L	mg/kg
OCRI-05	360-24251-8	SW6010	OC-SB-440-0.0/1.0-XXX	Tin	7.9	B	7.9	J	QLS-L	mg/kg
OCRI-05A	360-24251-14	SW6010	OC-SB-441-17/19-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-05A	360-24251-14	SW6010	OC-SB-441-17/19-XXX	Tin	5.9	J B ^	5.9	J	QLS-L	mg/kg
OCRI-05A	360-24251-17	SW6010	OC-SB-446-15/17-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-05A	360-24251-17	SW6010	OC-SB-446-15/17-XXX	Tin	9.4	B ^	9.4	J	QLS-L	mg/kg
OCRI-05A	360-24251-2	SW6010	OC-SB-433-20/22-XXX	Antimony	1.3	U	1.3	UJ	MS-L	mg/kg
OCRI-05A	360-24251-2	SW6010	OC-SB-433-20/22-XXX	Tin	17	B ^	17	J	QLS-L	mg/kg
OCRI-05A	360-24251-24	SW6010	OC-SB-438-20/22-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-05A	360-24251-24	SW6010	OC-SB-438-20/22-XXX	Tin	5.8	J B ^	5.8	J	QLS-L	mg/kg
OCRI-05A	360-24251-6	SW6010	OC-SB-439-16/18-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-05A	360-24251-6	SW6010	OC-SB-439-16/18-XXX	Tin	6.4	J B ^	6.4	J	QLS-L	mg/kg
OCRI-05A	360-24251-9	SW6010	OC-SB-440-23/25-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-05A	360-24251-9	SW6010	OC-SB-440-23/25-XXX	Tin	4.1	J B ^	4.1	J	QLS-L	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Antimony	0.67	U *	0.67	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Chromium	8.5		8.5	J	MS-L	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Copper	6.7		6.7	J	LD	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Magnesium	1400	B	1400	J	MS-L	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Potassium	580		580	J	QLS-L	mg/kg
OCRI-06	360-24309-1	SW6010	OC-SB-400-0.0/1.0-XXX	Tin	3	J B	3	J	QLS-L	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Antimony	0.67	U *	0.67	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Chromium	5.1		5.1	J	MS-L	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Copper	3.2		3.2	J	LD	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Magnesium	630	B	630	J	MS-L	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Potassium	360		360	J	QLS-L	mg/kg
OCRI-06	360-24309-10	SW6010	OC-SB-408-0.0/1.0-XXX	Tin	1.8	J B	6.7	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Antimony	0.6	U *	0.6	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Chromium	8.2		8.2	J	MS-L	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Copper	3.5		3.5	J	LD	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Magnesium	1200	B	1200	J	MS-L	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Potassium	660		660	J	QLS-L	mg/kg
OCRI-06	360-24309-11	SW6010	OC-SB-408-7.0/9.0-XXX	Tin	2.9	J B	2.9	J	QLS-L	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Antimony	0.61	U *	0.61	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Chromium	26		26	J	MS-L	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Copper	16		16	J	LD	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Magnesium	3400	B	3400	J	MS-L	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Potassium	1600		1600	J	QLS-L	mg/kg
OCRI-06	360-24309-12	SW6010	OC-SB-414-0.0/1.0-XXX	Tin	9.8	B	9.8	J	QLS-L	mg/kg
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Antimony	0.6	U *	0.6	UJ	LCS-L, MS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Chromium	12		12	J	MS-L	mg/kg
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Copper	4.9		4.9	J	LD	mg/kg
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Magnesium	850	B	850	J	MS-L	mg/kg
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Potassium	410		410	J	QLS-L	mg/kg
OCRI-06	360-24309-14	SW6010	OC-SB-414-6.0/8.0-XXX	Tin	10	B	10	J	QLS-L	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Antimony	0.63	U *	0.63	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Chromium	24		24	J	MS-L	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Copper	12		12	J	LD	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Magnesium	3300	B	3300	J	MS-L	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Potassium	1500		1500	J	QLS-L	mg/kg
OCRI-06	360-24309-15	SW6010	OC-SB-422-0.0/1.0-XXX	Tin	8.8	B	8.8	J	QLS-L	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Antimony	0.68	U *	0.68	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Chromium	5.9		5.9	J	MS-L	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Copper	2.5		2.5	J	LD	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Magnesium	830	B	830	J	MS-L	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Potassium	420		420	J	QLS-L	mg/kg
OCRI-06	360-24309-17	SW6010	OC-SB-422-6.0/8.0-XXX	Tin	2.1	J B	6.8	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Antimony	0.63	U *	0.63	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Chromium	38		38	J	MS-L	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Copper	12		12	J	LD	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Magnesium	1400	B	1400	J	MS-L	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Potassium	410		410	J	QLS-L	mg/kg
OCRI-06	360-24309-19	SW6010	OC-SB-429-6.0/8.0-XXX	Tin	16	B	16	J	QLS-L	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Antimony	0.68	U *	0.68	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Chromium	5		5	J	MS-L	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Copper	2.4		2.4	J	LD	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Magnesium	740	B	740	J	MS-L	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Potassium	500		500	J	QLS-L	mg/kg
OCRI-06	360-24309-2	SW6010	OC-SB-400-5.0/7.0-XXX	Tin	1.7	J B	6.8	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Antimony	0.55	U *	0.55	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Chromium	24		24	J	MS-L	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Copper	12		12	J	LD	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Magnesium	2800	B	2800	J	MS-L	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Potassium	2400		2400	J	QLS-L	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Thallium	0.09	J	0.09	JEB	BL	mg/kg
OCRI-06	360-24309-20	SW6010	OC-SB-430-0.0/1.0-XXX	Tin	8.9	B	8.9	J	QLS-L	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Antimony	0.72	U *	0.72	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Chromium	110		110	J	MS-L	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Copper	19		19	J	LD	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Magnesium	1700	B	1700	J	MS-L	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Potassium	750		750	J	QLS-L	mg/kg
OCRI-06	360-24309-22	SW6010	OC-SB-430-8.0/10-DUP	Tin	50	B	50	J	QLS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Antimony	0.99	*	0.99	J	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Chromium	91		91	J	MS-L	mg/kg
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Copper	18		18	J	LD	mg/kg
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Magnesium	1600	B	1600	J	MS-L	mg/kg
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Potassium	680		680	J	QLS-L	mg/kg
OCRI-06	360-24309-23	SW6010	OC-SB-430-8.0/10-XXX	Tin	39	B	39	J	QLS-L	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Antimony	0.68	U *	0.68	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Chromium	5.5		5.5	J	MS-L	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Copper	2.7		2.7	J	LD	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Magnesium	770	B	770	J	MS-L	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Potassium	420		420	J	QLS-L	mg/kg
OCRI-06	360-24309-3	SW6010	OC-SB-401-0.0/1.0-XXX	Tin	1.9	J B	6.8	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Antimony	0.61	U *	0.61	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Chromium	6		6	J	MS-L	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Copper	3		3	J	LD	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Magnesium	990	B	990	J	MS-L	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Potassium	650		650	J	QLS-L	mg/kg
OCRI-06	360-24309-4	SW6010	OC-SB-401-7.5/9.5-XXX	Tin	2.1	J B	6.1	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Antimony	0.62	U *	0.62	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Chromium	5.2		5.2	J	MS-L	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Copper	3		3	J	LD	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Magnesium	840	B	840	J	MS-L	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Potassium	360		360	J	QLS-L	mg/kg
OCRI-06	360-24309-5	SW6010	OC-SB-402-0.0/1.0-XXX	Tin	1.8	J B	6.2	UJ	BL, QLS-L	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Antimony	0.63	U *	0.63	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Chromium	12		12	J	MS-L	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Copper	3.4		3.4	J	LD	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Magnesium	980	B	980	J	MS-L	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Potassium	480		480	J	QLS-L	mg/kg
OCRI-06	360-24309-6	SW6010	OC-SB-402-7.5/9.5-XXX	Tin	4.5	J B	4.5	J	QLS-L	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Antimony	0.56	U *	0.56	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Chromium	6.9		6.9	J	MS-L	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Copper	4.5		4.5	J	LD	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Magnesium	530	B	530	J	MS-L	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Potassium	380		380	J	QLS-L	mg/kg
OCRI-06	360-24309-7	SW6010	OC-SB-407-0.0/1.0-XXX	Tin	2.5	J B	2.5	J	QLS-L	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Antimony	0.67	U *	0.67	UJ	LCS-L, MS-L	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Chromium	6.6		6.6	J	MS-L	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Copper	2		2	J	LD	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Magnesium	980	B	980	J	MS-L	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Potassium	540		540	J	QLS-L	mg/kg
OCRI-06	360-24309-9	SW6010	OC-SB-407-8.0/10-XXX	Tin	2.4	J B	2.4	J	QLS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-06A	360-24309-13	SW6010	OC-SB-414-20/22-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-06A	360-24309-13	SW6010	OC-SB-414-20/22-XXX	Tin	6	^ B	6	J	QLS-L	mg/kg
OCRI-06A	360-24309-16	SW6010	OC-SB-422-13/15-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-06A	360-24309-16	SW6010	OC-SB-422-13/15-XXX	Tin	5.7	J ^ B	5.7	J	QLS-L	mg/kg
OCRI-06A	360-24309-18	SW6010	OC-SB-429-16/18-XXX	Antimony	1.3	U	1.3	UJ	MS-L	mg/kg
OCRI-06A	360-24309-18	SW6010	OC-SB-429-16/18-XXX	Tin	10	J ^ B	10	J	QLS-L	mg/kg
OCRI-06A	360-24309-21	SW6010	OC-SB-430-19/21-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-06A	360-24309-21	SW6010	OC-SB-430-19/21-XXX	Thallium	0.096	J B	1.3	U	BL	mg/kg
OCRI-06A	360-24309-21	SW6010	OC-SB-430-19/21-XXX	Tin	6.9	^ B	6.9	J	QLS-L	mg/kg
OCRI-06A	360-24309-8	SW6010	OC-SB-407-26/28-XXX	Antimony	0.55	U	0.55	UJ	MS-L	mg/kg
OCRI-06A	360-24309-8	SW6010	OC-SB-407-26/28-XXX	Tin	4.8	J ^ B	4.8	J	QLS-L	mg/kg
OCRI-07	360-24327-1	SW6010	OC-SB-403-0.0/1.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-07	360-24327-11	SW6010	OC-SB-410-6.0/8.0-DUP	Antimony	0.85	U	0.85	UJ	MS-L	mg/kg
OCRI-07	360-24327-11	SW6010	OC-SB-410-6.0/8.0-DUP	Potassium	580		580	J	QLS-L	mg/kg
OCRI-07	360-24327-11	SW6010	OC-SB-410-6.0/8.0-DUP	Tin	2.8	J B	2.8	J	QLS-L	mg/kg
OCRI-07	360-24327-12	SW6010	OC-SB-410-6.0/8.0-XXX	Antimony	0.71	J	0.71	J	MS-L	mg/kg
OCRI-07	360-24327-12	SW6010	OC-SB-410-6.0/8.0-XXX	Potassium	680		680	J	QLS-L	mg/kg
OCRI-07	360-24327-12	SW6010	OC-SB-410-6.0/8.0-XXX	Tin	3.1	J B	3.1	J	QLS-L	mg/kg
OCRI-07	360-24327-13	SW6010	OC-SB-411-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-07	360-24327-14	SW6010	OC-SB-411-4.7/6.7-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-07	360-24327-15	SW6010	OC-SB-418-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-07	360-24327-17	SW6010	OC-SB-418-8/10-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-07	360-24327-3	SW6010	OC-SB-403-6.0/8.0-XXX	Antimony	1	U	1	UJ	MS-L	mg/kg
OCRI-07	360-24327-5	SW6010	OC-SB-404-5.0/7.0-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-07	360-24327-5	SW6010	OC-SB-404-5.0/7.0-XXX	Tin	2.1	J B	7.2	U	BL	mg/kg
OCRI-07	360-24327-6	SW6010	OC-SB-409-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-07	360-24327-8	SW6010	OC-SB-409-6.0/8.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-07	360-24327-8	SW6010	OC-SB-409-6.0/8.0-XXX	Tin	2.2	J B	6.7	U	BL	mg/kg
OCRI-07	360-24327-9	SW6010	OC-SB-410-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-07A	360-24327-10	SW6010	OC-SB-410-17/19-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-07A	360-24327-16	SW6010	OC-SB-418-15/17-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-07A	360-24327-2	SW6010	OC-SB-403-13/15-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-07A	360-24327-2	SW6010	OC-SB-403-13/15-XXX	Sodium	28	J B	130	U	BL	mg/kg
OCRI-07A	360-24327-4	SW6010	OC-SB-404-13/15-XXX	Antimony	0.53	U	0.53	UJ	MS-L	mg/kg
OCRI-07A	360-24327-4	SW6010	OC-SB-404-13/15-XXX	Sodium	14	J B	110	U	BL	mg/kg
OCRI-07A	360-24327-7	SW6010	OC-SB-409-15/17-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-08	360-24343-1	SW6010	OC-SB-444-0.0/1.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-1	SW6010	OC-SB-444-0.0/1.0-XXX	Tin	72	B ^	72	J	QLS-L	mg/kg
OCRI-08	360-24343-10	SW6010	OC-SB-451-2.5/4.5-XXX	Antimony	0.89		0.89	J	MS-L, LD	mg/kg
OCRI-08	360-24343-10	SW6010	OC-SB-451-2.5/4.5-XXX	Tin	1.6	J B	5.9	UJ	BL, QLS-L	mg/kg
OCRI-08	360-24343-11	SW6010	OC-SB-454-0.0/1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-11	SW6010	OC-SB-454-0.0/1.0-XXX	Tin	7.3	B ^	7.3	J	QLS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-08	360-24343-13	SW6010	OC-SB-454-6.0/8.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-13	SW6010	OC-SB-454-6.0/8.0-XXX	Tin	51	B ^	51	J	QLS-L	mg/kg
OCRI-08	360-24343-16	SW6010	OC-SB-455-6.0/8.0-DUP	Antimony	1.4	U	1.4	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-16	SW6010	OC-SB-455-6.0/8.0-DUP	Tin	3.2	J B ^	3.2	J	QLS-L	mg/kg
OCRI-08	360-24343-17	SW6010	OC-SB-455-6.0/8.0-XXX	Antimony	1.5	U	1.5	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-17	SW6010	OC-SB-455-6.0/8.0-XXX	Tin	3.1	J B ^	3.1	J	QLS-L	mg/kg
OCRI-08	360-24343-3	SW6010	OC-SB-444-5.0/7.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-3	SW6010	OC-SB-444-5.0/7.0-XXX	Tin	67	B ^	67	J	QLS-L	mg/kg
OCRI-08	360-24343-4	SW6010	OC-SB-449-0.0/1.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-4	SW6010	OC-SB-449-0.0/1.0-XXX	Tin	2.1	J B ^	6	UJ	BL, QLS-L	mg/kg
OCRI-08	360-24343-6	SW6010	OC-SB-449-6.0/8.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-6	SW6010	OC-SB-449-6.0/8.0-XXX	Tin	7.1	B ^	7.1	J	QLS-L	mg/kg
OCRI-08	360-24343-7	SW6010	OC-SB-451-0.0/1.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-7	SW6010	OC-SB-451-0.0/1.0-XXX	Tin	23	B ^	23	J	QLS-L	mg/kg
OCRI-08	360-24343-9	SW6010	OC-SB-451-2.5/4.5-DUP	Antimony	0.57	U	0.57	UJ	MS-L, LD	mg/kg
OCRI-08	360-24343-9	SW6010	OC-SB-451-2.5/4.5-DUP	Tin	1.6	J B ^	5.7	UJ	BL, QLS-L	mg/kg
OCRI-08A	360-24343-12	SW6010	OC-SB-454-18/20-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-08A	360-24343-12	SW6010	OC-SB-454-18/20-XXX	Tin	100	^ B	100	J	QLS-L	mg/kg
OCRI-08A	360-24343-15	SW6010	OC-SB-455-28/30-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-08A	360-24343-15	SW6010	OC-SB-455-28/30-XXX	Tin	6	J ^ B	6	J	QLS-L	mg/kg
OCRI-08A	360-24343-2	SW6010	OC-SB-444-12/14-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-08A	360-24343-2	SW6010	OC-SB-444-12/14-XXX	Tin	54	^ B	54	J	QLS-L	mg/kg
OCRI-08A	360-24343-5	SW6010	OC-SB-449-11/13-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-08A	360-24343-5	SW6010	OC-SB-449-11/13-XXX	Tin	67	^ B	67	J	QLS-L	mg/kg
OCRI-08A	360-24343-8	SW6010	OC-SB-451-18/20-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-08A	360-24343-8	SW6010	OC-SB-451-18/20-XXX	Tin	19	^ B	19	J	QLS-L	mg/kg
OCRI-09	360-24365-1	SW6010	OC-SB-442-0.0/1.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-09	360-24365-1	SW6010	OC-SB-442-0.0/1.0-XXX	Tin	8	B ^	8	J	QLS-L	mg/kg
OCRI-09	360-24365-10	SW6010	OC-SB-452-5.0/7.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-09	360-24365-10	SW6010	OC-SB-452-5.0/7.0-XXX	Tin	11	B ^	11	J	QLS-L	mg/kg
OCRI-09	360-24365-13	SW6010	OC-SB-458-0.0/1.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-09	360-24365-13	SW6010	OC-SB-458-0.0/1.0-XXX	Tin	6.7	B ^	6.7	J	QLS-L	mg/kg
OCRI-09	360-24365-15	SW6010	OC-SB-458-5.0/7.0-XXX	Antimony	0.76	U	0.76	UJ	MS-L	mg/kg
OCRI-09	360-24365-15	SW6010	OC-SB-458-5.0/7.0-XXX	Tin	2.4	J B ^	2.4	J	QLS-L	mg/kg
OCRI-09	360-24365-16	SW6010	OC-SB-460-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-09	360-24365-16	SW6010	OC-SB-460-0.0/1.0-XXX	Tin	8.2	B ^	8.2	J	QLS-L	mg/kg
OCRI-09	360-24365-18	SW6010	OC-SB-460-5.5/7.5-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-09	360-24365-18	SW6010	OC-SB-460-5.5/7.5-XXX	Tin	3.8	J B ^	3.8	J	QLS-L	mg/kg
OCRI-09	360-24365-3	SW6010	OC-SB-442-8.0/10-DUP	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-09	360-24365-3	SW6010	OC-SB-442-8.0/10-DUP	Tin	4.1	J B ^	4.1	J	QLS-L	mg/kg
OCRI-09	360-24365-4	SW6010	OC-SB-442-8.0/10-XXX	Antimony	0.53	J	0.53	J	MS-L	mg/kg
OCRI-09	360-24365-4	SW6010	OC-SB-442-8.0/10-XXX	Tin	5.3	J B	5.3	J	QLS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-09	360-24365-5	SW6010	OC-SB-447-0.0/1.0-XXX	Antimony	0.92	J	0.92	J	MS-L	mg/kg
OCRI-09	360-24365-5	SW6010	OC-SB-447-0.0/1.0-XXX	Thallium	0.43	J	2.8	U	BL	mg/kg
OCRI-09	360-24365-5	SW6010	OC-SB-447-0.0/1.0-XXX	Tin	41	B ^	41	J	QLS-L	mg/kg
OCRI-09	360-24365-7	SW6010	OC-SB-447-3.0/5.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-09	360-24365-7	SW6010	OC-SB-447-3.0/5.0-XXX	Thallium	0.15	J	0.15	JEB	BL	mg/kg
OCRI-09	360-24365-7	SW6010	OC-SB-447-3.0/5.0-XXX	Tin	7.3	B ^	7.3	J	QLS-L	mg/kg
OCRI-09	360-24365-8	SW6010	OC-SB-452-0.0/1.0-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-09	360-24365-8	SW6010	OC-SB-452-0.0/1.0-XXX	Tin	6.4	J B ^	6.4	J	QLS-L	mg/kg
OCRI-09A	360-24365-14	SW6010	OC-SB-458-22/24-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-09A	360-24365-14	SW6010	OC-SB-458-22/24-XXX	Tin	4.2	J ^ B	4.2	J	QLS-L	mg/kg
OCRI-09A	360-24365-17	SW6010	OC-SB-460-30/32-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-09A	360-24365-17	SW6010	OC-SB-460-30/32-XXX	Tin	50	^ B	50	J	QLS-L	mg/kg
OCRI-09A	360-24365-2	SW6010	OC-SB-442-20/22-XXX	Antimony	0.55	U	0.55	UJ	MS-L	mg/kg
OCRI-09A	360-24365-2	SW6010	OC-SB-442-20/22-XXX	Tin	4.2	J ^ B	4.2	J	QLS-L	mg/kg
OCRI-09A	360-24365-6	SW6010	OC-SB-447-18/20-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-09A	360-24365-6	SW6010	OC-SB-447-18/20-XXX	Tin	3.6	J ^ B	3.6	J	QLS-L	mg/kg
OCRI-09A	360-24365-9	SW6010	OC-SB-452-13/15-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-09A	360-24365-9	SW6010	OC-SB-452-13/15-XXX	Tin	5.5	J ^ B	5.5	J	QLS-L	mg/kg
OCRI-10	360-24417-1	SW6010	OC-SB-463-0.0/1.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-10	360-24417-1	SW6010	OC-SB-463-0.0/1.0-XXX	Chromium	14		14	J	SD	mg/kg
OCRI-10	360-24417-1	SW6010	OC-SB-463-0.0/1.0-XXX	Tin	5	J B ^	5	J	QLS-L	mg/kg
OCRI-10	360-24417-10	SW6010	OC-SB-465-8.0/10-XXX	Antimony	0.46	J	0.46	J	MS-L	mg/kg
OCRI-10	360-24417-10	SW6010	OC-SB-465-8.0/10-XXX	Chromium	6.8		6.8	J	SD	mg/kg
OCRI-10	360-24417-10	SW6010	OC-SB-465-8.0/10-XXX	Tin	2.2	J B	2.2	J	QLS-L	mg/kg
OCRI-10	360-24417-11	SW6010	OC-SB-468-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-10	360-24417-11	SW6010	OC-SB-468-0.0/1.0-XXX	Chromium	11		11	J	SD	mg/kg
OCRI-10	360-24417-11	SW6010	OC-SB-468-0.0/1.0-XXX	Tin	3.7	J B ^	3.7	J	QLS-L	mg/kg
OCRI-10	360-24417-13	SW6010	OC-SB-468-8.0/10-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-10	360-24417-13	SW6010	OC-SB-468-8.0/10-XXX	Chromium	5.6		5.6	J	SD	mg/kg
OCRI-10	360-24417-13	SW6010	OC-SB-468-8.0/10-XXX	Tin	1.8	J B ^	5.9	UJ	BL, QLS-L	mg/kg
OCRI-10	360-24417-14	SW6010	OC-SB-471-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-10	360-24417-14	SW6010	OC-SB-471-0.0/1.0-XXX	Chromium	14		14	J	SD	mg/kg
OCRI-10	360-24417-14	SW7471	OC-SB-471-0.0/1.0-XXX	Mercury	0.028	J	0.028	JEB	BL	mg/kg
OCRI-10	360-24417-14	SW6010	OC-SB-471-0.0/1.0-XXX	Tin	5	J B ^	5	J	QLS-L	mg/kg
OCRI-10	360-24417-15	SW6010	OC-SB-471-3.0/5.0-XXX	Antimony	0.75	U	0.75	UJ	MS-L	mg/kg
OCRI-10	360-24417-15	SW6010	OC-SB-471-3.0/5.0-XXX	Chromium	7.9		7.9	J	SD	mg/kg
OCRI-10	360-24417-15	SW6010	OC-SB-471-3.0/5.0-XXX	Tin	2.5	J B ^	2.5	J	QLS-L	mg/kg
OCRI-10	360-24417-3	SW6010	OC-SB-463-6.0/8.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-10	360-24417-3	SW6010	OC-SB-463-6.0/8.0-XXX	Chromium	5.9		5.9	J	SD	mg/kg
OCRI-10	360-24417-3	SW6010	OC-SB-463-6.0/8.0-XXX	Tin	1.9	J B ^	6.7	UJ	BL, QLS-L	mg/kg
OCRI-10	360-24417-4	SW6010	OC-SB-464-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-10	360-24417-4	SW6010	OC-SB-464-0.0/1.0-XXX	Chromium	20		20	J	SD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-10	360-24417-4	SW6010	OC-SB-464-0.0/1.0-XXX	Tin	7	B ^	7	J	QLS-L	mg/kg
OCRI-10	360-24417-6	SW6010	OC-SB-464-5.0/7.0-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-10	360-24417-6	SW6010	OC-SB-464-5.0/7.0-XXX	Chromium	40		40	J	SD	mg/kg
OCRI-10	360-24417-6	SW6010	OC-SB-464-5.0/7.0-XXX	Tin	16	B ^	16	J	QLS-L	mg/kg
OCRI-10	360-24417-7	SW6010	OC-SB-465-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-10	360-24417-7	SW6010	OC-SB-465-0.0/1.0-XXX	Chromium	5.9		5.9	J	SD	mg/kg
OCRI-10	360-24417-7	SW6010	OC-SB-465-0.0/1.0-XXX	Tin	2	J B ^	6.2	UJ	BL, QLS-L	mg/kg
OCRI-10	360-24417-9	SW6010	OC-SB-465-8.0/10-DUP	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-10	360-24417-9	SW6010	OC-SB-465-8.0/10-DUP	Chromium	6		6	J	SD	mg/kg
OCRI-10	360-24417-9	SW6010	OC-SB-465-8.0/10-DUP	Tin	2	J B ^	6.6	UJ	BL, QLS-L	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Calcium	3200	B	3200	J	MS-H, LD	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Manganese	110		110	J	SD	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Potassium	2000		2000	J	MS-H	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Sodium	190		190	J	LD	mg/kg
OCRI-10A	360-24417-12	SW6010	OC-SB-468-31/33-XXX	Tin	7.9	B ^	7.9	J	QLS-L	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Calcium	3300	B	3300	J	MS-H, LD	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Manganese	150		150	J	SD	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Potassium	2500		2500	J	MS-H	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Sodium	170		170	J	LD	mg/kg
OCRI-10A	360-24417-16	SW6010	OC-SB-471-26/28-XXX	Tin	6.9	B ^	6.9	J	QLS-L	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Antimony	0.55	U	0.55	UJ	MS-L	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Calcium	2900	B	2900	J	MS-H, LD	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Manganese	330		330	J	SD	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Potassium	1700		1700	J	MS-H	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Selenium	0.31	J	0.55	U	BL	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Sodium	71	J	71	J	LD	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Thallium	0.2	J	1.1	U	BL	mg/kg
OCRI-10A	360-24417-2	SW6010	OC-SB-463-28/30-XXX	Tin	5	J B ^	5	J	QLS-L	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Calcium	3700	B	3700	J	MS-H, LD	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Manganese	230		230	J	SD	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Potassium	3700		3700	J	MS-H	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Sodium	450		450	J	LD	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Thallium	0.13	J	1.4	U	BL	mg/kg
OCRI-10A	360-24417-5	SW6010	OC-SB-464-26/28-XXX	Tin	19	B ^	19	J	QLS-L	mg/kg
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Calcium	840	B	840	J	MS-H, LD	mg/kg
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Manganese	61		61	J	SD	mg/kg
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Potassium	870		870	J	MS-H	mg/kg
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Sodium	47	J	47	J	LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-10A	360-24417-8	SW6010	OC-SB-465-16/18-XXX	Tin	2.9	J B ^	2.9	J	QLS-L	mg/kg
OCRI-11	360-24444-1	SW6010	OC-SB-459-6.0/8.0-DUP	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-11	360-24444-1	SW6010	OC-SB-459-6.0/8.0-DUP	Tin	2.6	J B ^	2.6	J	QLS-L	mg/kg
OCRI-11	360-24444-12	SW6010	OC-SB-459-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-11	360-24444-12	SW6010	OC-SB-459-0.0/1.0-XXX	Sodium	41	J B	110	U	BL	mg/kg
OCRI-11	360-24444-12	SW6010	OC-SB-459-0.0/1.0-XXX	Tin	4.4	J B ^	4.4	J	QLS-L	mg/kg
OCRI-11	360-24444-2	SW6010	OC-SB-459-6.0/8.0-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-11	360-24444-2	SW6010	OC-SB-459-6.0/8.0-XXX	Tin	2.6	J B	2.6	J	QLS-L	mg/kg
OCRI-11	360-24444-3	SW6010	OC-SB-462-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-11	360-24444-3	SW6010	OC-SB-462-0.0/1.0-XXX	Sodium	34	J B	120	U	BL	mg/kg
OCRI-11	360-24444-3	SW6010	OC-SB-462-0.0/1.0-XXX	Tin	3.7	J B ^	3.7	J	QLS-L	mg/kg
OCRI-11	360-24444-5	SW6010	OC-SB-462-4.0/6.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-11	360-24444-5	SW6010	OC-SB-462-4.0/6.0-XXX	Tin	6.6	B ^	6.6	J	QLS-L	mg/kg
OCRI-11	360-24444-8	SW6010	OC-SB-467-6.0/8.0-DUP	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-11	360-24444-8	SW6010	OC-SB-467-6.0/8.0-DUP	Tin	2	J B ^	7	UJ	BL, QLS-L	mg/kg
OCRI-11	360-24444-9	SW6010	OC-SB-467-6.0/8.0-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-11	360-24444-9	SW6010	OC-SB-467-6.0/8.0-XXX	Tin	2	J B ^	7.2	UJ	BL, QLS-L	mg/kg
OCRI-11A	360-24444-13	SW6010	OC-SB-459-26/28-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-11A	360-24444-13	SW6010	OC-SB-459-26/28-XXX	Tin	190	B ^	190	J	QLS-L	mg/kg
OCRI-11A	360-24444-4	SW6010	OC-SB-462-31/33-XXX	Antimony	0.55	U	0.55	UJ	MS-L	mg/kg
OCRI-11A	360-24444-4	SW6010	OC-SB-462-31/33-XXX	Tin	59	B ^	59	J	QLS-L	mg/kg
OCRI-11A	360-24444-7	SW6010	OC-SB-467-30/32-XXX	Antimony	0.33	J	0.33	J	MS-L	mg/kg
OCRI-11A	360-24444-7	SW6010	OC-SB-467-30/32-XXX	Tin	100	B ^	100	J	QLS-L	mg/kg
OCRI-12	360-24454-3	SW6010	OC-SB-461-5.0/7.0-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-12	360-24454-3	SW6010	OC-SB-461-5.0/7.0-XXX	Sodium	20	J B	140	U	BL	mg/kg
OCRI-12	360-24454-3	SW6010	OC-SB-461-5.0/7.0-XXX	Tin	4	J ^ B	4	J	QLS-L	mg/kg
OCRI-12	360-24454-4	SW6010	OC-SB-470-0.0/1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-12	360-24454-4	SW6010	OC-SB-470-0.0/1.0-XXX	Sodium	38	J B	130	U	BL	mg/kg
OCRI-12	360-24454-4	SW6010	OC-SB-470-0.0/1.0-XXX	Tin	42	B ^	42	J	QLS-L	mg/kg
OCRI-12	360-24454-6	SW6010	OC-SB-470-7.0/9.0-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-12	360-24454-6	SW6010	OC-SB-470-7.0/9.0-XXX	Tin	120	B ^	120	J	QLS-L	mg/kg
OCRI-12	360-24454-7	SW6010	OC-SB-472-0.0/1.0-XXX	Antimony	0.56	U	0.56	UJ	MS-L	mg/kg
OCRI-12	360-24454-7	SW6010	OC-SB-472-0.0/1.0-XXX	Sodium	34	J B	110	U	BL	mg/kg
OCRI-12	360-24454-7	SW6010	OC-SB-472-0.0/1.0-XXX	Tin	2.9	J B ^	2.9	J	QLS-L	mg/kg
OCRI-12	360-24454-8	SW6010	OC-SB-472-30/32-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-12	360-24454-8	SW6010	OC-SB-472-30/32-XXX	Tin	120	B ^	120	J	QLS-L	mg/kg
OCRI-12	360-24454-9	SW6010	OC-SB-472-8.0/10-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-12	360-24454-9	SW6010	OC-SB-472-8.0/10-XXX	Sodium	46	J B	150	U	BL	mg/kg
OCRI-12	360-24454-9	SW6010	OC-SB-472-8.0/10-XXX	Tin	2.3	J B ^	7.3	UJ	BL, QLS-L	mg/kg
OCRI-12A	360-24454-2	SW6010	OC-SB-461-28/30-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-12A	360-24454-2	SW6010	OC-SB-461-28/30-XXX	Tin	100	B ^	100	J	QLS-L	mg/kg
OCRI-12A	360-24454-5	SW6010	OC-SB-470-31/33-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-12A	360-24454-5	SW6010	OC-SB-470-31/33-XXX	Tin	20	B ^	20	J	QLS-L	mg/kg
OCRI-13	360-24499-1	SW6010	OC-SB-466-6.0/8.0-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-13	360-24499-1	SW6010	OC-SB-466-6.0/8.0-XXX	Silver	0.15	J B	0.7	U	BL	mg/kg
OCRI-13	360-24499-1	SW6010	OC-SB-466-6.0/8.0-XXX	Tin	3.5	J ^ B	3.5	J	QLS-L	mg/kg
OCRI-13	360-24499-14	SW6010	OC-SB-417-0.0/1.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-13	360-24499-14	SW6010	OC-SB-417-0.0/1.0-XXX	Silver	0.18	J B	0.67	U	BL	mg/kg
OCRI-13	360-24499-14	SW6010	OC-SB-417-0.0/1.0-XXX	Tin	2.5	J ^ B	6.7	UJ	BL, QLS-L	mg/kg
OCRI-13	360-24499-16	SW6010	OC-SB-417-8.0/10-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-13	360-24499-16	SW6010	OC-SB-417-8.0/10-XXX	Silver	0.089	J B	0.62	U	BL	mg/kg
OCRI-13	360-24499-16	SW6010	OC-SB-417-8.0/10-XXX	Tin	1.7	J ^ B	6.2	UJ	BL, QLS-L	mg/kg
OCRI-13	360-24499-17	SW6010	OC-SB-434-0.0/1.0-XXX	Antimony	0.54	U	0.54	UJ	MS-L	mg/kg
OCRI-13	360-24499-17	SW6010	OC-SB-434-0.0/1.0-XXX	Thallium	0.38	J	1.1	U	BL	mg/kg
OCRI-13	360-24499-17	SW6010	OC-SB-434-0.0/1.0-XXX	Tin	11	B ^	11	J	QLS-L	mg/kg
OCRI-13	360-24499-19	SW6010	OC-SB-434-7.0/9.0-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-13	360-24499-19	SW6010	OC-SB-434-7.0/9.0-XXX	Silver	0.15	J B	0.58	U	BL	mg/kg
OCRI-13	360-24499-19	SW6010	OC-SB-434-7.0/9.0-XXX	Tin	2.1	J B ^	5.8	UJ	BL, QLS-L	mg/kg
OCRI-13	360-24499-2	SW6010	OC-SB-469-0.0/1.0-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-13	360-24499-2	SW6010	OC-SB-469-0.0/1.0-XXX	Silver	0.26	J B	0.58	U	BL	mg/kg
OCRI-13	360-24499-2	SW6010	OC-SB-469-0.0/1.0-XXX	Tin	9.4	B ^	9.4	J	QLS-L	mg/kg
OCRI-13	360-24499-20	SW6010	OC-SB-450-0.0/1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-13	360-24499-20	SW6010	OC-SB-450-0.0/1.0-XXX	Silver	0.13	J B	0.63	U	BL	mg/kg
OCRI-13	360-24499-20	SW6010	OC-SB-450-0.0/1.0-XXX	Tin	7.2	B ^	7.2	J	QLS-L	mg/kg
OCRI-13	360-24499-22	SW6010	OC-SB-450-8.0/10-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-13	360-24499-22	SW6010	OC-SB-450-8.0/10-XXX	Silver	0.2	J B	0.65	U	BL	mg/kg
OCRI-13	360-24499-22	SW6010	OC-SB-450-8.0/10-XXX	Tin	4.7	J B ^	4.7	J	QLS-L	mg/kg
OCRI-13	360-24499-4	SW6010	OC-SB-469-36/37-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-13	360-24499-4	SW6010	OC-SB-469-36/37-XXX	Tin	97	^ B	97	J	QLS-L	mg/kg
OCRI-13	360-24499-5	SW6010	OC-SB-469-7.0/9.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-13	360-24499-5	SW6010	OC-SB-469-7.0/9.0-XXX	Silver	0.15	J B	0.61	U	BL	mg/kg
OCRI-13	360-24499-5	SW6010	OC-SB-469-7.0/9.0-XXX	Tin	3.8	J B ^	3.8	J	QLS-L	mg/kg
OCRI-13	360-24499-6	SW6010	OC-SB-466-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-13	360-24499-6	SW6010	OC-SB-466-0.0/1.0-XXX	Silver	0.16	J B	0.61	U	BL	mg/kg
OCRI-13	360-24499-6	SW6010	OC-SB-466-0.0/1.0-XXX	Tin	2.5	J B ^	6.1	UJ	BL, QLS-L	mg/kg
OCRI-13	360-24499-7	SW6010	OC-SB-466-30/32-XXX	Antimony	3.5	U	3.5	UJ	MS-L	mg/kg
OCRI-13	360-24499-7	SW6010	OC-SB-466-30/32-XXX	Tin	99	B	99	J	QLS-L	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Aluminum	8000		8000	J	LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Arsenic	2.4		2.4	J	LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Cadmium	0.38		0.38	J	LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Calcium	4900	B	4900	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Chromium	27	B	27	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Cobalt	10		10	J	LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Copper	27		27	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Iron	21000	B	21000	J	LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Lead	0.52	J	0.52	J	LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Manganese	130		130	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Nickel	12		12	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Thallium	0.14	J	1.5	U	BL	mg/kg
OCRI-13A	360-24499-15	SW6010	OC-SB-417-20/22-XXX	Tin	9.7	B ^	9.7	J	MS-L, LD, QSL-L	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Aluminum	11000		11000	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Arsenic	5.8		5.8	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Cadmium	0.41		0.41	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Calcium	4400	B	4400	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Chromium	40	B	40	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Cobalt	11		11	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Copper	31		31	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Iron	22000	B	22000	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Lead	2.4		2.4	J	LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Manganese	200		200	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Nickel	18		18	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Thallium	0.12	J	1.4	U	BL	mg/kg
OCRI-13A	360-24499-18	SW6010	OC-SB-434-15/16-XXX	Tin	15	B ^	15	J	MS-L, LD, QSL-L	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Aluminum	7900		7900	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Arsenic	4.5		4.5	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Cadmium	0.23	J	0.23	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Calcium	2600	B	2600	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Chromium	18	B	18	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Cobalt	6.6		6.6	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Copper	20		20	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Iron	13000	B	13000	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Lead	1.7		1.7	J	LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Manganese	100		100	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Nickel	13		13	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-21	SW6010	OC-SB-450-33/35-XXX	Tin	6.5	B ^	6.5	J	MS-L, LD, QSL-L	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Aluminum	1400		1400	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Arsenic	2.2		2.2	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Cadmium	0.38		0.38	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Calcium	1200	B	1200	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Chromium	33	B	33	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Cobalt	2.6		2.6	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Copper	28		28	J	MS-L, LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Iron	21000	B	21000	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Lead	1.1		1.1	J	LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Manganese	190		190	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Nickel	19		19	J	MS-L, LD	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Thallium	0.13	J	1.2	U	BL	mg/kg
OCRI-13A	360-24499-3	SW6010	OC-SB-469-28/30-XXX	Tin	14	B ^	14	J	MS-L, LD, QSL-L	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Beryllium	0.17	J	0.17	J	LD	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Chromium	12	B	12	J	MS-L	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Copper	7.9		7.9	J	FD	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Potassium	580		580	J	MS-L	mg/kg
OCRI-14	360-24563-1	SW6010	OC-SB-427-0.0/1.0-XXX	Tin	4.3	J B ^	4.3	J	QLS-L	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Beryllium	0.17	J	0.17	J	LD	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Chromium	33	B	33	J	MS-L	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Copper	3.3		3.3	J	FD	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Potassium	520		520	J	MS-L	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Sodium	48	J B	130	U	BL	mg/kg
OCRI-14	360-24563-11	SW6010	OC-SB-456-0.0/1.0-XXX	Tin	13	B ^	13	J	QLS-L	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Beryllium	0.24	J	0.24	J	LD	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Chromium	280	B	280	J	MS-L	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Copper	35		35	J	FD	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Potassium	2600		2600	J	MS-L	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Thallium	0.25	J	0.25	JEB	BL	mg/kg
OCRI-14	360-24563-12	SW6010	OC-SB-456-16/18-XXX	Tin	110	B ^	110	J	QLS-L	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Beryllium	0.1	J	0.1	J	LD	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Chromium	100	B	100	J	MS-L	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Copper	11		11	J	FD	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Potassium	760		760	J	MS-L	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Sodium	39	J B	120	U	BL	mg/kg
OCRI-14	360-24563-13	SW6010	OC-SB-456-7.0/9.0-DUP	Tin	42	B ^	42	J	QLS-L	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Beryllium	0.097	J	0.097	J	LD	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Chromium	100	B	100	J	MS-L	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Copper	3.9		3.9	J	FD	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Potassium	880		880	J	MS-L	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Sodium	39	J B	130	U	BL	mg/kg
OCRI-14	360-24563-14	SW6010	OC-SB-456-7.0/9.0-XXX	Tin	42	B ^	42	J	QLS-L	mg/kg
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Beryllium	0.19	J	0.19	J	LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Chromium	64	B	64	J	MS-L	mg/kg
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Copper	2.5		2.5	J	FD	mg/kg
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Potassium	320		320	J	MS-L	mg/kg
OCRI-14	360-24563-15	SW6010	OC-SB-457-0.0/1.0-XXX	Tin	26	B ^	26	J	QLS-L	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Beryllium	0.076	J	0.076	J	LD	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Chromium	64	B	64	J	MS-L	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Copper	3.4		3.4	J	FD	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Potassium	960		960	J	MS-L	mg/kg
OCRI-14	360-24563-16	SW6010	OC-SB-457-8.0/10-XXX	Tin	26	B ^	26	J	QLS-L	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Beryllium	0.2	J	0.2	J	LD	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Chromium	8.7	B	8.7	J	MS-L	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Copper	4.6		4.6	J	FD	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Potassium	750		750	J	MS-L	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Sodium	36	J B	140	U	BL	mg/kg
OCRI-14	360-24563-2	SW6010	OC-SB-427-12/14-XXX	Tin	3.1	J B ^	3.1	J	QLS-L	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Beryllium	0.11	J	0.11	J	LD	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Chromium	5.5	B	5.5	J	MS-L	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Copper	3.2		3.2	J	FD	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Potassium	490		490	J	MS-L	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Sodium	26	J B	130	U	BL	mg/kg
OCRI-14	360-24563-4	SW6010	OC-SB-427-8.0/10-DUP	Tin	1.9	J B ^	6.3	UJ	BL, QLS-L	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Antimony	0.67		0.67	J	MS-L	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Beryllium	0.12	J	0.12	J	LD	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Chromium	5.3	B	5.3	J	MS-L	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Copper	3.1		3.1	J	FD	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Potassium	530		530	J	MS-L	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Sodium	27	J B	130	U	BL	mg/kg
OCRI-14	360-24563-5	SW6010	OC-SB-427-8.0/10-XXX	Tin	1.8	J ^ B	6.6	UJ	BL, QLS-L	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Beryllium	0.24	J	0.24	J	LD	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Chromium	20	B	20	J	MS-L	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Copper	15		15	J	FD	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Potassium	820		820	J	MS-L	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Sodium	47	J B	140	U	BL	mg/kg
OCRI-14	360-24563-6	SW6010	OC-SB-428-0.0/1.0-XXX	Tin	6.8	J B ^	6.8	J	QLS-L	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Antimony	0.6	U	0.6	UJ	MS-L	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Beryllium	0.11	J	0.11	J	LD	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Chromium	6.5	B	6.5	J	MS-L	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Copper	2.8		2.8	J	FD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Potassium	530		530	J	MS-L	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Sodium	53	J B	120	U	BL	mg/kg
OCRI-14	360-24563-9	SW6010	OC-SB-428-8.0/10-XXX	Tin	2.2	J B ^	6	UJ	BL, QLS-L	mg/kg
OCRI-14A	360-24563-3	SW6010	OC-SB-427-17/19-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-14A	360-24563-3	SW6010	OC-SB-427-17/19-XXX	Tin	2.8	J ^ B	2.8	J	QLS-L	mg/kg
OCRI-14A	360-24563-7	SW6010	OC-SB-428-23/25-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-14A	360-24563-7	SW6010	OC-SB-428-23/25-XXX	Tin	7.6	B ^	7.6	J	QLS-L	mg/kg
OCRI-15	360-24582-1	SW6010	OC-SB-457-28/30-XXX	Antimony	0.29	J	0.29	J	MS-L	mg/kg
OCRI-15	360-24582-1	SW6010	OC-SB-457-28/30-XXX	Barium	41		41	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-1	SW6010	OC-SB-457-28/30-XXX	Lead	3		3	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-1	SW7471	OC-SB-457-28/30-XXX	Mercury	0.23	U	0.23	UJ	FD, LD	mg/kg
OCRI-15	360-24582-1	SW6010	OC-SB-457-28/30-XXX	Tin	69	B ^	69	J	QLS-L	mg/kg
OCRI-15	360-24582-10	SW6010	OC-SS-405-0.0/1.0-XXX	Antimony	0.58	U	0.58	UJ	MS-L	mg/kg
OCRI-15	360-24582-10	SW6010	OC-SS-405-0.0/1.0-XXX	Barium	7		7	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-10	SW6010	OC-SS-405-0.0/1.0-XXX	Lead	10		10	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-10	SW7471	OC-SS-405-0.0/1.0-XXX	Mercury	0.17	U	0.17	UJ	FD, LD	mg/kg
OCRI-15	360-24582-10	SW6010	OC-SS-405-0.0/1.0-XXX	Tin	2.6	J B ^	2.6	J	QLS-L	mg/kg
OCRI-15	360-24582-11	SW6010	OC-SS-406-0.0/1.0.-XXX	Antimony	0.79	U	0.79	UJ	MS-L	mg/kg
OCRI-15	360-24582-11	SW6010	OC-SS-406-0.0/1.0.-XXX	Barium	17		17	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-11	SW6010	OC-SS-406-0.0/1.0.-XXX	Lead	33		33	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-11	SW7471	OC-SS-406-0.0/1.0.-XXX	Mercury	0.077	J	0.077	J	FD, LD	mg/kg
OCRI-15	360-24582-11	SW6010	OC-SS-406-0.0/1.0.-XXX	Selenium	0.67	J B	0.79	U	BL	mg/kg
OCRI-15	360-24582-11	SW6010	OC-SS-406-0.0/1.0.-XXX	Tin	4.6	J B ^	4.6	J	QLS-L	mg/kg
OCRI-15	360-24582-12	SW6010	OC-SS-407-0.0/1.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-15	360-24582-12	SW6010	OC-SS-407-0.0/1.0-XXX	Barium	9.3		9.3	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-12	SW6010	OC-SS-407-0.0/1.0-XXX	Lead	15		15	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-12	SW7471	OC-SS-407-0.0/1.0-XXX	Mercury	0.21	U	0.21	UJ	FD, LD	mg/kg
OCRI-15	360-24582-12	SW6010	OC-SS-407-0.0/1.0-XXX	Tin	12	B ^	12	J	QLS-L	mg/kg
OCRI-15	360-24582-13	SW6010	OC-SS-408-0.0/1.0-XXX	Antimony	0.63	U	0.63	UJ	MS-L	mg/kg
OCRI-15	360-24582-13	SW6010	OC-SS-408-0.0/1.0-XXX	Barium	23		23	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-13	SW6010	OC-SS-408-0.0/1.0-XXX	Lead	31		31	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-13	SW7471	OC-SS-408-0.0/1.0-XXX	Mercury	0.1	J	0.1	J	FD, LD	mg/kg
OCRI-15	360-24582-13	SW6010	OC-SS-408-0.0/1.0-XXX	Tin	31	B ^	31	J	QLS-L	mg/kg
OCRI-15	360-24582-14	SW6010	OC-SS-409-0.0/1.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-15	360-24582-14	SW6010	OC-SS-409-0.0/1.0-XXX	Barium	29		29	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-14	SW6010	OC-SS-409-0.0/1.0-XXX	Lead	14		14	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-14	SW7471	OC-SS-409-0.0/1.0-XXX	Mercury	0.068	J	0.068	J	FD, LD	mg/kg
OCRI-15	360-24582-14	SW6010	OC-SS-409-0.0/1.0-XXX	Tin	6.9	B ^	6.9	J	QLS-L	mg/kg
OCRI-15	360-24582-16	SW6010	OC-SS-411-0.0/1.0-XXX	Antimony	1.5	U	1.5	UJ	MS-L	mg/kg
OCRI-15	360-24582-16	SW6010	OC-SS-411-0.0/1.0-XXX	Barium	81		81	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-16	SW6010	OC-SS-411-0.0/1.0-XXX	Lead	25		25	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-16	SW7471	OC-SS-411-0.0/1.0-XXX	Mercury	0.43	U	0.43	UJ	FD, LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
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OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-15	360-24582-16	SW6010	OC-SS-411-0.0/1.0-XXX	Tin	7.9	J B ^	7.9	J	QLS-L	mg/kg
OCRI-15	360-24582-17	SW6010	OC-SS-412-0.0/1.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-15	360-24582-17	SW6010	OC-SS-412-0.0/1.0-XXX	Barium	46		46	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-17	SW6010	OC-SS-412-0.0/1.0-XXX	Lead	11		11	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-17	SW7471	OC-SS-412-0.0/1.0-XXX	Mercury	0.19	U	0.19	UJ	FD, LD	mg/kg
OCRI-15	360-24582-17	SW6010	OC-SS-412-0.0/1.0-XXX	Thallium	0.16	J	1.4	U	BL	mg/kg
OCRI-15	360-24582-17	SW6010	OC-SS-412-0.0/1.0-XXX	Tin	21	B ^	21	J	QLS-L	mg/kg
OCRI-15	360-24582-19	SW6010	OC-SS-414-0.0/1.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-15	360-24582-19	SW6010	OC-SS-414-0.0/1.0-XXX	Barium	17		17	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-19	SW6010	OC-SS-414-0.0/1.0-XXX	Lead	8.1		8.1	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-19	SW7471	OC-SS-414-0.0/1.0-XXX	Mercury	0.2	U	0.2	UJ	FD, LD	mg/kg
OCRI-15	360-24582-19	SW6010	OC-SS-414-0.0/1.0-XXX	Tin	4.5	J B ^	4.5	J	QLS-L	mg/kg
OCRI-15	360-24582-20	SW6010	OC-SS-415-0.0/1.0-XXX	Antimony	1.4	U	1.4	UJ	MS-L	mg/kg
OCRI-15	360-24582-20	SW6010	OC-SS-415-0.0/1.0-XXX	Barium	56		56	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-20	SW6010	OC-SS-415-0.0/1.0-XXX	Lead	80		80	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-20	SW7471	OC-SS-415-0.0/1.0-XXX	Mercury	0.41	U	0.41	UJ	FD, LD	mg/kg
OCRI-15	360-24582-20	SW6010	OC-SS-415-0.0/1.0-XXX	Selenium	0.65	J B	1.4	U	BL	mg/kg
OCRI-15	360-24582-20	SW6010	OC-SS-415-0.0/1.0-XXX	Tin	34	B ^	34	J	QLS-L	mg/kg
OCRI-15	360-24582-21	SW6010	OC-SS-416-0.0/1.0-DUP	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-15	360-24582-21	SW6010	OC-SS-416-0.0/1.0-DUP	Barium	9.4		9.4	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-21	SW6010	OC-SS-416-0.0/1.0-DUP	Lead	13		13	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-21	SW7471	OC-SS-416-0.0/1.0-DUP	Mercury	0.047	J	0.047	J	FD, LD	mg/kg
OCRI-15	360-24582-21	SW6010	OC-SS-416-0.0/1.0-DUP	Tin	22	B ^	22	J	QLS-L	mg/kg
OCRI-15	360-24582-22	SW6010	OC-SS-416-0.0/1.0-XXX	Antimony	0.81		0.81	J	MS-L	mg/kg
OCRI-15	360-24582-22	SW6010	OC-SS-416-0.0/1.0-XXX	Barium	27		27	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-22	SW6010	OC-SS-416-0.0/1.0-XXX	Lead	26		26	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-22	SW7471	OC-SS-416-0.0/1.0-XXX	Mercury	0.17	J	0.17	J	FD, LD	mg/kg
OCRI-15	360-24582-22	SW6010	OC-SS-416-0.0/1.0-XXX	Tin	22	B ^	22	J	QLS-L	mg/kg
OCRI-15	360-24582-5	SW6010	OC-SS-400-0.0/1.0-XXX	Antimony	0.86	U	0.86	UJ	MS-L	mg/kg
OCRI-15	360-24582-5	SW6010	OC-SS-400-0.0/1.0-XXX	Barium	13		13	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-5	SW6010	OC-SS-400-0.0/1.0-XXX	Lead	53		53	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-5	SW7471	OC-SS-400-0.0/1.0-XXX	Mercury	0.12	J	0.12	J	FD, LD	mg/kg
OCRI-15	360-24582-5	SW6010	OC-SS-400-0.0/1.0-XXX	Selenium	0.41	J B	0.86	U	BL	mg/kg
OCRI-15	360-24582-5	SW6010	OC-SS-400-0.0/1.0-XXX	Tin	5.3	J B ^	5.3	J	QLS-L	mg/kg
OCRI-15	360-24582-6	SW6010	OC-SS-401-0.1/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-15	360-24582-6	SW6010	OC-SS-401-0.1/1.0-XXX	Barium	16		16	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-6	SW6010	OC-SS-401-0.1/1.0-XXX	Lead	30		30	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-6	SW7471	OC-SS-401-0.1/1.0-XXX	Mercury	0.2	U	0.2	UJ	FD, LD	mg/kg
OCRI-15	360-24582-6	SW6010	OC-SS-401-0.1/1.0-XXX	Tin	3.6	J B ^	3.6	J	QLS-L	mg/kg
OCRI-15	360-24582-7	SW6010	OC-SS-402-0.0/1.0-XXX	Antimony	0.82	U	0.82	UJ	MS-L	mg/kg
OCRI-15	360-24582-7	SW6010	OC-SS-402-0.0/1.0-XXX	Barium	27		27	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-7	SW6010	OC-SS-402-0.0/1.0-XXX	Lead	48		48	J	MS-L, FD, LD	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
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OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-15	360-24582-7	SW7471	OC-SS-402-0.0/1.0-XXX	Mercury	0.16	J	0.16	J	FD, LD	mg/kg
OCRI-15	360-24582-7	SW6010	OC-SS-402-0.0/1.0-XXX	Selenium	0.99	B	0.82	U	BL	mg/kg
OCRI-15	360-24582-7	SW6010	OC-SS-402-0.0/1.0-XXX	Tin	5	J B ^	5	J	QLS-L	mg/kg
OCRI-15	360-24582-9	SW6010	OC-SS-404-0.0/1.0-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-15	360-24582-9	SW6010	OC-SS-404-0.0/1.0-XXX	Barium	17		17	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-9	SW6010	OC-SS-404-0.0/1.0-XXX	Lead	27		27	J	MS-L, FD, LD	mg/kg
OCRI-15	360-24582-9	SW7471	OC-SS-404-0.0/1.0-XXX	Mercury	0.46		0.46	J	FD, LD	mg/kg
OCRI-15	360-24582-9	SW6010	OC-SS-404-0.0/1.0-XXX	Tin	4.7	J B ^	4.7	J	QLS-L	mg/kg
OCRI-16	360-24634-1	SW6010	OC-SS-417-0.0/1.0-XXX	Antimony	0.28	J	0.28	J	MS-L	mg/kg
OCRI-16	360-24634-1	SW6010	OC-SS-417-0.0/1.0-XXX	Thallium	0.16	J	1.4	U	BL	mg/kg
OCRI-16	360-24634-1	SW6010	OC-SS-417-0.0/1.0-XXX	Tin	3.9	J ^	3.9	J	QLS-L	mg/kg
OCRI-16	360-24634-10	SW6010	OC-SS-426-0.0/1.0-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-16	360-24634-10	SW6010	OC-SS-426-0.0/1.0-XXX	Tin	10	^ B	10	J	QLS-L	mg/kg
OCRI-16	360-24634-11	SW6010	OC-SS-427-0.0/1.0-XXX	Antimony	0.75	U	0.75	UJ	MS-L	mg/kg
OCRI-16	360-24634-11	SW6010	OC-SS-427-0.0/1.0-XXX	Copper	2.4		2.4	EB	BL	mg/kg
OCRI-16	360-24634-11	SW6010	OC-SS-427-0.0/1.0-XXX	Tin	2.3	J ^ B	2.3	J	QLS-L	mg/kg
OCRI-16	360-24634-12	SW6010	OC-SS-428-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-16	360-24634-12	SW6010	OC-SS-428-0.0/1.0-XXX	Tin	9.3	^ B	9.3	J	QLS-L	mg/kg
OCRI-16	360-24634-13	SW6010	OC-SS-429-0.0/1.0-XXX	Antimony	0.77	U	0.77	UJ	MS-L	mg/kg
OCRI-16	360-24634-13	SW6010	OC-SS-429-0.0/1.0-XXX	Tin	36	^ B	36	J	QLS-L	mg/kg
OCRI-16	360-24634-14	SW6010	OC-SS-430-0.0/1.0-XXX	Antimony	0.86	U	0.86	UJ	MS-L	mg/kg
OCRI-16	360-24634-14	SW6010	OC-SS-430-0.0/1.0-XXX	Tin	26	^ B	26	J	QLS-L	mg/kg
OCRI-16	360-24634-15	SW6010	OC-SS-431-0.0/1.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-16	360-24634-15	SW6010	OC-SS-431-0.0/1.0-XXX	Tin	24	^ B	24	J	QLS-L	mg/kg
OCRI-16	360-24634-16	SW6010	OC-SS-432-0.0/1.0-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-16	360-24634-16	SW6010	OC-SS-432-0.0/1.0-XXX	Tin	12	^ B	12	J	QLS-L	mg/kg
OCRI-16	360-24634-2	SW6010	OC-SS-418-0.0/1.0-XXX	Antimony	0.64	U	0.64	UJ	MS-L	mg/kg
OCRI-16	360-24634-2	SW6010	OC-SS-418-0.0/1.0-XXX	Arsenic	0.84	J	1.3	U	BL	mg/kg
OCRI-16	360-24634-2	SW6010	OC-SS-418-0.0/1.0-XXX	Copper	0.94	J	0.94	JEB	BL	mg/kg
OCRI-16	360-24634-2	SW6010	OC-SS-418-0.0/1.0-XXX	Thallium	0.2	J	1.3	U	BL	mg/kg
OCRI-16	360-24634-2	SW6010	OC-SS-418-0.0/1.0-XXX	Tin	0.46	J ^ B	6.4	UJ	BL, QLS-L	mg/kg
OCRI-16	360-24634-3	SW6010	OC-SS-419-0.0/1.0-XXX	Antimony	0.62	U	0.62	UJ	MS-L	mg/kg
OCRI-16	360-24634-3	SW6010	OC-SS-419-0.0/1.0-XXX	Tin	24	^ B	24	J	QLS-L	mg/kg
OCRI-16	360-24634-4	SW6010	OC-SS-420-0.0/1.0-XXX	Antimony	0.57	U	0.57	UJ	MS-L	mg/kg
OCRI-16	360-24634-4	SW6010	OC-SS-420-0.0/1.0-XXX	Tin	18	^ B	18	J	QLS-L	mg/kg
OCRI-16	360-24634-5	SW6010	OC-SS-421-0.0/1.0-XXX	Antimony	0.69	U	0.69	UJ	MS-L	mg/kg
OCRI-16	360-24634-5	SW6010	OC-SS-421-0.0/1.0-XXX	Tin	20	^ B	20	J	QLS-L	mg/kg
OCRI-16	360-24634-6	SW6010	OC-SS-422-0.0/1.0-XXX	Antimony	0.77	U	0.77	UJ	MS-L	mg/kg
OCRI-16	360-24634-6	SW6010	OC-SS-422-0.0/1.0-XXX	Tin	14	^ B	14	J	QLS-L	mg/kg
OCRI-16	360-24634-7	SW6010	OC-SS-423-0.0/1.0-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-16	360-24634-7	SW6010	OC-SS-423-0.0/1.0-XXX	Tin	24	^ B	24	J	QLS-L	mg/kg
OCRI-16	360-24634-8	SW6010	OC-SS-424-0.0/1.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg

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OU1 SOIL PROGRAM
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Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-16	360-24634-8	SW6010	OC-SS-424-0.0/1.0-XXX	Tin	22	^ B	22	J	QLS-L	mg/kg
OCRI-16	360-24634-9	SW6010	OC-SS-425-0.0/1.0-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-16	360-24634-9	SW6010	OC-SS-425-0.0/1.0-XXX	Thallium	0.12	J	1.4	U	BL	mg/kg
OCRI-16	360-24634-9	SW6010	OC-SS-425-0.0/1.0-XXX	Tin	30	^ B	30	J	QLS-L	mg/kg
OCRI-17	360-24665-1	SW6010	OC-SS-434-0.0/1.0-XXX	Antimony	0.75	U	0.75	UJ	MS-L	mg/kg
OCRI-17	360-24665-1	SW6010	OC-SS-434-0.0/1.0-XXX	Tin	3.2	J ^ B	3.2	J	QLS-L	mg/kg
OCRI-17	360-24665-10	SW6010	OC-SS-454-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-17	360-24665-10	SW6010	OC-SS-454-0.0/1.0-XXX	Tin	3.5	J ^ B	3.5	J	QLS-L	mg/kg
OCRI-17	360-24665-11	SW6010	OC-SS-455-0.0/1.0-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-17	360-24665-11	SW6010	OC-SS-455-0.0/1.0-XXX	Tin	3.4	J ^ B	3.4	J	QLS-L	mg/kg
OCRI-17	360-24665-12	SW6010	OC-SS-460-0.0/1.0-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-17	360-24665-12	SW6010	OC-SS-460-0.0/1.0-XXX	Tin	1.7	J ^ B	1.7	J	QLS-L	mg/kg
OCRI-17	360-24665-13	SW6010	OC-SB-406-0.0/1.0-XXX	Antimony	1.4	U	1.4	UJ	MS-L	mg/kg
OCRI-17	360-24665-13	SW6010	OC-SB-406-0.0/1.0-XXX	Tin	6.9	J ^ B	6.9	J	QLS-L	mg/kg
OCRI-17	360-24665-15	SW6010	OC-SB-406-8.0/10-XXX	Antimony	0.59	U	0.59	UJ	MS-L	mg/kg
OCRI-17	360-24665-15	SW6010	OC-SB-406-8.0/10-XXX	Tin	2.8	J ^ B	2.8	J	QLS-L	mg/kg
OCRI-17	360-24665-16	SW6010	OC-SB-413-0.0/1.0-XXX	Antimony	1.5	U	1.5	UJ	MS-L	mg/kg
OCRI-17	360-24665-16	SW6010	OC-SB-413-0.0/1.0-XXX	Tin	4.1	J ^ B	4.1	J	QLS-L	mg/kg
OCRI-17	360-24665-17	SW6010	OC-SB-413-1.0/5.0-XXX	Antimony	0.68	U	0.68	UJ	MS-L	mg/kg
OCRI-17	360-24665-17	SW6010	OC-SB-413-1.0/5.0-XXX	Tin	3.4	J ^ B	3.4	J	QLS-L	mg/kg
OCRI-17	360-24665-2	SW6010	OC-SS-435-0.0/1.0-XXX	Antimony	0.75	U	0.75	UJ	MS-L	mg/kg
OCRI-17	360-24665-2	SW6010	OC-SS-435-0.0/1.0-XXX	Tin	3.2	J ^ B	3.2	J	QLS-L	mg/kg
OCRI-17	360-24665-3	SW6010	OC-SS-436-0.0/1.0-XXX	Antimony	0.76	U	0.76	UJ	MS-L	mg/kg
OCRI-17	360-24665-3	SW6010	OC-SS-436-0.0/1.0-XXX	Tin	1.1	J ^ B	1.1	J	QLS-L	mg/kg
OCRI-17	360-24665-4	SW6010	OC-SS-437-0.0/1.0-XXX	Antimony	0.73	U	0.73	UJ	MS-L	mg/kg
OCRI-17	360-24665-4	SW6010	OC-SS-437-0.0/1.0-XXX	Tin	31	^ B	31	J	QLS-L	mg/kg
OCRI-17	360-24665-5	SW6010	OC-SS-440-0.0/1.0-XXX	Antimony	1.1	U	1.1	UJ	MS-L	mg/kg
OCRI-17	360-24665-5	SW6010	OC-SS-440-0.0/1.0-XXX	Tin	35	^ B	35	J	QLS-L	mg/kg
OCRI-17	360-24665-6	SW6010	OC-SS-442-0.0/1.0-XXX	Antimony	0.97	U	0.97	UJ	MS-L	mg/kg
OCRI-17	360-24665-6	SW6010	OC-SS-442-0.0/1.0-XXX	Tin	3.8	J ^ B	3.8	J	QLS-L	mg/kg
OCRI-17	360-24665-7	SW6010	OC-SS-449-0.0/1.0-XXX	Antimony	0.9	U	0.9	UJ	MS-L	mg/kg
OCRI-17	360-24665-7	SW6010	OC-SS-449-0.0/1.0-XXX	Tin	0.71	J ^ B	0.71	J	QLS-L	mg/kg
OCRI-17	360-24665-8	SW6010	OC-SS-450-0.0/1.0-XXX	Antimony	0.86	U	0.86	UJ	MS-L	mg/kg
OCRI-17	360-24665-8	SW6010	OC-SS-450-0.0/1.0-XXX	Tin	2.2	J ^ B	2.2	J	QLS-L	mg/kg
OCRI-17	360-24665-9	SW6010	OC-SS-451-0.0/1.0-XXX	Antimony	0.84	U	0.84	UJ	MS-L	mg/kg
OCRI-17	360-24665-9	SW6010	OC-SS-451-0.0/1.0-XXX	Tin	0.78	J ^ B	0.78	J	QLS-L	mg/kg
OCRI-17A	360-24665-14	SW6010	OC-SB-406-13/15-XXX	Antimony	0.65	U	0.65	UJ	MS-L	mg/kg
OCRI-17A	360-24665-14	SW6010	OC-SB-406-13/15-XXX	Tin	9.5	^ B	9.5	J	QLS-L	mg/kg
OCRI-17A	360-24665-18	SW6010	OC-SB-413-10/12-XXX	Antimony	0.71	U	0.71	UJ	MS-L	mg/kg
OCRI-17A	360-24665-18	SW6010	OC-SB-413-10/12-XXX	Tin	5.8	J ^ B	5.8	J	QLS-L	mg/kg
OCRI-18	360-24686-1	SW6010	OC-SB-400-17/19-XXX	Antimony	0.65	J	0.71	U	BL, MS-L	mg/kg
OCRI-18	360-24686-1	SW6010	OC-SB-400-17/19-XXX	Selenium	0.45	J B	0.71	U	BL	mg/kg

TABLE 3.7 - VALIDATION CODE SUMMARY - METALS
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-18	360-24686-10	SW6010	OC-SS-453-0.0/1.0-XXX	Antimony	0.83	U	0.83	UJ	MS-L	mg/kg
OCRI-18	360-24686-10	SW6010	OC-SS-453-0.0/1.0-XXX	Selenium	0.55	J B	0.83	U	BL	mg/kg
OCRI-18	360-24686-11	SW6010	OC-SS-457-0.0/1.0-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-18	360-24686-11	SW6010	OC-SS-457-0.0/1.0-XXX	Selenium	0.33	J B	0.66	U	BL	mg/kg
OCRI-18	360-24686-13	SW6010	OC-SS-456-0.0/1.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-18	360-24686-13	SW6010	OC-SS-456-0.0/1.0-XXX	Selenium	0.49	J B	0.67	U	BL	mg/kg
OCRI-18	360-24686-14	SW6010	OC-SS-458-0.0/1.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg
OCRI-18	360-24686-14	SW6010	OC-SS-458-0.0/1.0-XXX	Selenium	0.4	J B	0.67	U	BL	mg/kg
OCRI-18	360-24686-15	SW6010	OC-SS-459-0.0/1.0-XXX	Antimony	0.7	U	0.7	UJ	MS-L	mg/kg
OCRI-18	360-24686-15	SW6010	OC-SS-459-0.0/1.0-XXX	Selenium	0.35	J B	0.7	U	BL	mg/kg
OCRI-18	360-24686-16	SW6010	OC-SS-461-0.0/1.0-XXX	Antimony	0.74	U	0.74	UJ	MS-L	mg/kg
OCRI-18	360-24686-2	SW6010	OC-SB-435-0.0/1.0-XXX	Antimony	3.3	U	3.3	UJ	MS-L	mg/kg
OCRI-18	360-24686-3	SW6010	OC-SB-435-11/15-XXX	Antimony	0.72	U	0.72	UJ	MS-L	mg/kg
OCRI-18	360-24686-4	SW6010	OC-SB-435-6.0/10-XXX	Antimony	0.76	U	0.76	UJ	MS-L	mg/kg
OCRI-18	360-24686-5	SW6010	OC-SB-453-0.0/1.0-XXX	Antimony	2.8	U	2.8	UJ	MS-L	mg/kg
OCRI-18	360-24686-6	SW6010	OC-SB-453-1.0/6.0-XXX	Antimony	0.75	U	0.75	UJ	MS-L	mg/kg
OCRI-18	360-24686-7	SW6010	OC-SB-473-0.0/1.0-XXX	Antimony	0.61	U	0.61	UJ	MS-L	mg/kg
OCRI-18	360-24686-7	SW6010	OC-SB-473-0.0/1.0-XXX	Selenium	0.41	J B	0.61	U	BL	mg/kg
OCRI-18	360-24686-8	SW6010	OC-SB-473-13/15-XXX	Antimony	0.66	U	0.66	UJ	MS-L	mg/kg
OCRI-18	360-24686-9	SW6010	OC-SB-473-4.0/6.0-XXX	Antimony	0.67	U	0.67	UJ	MS-L	mg/kg

Notes:
Samples analyzed by SW-846 Method
6010B (ICP) / Hg by 7471
Units: mg/kg = milligrams per kilogram
Qualifiers:
EB = compound detected in the associated equipment rinsate blank
U = not-detected
J = estimated

Validation Reason Codes:
BL = QC Blank Qualifier
FD = Field Duplicate limit exceeded
LCS-L = LCS recovery low
LD = Lab Duplicate limit exceeded
MS-H = MS and/or MSD recovery high
MS-L = MS and/or MSD recovery low
QLS-L = Quantitation Limit Standard recovery less than limits
SD = Serial dilution result exceeds percent difference limit

Prepared by / Date: KJC 06/30/10
Checked by / Date: TLC 06/30/10

TABLE 3.8 - VALIDATION CODE SUMMARY - HEXAVALENT CHROMIUM
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-12A	360-24454-14	SW7199	OC-SB-470-31/33-XXX	Chromium, Hexavalent	2.6	H	2.6	J	HT	mg/kg

Notes:
Samples analyzed by SW-846 Method
7199 (soil prep method 3060A)
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated

Validation Reason Codes:
HT = Holding time for prep or analysis exceeded

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.9 - VALIDATION CODE SUMMARY - AMMONIA
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04	360-24244-1	LACH_107_06_1_B	OC-SB-432-0.0/1.0-XXX	Nitrogen, as Ammonia	170		170	EB	BL	mg/kg
OCRI-04	360-24244-10	LACH_107_06_1_B	OC-SB-437-0.0/1.0-XXX	Nitrogen, as Ammonia	21		21	EB	BL	mg/kg
OCRI-04	360-24244-11	LACH_107_06_1_B	OC-SB-437-21/23-XXX	Nitrogen, as Ammonia	160		160	EB	BL	mg/kg
OCRI-04	360-24244-12	LACH_107_06_1_B	OC-SB-437-5.0/7.0-XXX	Nitrogen, as Ammonia	13		13	EB	BL	mg/kg
OCRI-04	360-24244-2	LACH_107_06_1_B	OC-SB-432-14/16-XXX	Nitrogen, as Ammonia	12		12	EB	BL	mg/kg
OCRI-04	360-24244-3	LACH_107_06_1_B	OC-SB-432-5.0/7.0-XXX	Nitrogen, as Ammonia	12		12	EB	BL	mg/kg
OCRI-04	360-24244-4	LACH_107_06_1_B	OC-SB-443-0.0/1.0-XXX	Nitrogen, as Ammonia	9.9		9.9	EB	BL	mg/kg
OCRI-04	360-24244-5	LACH_107_06_1_B	OC-SB-443-18/20-XXX	Nitrogen, as Ammonia	220		220	EB	BL	mg/kg
OCRI-04	360-24244-8	LACH_107_06_1_B	OC-SB-445-25/27-XXX	Nitrogen, as Ammonia	160		160	EB	BL	mg/kg
OCRI-04	360-24244-9	LACH_107_06_1_B	OC-SB-445-8.0/10-XXX	Nitrogen, as Ammonia	46		46	EB	BL	mg/kg
OCRI-10	360-24417-1	LACH_107_06_1_B	OC-SB-463-0.0/1.0-XXX	Nitrogen, as Ammonia	11		11	J	MS-L	mg/kg
OCRI-10	360-24417-10	LACH_107_06_1_B	OC-SB-465-8.0/10-XXX	Nitrogen, as Ammonia	75		75	J	MS-L	mg/kg
OCRI-10	360-24417-11	LACH_107_06_1_B	OC-SB-468-0.0/1.0-XXX	Nitrogen, as Ammonia	55		55	J	MS-L	mg/kg
OCRI-10	360-24417-12	LACH_107_06_1_B	OC-SB-468-31/33-XXX	Nitrogen, as Ammonia	88		88	J	MS-L	mg/kg
OCRI-10	360-24417-13	LACH_107_06_1_B	OC-SB-468-8.0/10-XXX	Nitrogen, as Ammonia	92		92	J	MS-L	mg/kg
OCRI-10	360-24417-14	LACH_107_06_1_B	OC-SB-471-0.0/1.0-XXX	Nitrogen, as Ammonia	6.8	U	6.8	UJ	MS-L	mg/kg
OCRI-10	360-24417-15	LACH_107_06_1_B	OC-SB-471-3.0/5.0-XXX	Nitrogen, as Ammonia	6.4	U	6.4	UJ	MS-L	mg/kg
OCRI-10	360-24417-16	LACH_107_06_1_B	OC-SB-471-26/28-XXX	Nitrogen, as Ammonia	100		100	J	MS-L	mg/kg
OCRI-10	360-24417-2	LACH_107_06_1_B	OC-SB-463-28/30-XXX	Nitrogen, as Ammonia	510		510	J	MS-L	mg/kg
OCRI-10	360-24417-3	LACH_107_06_1_B	OC-SB-463-6.0/8.0-XXX	Nitrogen, as Ammonia	8.3	U	8.3	UJ	MS-L	mg/kg
OCRI-10	360-24417-4	LACH_107_06_1_B	OC-SB-464-0.0/1.0-XXX	Nitrogen, as Ammonia	11		11	J	MS-L	mg/kg
OCRI-10	360-24417-5	LACH_107_06_1_B	OC-SB-464-26/28-XXX	Nitrogen, as Ammonia	120		120	J	MS-L	mg/kg
OCRI-10	360-24417-6	LACH_107_06_1_B	OC-SB-464-5.0/7.0-XXX	Nitrogen, as Ammonia	11		11	J	MS-L	mg/kg
OCRI-10	360-24417-7	LACH_107_06_1_B	OC-SB-465-0.0/1.0-XXX	Nitrogen, as Ammonia	6.7	U	6.7	UJ	MS-L	mg/kg
OCRI-10	360-24417-8	LACH_107_06_1_B	OC-SB-465-16/18-XXX	Nitrogen, as Ammonia	79		79	J	MS-L	mg/kg
OCRI-10	360-24417-9	LACH_107_06_1_B	OC-SB-465-8.0/10-DUP	Nitrogen, as Ammonia	78		78	J	MS-L	mg/kg
OCRI-14	360-24563-11	LACH_107_06_1_B	OC-SB-456-0.0/1.0-XXX	Nitrogen, as Ammonia	15		15	J	FD	mg/kg
OCRI-14	360-24563-12	LACH_107_06_1_B	OC-SB-456-16/18-XXX	Nitrogen, as Ammonia	390		390	J	FD	mg/kg
OCRI-14	360-24563-13	LACH_107_06_1_B	OC-SB-456-7.0/9.0-DUP	Nitrogen, as Ammonia	68		68	J	FD	mg/kg
OCRI-14	360-24563-14	LACH_107_06_1_B	OC-SB-456-7.0/9.0-XXX	Nitrogen, as Ammonia	6.7	U	6.7	UJ	FD	mg/kg
OCRI-14	360-24563-15	LACH_107_06_1_B	OC-SB-457-0.0/1.0-XXX	Nitrogen, as Ammonia	79		79	J	FD	mg/kg
OCRI-14	360-24563-16	LACH_107_06_1_B	OC-SB-457-8.0/10-XXX	Nitrogen, as Ammonia	33		33	J	FD	mg/kg

Notes:

Samples analyzed by QuikChem: LACHAT 10-107-06-1-A

Units: mg/kg = milligrams per kilogram

Qualifiers:

U = not-detected

J = estimated

EB = compound detected in the associated equipment blank

Validation Reason Codes:

BL = QC Blank Qualifier

FD = Field Duplicate limit exceeded

MS-L = MS and/or MSD recovery low

Prepared by / Date: KJC 06/22/10

Checked by / Date: TLC 06/30/10

TABLE 3.10 - VALIDATION CODE SUMMARY - ANIONS (CHLORIDE AND SULFATE)
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-03	360-24223-4	E300	OC-SB-419-0.0/1.0-XXX	Chloride	30		30	J	MS-H	mg/kg
OCRI-05	360-24251-16	E300	OC-SB-446-0.0/1.0-XXX	Sulfate	120		120	EB	BL	mg/kg
OCRI-05	360-24251-17	E300	OC-SB-446-15/17-XXX	Sulfate	59		59	EB	BL	mg/kg
OCRI-05	360-24251-24	E300	OC-SB-438-20/22-XXX	Sulfate	96		96	EB	BL	mg/kg
OCRI-05	360-24251-9	E300	OC-SB-440-23/25-XXX	Sulfate	45		45	EB	BL	mg/kg

Notes:
Samples analyzed by EPA 300
Units: mg/kg = milligrams per kilogram
Qualifiers:
J = estimated
EB = compound detected in the associated equipment rinsate blank

Validation Reason Codes:
MS-H = MS and/or MSD recovery high
BL = QC Blank Qualifier

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.11 - VALIDATION CODE SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-04	360-24244-3	SW8315	OC-SB-432-5.0/7.0-XXX	Acetaldehyde	230	U	230	UJ	MS-L	ug/kg
OCRI-04	360-24244-3	SW8315	OC-SB-432-5.0/7.0-XXX	Formaldehyde	110	U	110	UJ	MS-L	ug/kg
OCRI-07	360-24327-1	SW8315	OC-SB-403-0.0/1.0-XXX	Acetaldehyde	47	J B	210	U	BL	ug/kg
OCRI-07	360-24327-10	SW8315	OC-SB-410-17/19-XXX	Acetaldehyde	38	J B	220	U	BL	ug/kg
OCRI-07	360-24327-11	SW8315	OC-SB-410-6.0/8.0-DUP	Acetaldehyde	54	J B	260	U	BL	ug/kg
OCRI-07	360-24327-12	SW8315	OC-SB-410-6.0/8.0-XXX	Acetaldehyde	57	J B	260	U	BL	ug/kg
OCRI-07	360-24327-13	SW8315	OC-SB-411-0.0/1.0-XXX	Acetaldehyde	46	J B	210	U	BL	ug/kg
OCRI-07	360-24327-14	SW8315	OC-SB-411-4.7/6.7-XXX	Acetaldehyde	37	J B	200	U	BL	ug/kg
OCRI-07	360-24327-15	SW8315	OC-SB-418-0.0/1.0-XXX	Acetaldehyde	34	J B	210	U	BL	ug/kg
OCRI-07	360-24327-17	SW8315	OC-SB-418-8/10-XXX	Acetaldehyde	35	J B	220	U	BL	ug/kg
OCRI-07	360-24327-2	SW8315	OC-SB-403-13/15-XXX	Acetaldehyde	39	J B	250	U	BL	ug/kg
OCRI-07	360-24327-3	SW8315	OC-SB-403-6.0/8.0-XXX	Acetaldehyde	66	J B	320	U	BL	ug/kg
OCRI-07	360-24327-4	SW8315	OC-SB-404-13/15-XXX	Acetaldehyde	40	J B	210	U	BL	ug/kg
OCRI-07	360-24327-5	SW8315	OC-SB-404-5.0/7.0-XXX	Acetaldehyde	42	J B	230	U	BL	ug/kg
OCRI-07	360-24327-6	SW8315	OC-SB-409-0.0/1.0-XXX	Acetaldehyde	39	J B	200	U	BL	ug/kg
OCRI-07	360-24327-7	SW8315	OC-SB-409-15/17-XXX	Acetaldehyde	32	J B	220	U	BL	ug/kg
OCRI-07	360-24327-8	SW8315	OC-SB-409-6.0/8.0-XXX	Acetaldehyde	78	J B	250	U	BL	ug/kg
OCRI-07	360-24327-9	SW8315	OC-SB-410-0.0/1.0-XXX	Acetaldehyde	34	J B	220	U	BL	ug/kg
OCRI-08	360-24343-10	SW8315	OC-SB-451-2.5/4.5-XXX	Acetaldehyde	210	U	210	UJ	MS-L	ug/kg
OCRI-08	360-24343-10	SW8315	OC-SB-451-2.5/4.5-XXX	Formaldehyde	140		140	J	MS-L	ug/kg
OCRI-08	360-24343-9	SW8315	OC-SB-451-2.5/4.5-DUP	Acetaldehyde	31	J	31	J	MS-L	ug/kg
OCRI-08	360-24343-9	SW8315	OC-SB-451-2.5/4.5-DUP	Formaldehyde	170		170	J	MS-L	ug/kg
OCRI-09	360-24365-3	SW8315	OC-SB-442-8.0/10-DUP	Formaldehyde	600		600	J	FD	ug/kg
OCRI-09	360-24365-4	SW8315	OC-SB-442-8.0/10-XXX	Formaldehyde	170		170	J	FD	ug/kg
OCRI-11	360-24444-1	SW8315	OC-SB-459-6.0/8.0-DUP	Acetaldehyde	69	J B	220	UJ	BL, MS-L	ug/kg
OCRI-11	360-24444-12	SW8315	OC-SB-459-0.0/1.0-XXX	Acetaldehyde	37	J B	220	UJ	BL, MS-L	ug/kg
OCRI-11	360-24444-13	SW8315	OC-SB-459-26/28-XXX	Acetaldehyde	47	J B	210	UJ	BL, MS-L	ug/kg
OCRI-11	360-24444-2	SW8315	OC-SB-459-6.0/8.0-XXX	Acetaldehyde	63	J B	220	UJ	BL, MS-L	ug/kg
OCRI-12	360-24454-7	SW8315	OC-SB-472-0.0/1.0-XXX	Acetaldehyde	38	J B	210	U	BL	ug/kg
OCRI-12	360-24454-8	SW8315	OC-SB-472-30/32-XXX	Acetaldehyde	52	J B	210	U	BL	ug/kg
OCRI-12	360-24454-9	SW8315	OC-SB-472-8.0/10-XXX	Acetaldehyde	42	J B	230	U	BL	ug/kg
OCRI-13	360-24499-1	SW8315	OC-SB-466-6.0/8.0-XXX	Acetaldehyde	45	J B	220	U	BL	ug/kg
OCRI-13	360-24499-17	SW8315	OC-SB-434-0.0/1.0-XXX	Acetaldehyde	120	J B	210	U	BL	ug/kg
OCRI-13	360-24499-18	SW8315	OC-SB-434-15/16-XXX	Acetaldehyde	120	J B	230	U	BL	ug/kg
OCRI-13	360-24499-19	SW8315	OC-SB-434-7.0/9.0-XXX	Acetaldehyde	45	J B	210	U	BL	ug/kg
OCRI-13	360-24499-20	SW8315	OC-SB-450-0.0/1.0-XXX	Acetaldehyde	56	J B	210	U	BL	ug/kg
OCRI-13	360-24499-21	SW8315	OC-SB-450-33/35-XXX	Acetaldehyde	41	J B	220	U	BL	ug/kg
OCRI-13	360-24499-22	SW8315	OC-SB-450-8.0/10-XXX	Acetaldehyde	50	J B	230	U	BL	ug/kg
OCRI-13	360-24499-7	SW8315	OC-SB-466-30/32-XXX	Acetaldehyde	59	J B	220	U	BL	ug/kg
OCRI-14	360-24563-1	SW8315	OC-SB-427-0.0/1.0-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-14	360-24563-11	SW8315	OC-SB-456-0.0/1.0-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg

TABLE 3.11 - VALIDATION CODE SUMMARY - FORMALDEHYDE / ACETALDEHYDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-14	360-24563-12	SW8315	OC-SB-456-16/18-XXX	Acetaldehyde	220	U	220	UJ	LCS-L	ug/kg
OCRI-14	360-24563-13	SW8315	OC-SB-456-7.0/9.0-DUP	Acetaldehyde	33	J	33	J	LCS-L	ug/kg
OCRI-14	360-24563-14	SW8315	OC-SB-456-7.0/9.0-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-14	360-24563-15	SW8315	OC-SB-457-0.0/1.0-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-14	360-24563-16	SW8315	OC-SB-457-8.0/10-XXX	Acetaldehyde	100	J	100	J	LCS-L	ug/kg
OCRI-14	360-24563-2	SW8315	OC-SB-427-12/14-XXX	Acetaldehyde	220	U	220	UJ	LCS-L	ug/kg
OCRI-14	360-24563-3	SW8315	OC-SB-427-17/19-XXX	Acetaldehyde	220	U	220	UJ	LCS-L	ug/kg
OCRI-14	360-24563-4	SW8315	OC-SB-427-8.0/10-DUP	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-14	360-24563-5	SW8315	OC-SB-427-8.0/10-XXX	Acetaldehyde	200	U	200	UJ	LCS-L	ug/kg
OCRI-14	360-24563-6	SW8315	OC-SB-428-0.0/1.0-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-14	360-24563-7	SW8315	OC-SB-428-23/25-XXX	Acetaldehyde	73	J	73	J	LCS-L	ug/kg
OCRI-14	360-24563-9	SW8315	OC-SB-428-8.0/10-XXX	Acetaldehyde	210	U	210	UJ	LCS-L	ug/kg
OCRI-16	360-24634-4	SW8315	OC-SS-420-0.0/1.0-XXX	Acetaldehyde	230	U	230	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8315	OC-SS-434-0.0/1.0-XXX	Acetaldehyde	240	U	240	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	SW8315	OC-SS-434-0.0/1.0-XXX	Formaldehyde	110	J	110	J	MS-L	ug/kg
OCRI-18	360-24686-7	SW8315	OC-SB-473-0.0/1.0-XXX	Formaldehyde	220	J	220	J	MS-L	ug/kg

Notes:
Samples analyzed by SW-846 Method 8315
Units: ug/kg = micrograms per kilogram
Qualifiers:
U = not-detected
J = estimated

Validation Reason Codes:
BL = QC Blank Qualifier
FD = Field Duplicate limit exceeded
LCS-L = LCS recovery low
MS-L = MS and/or MSD recovery low

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.12 - VALIDATION CODE SUMMARY - PHTHALIC ANHYDRIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
OCRI-01	360-24173-11	LC65	OC-SB-412-6.0/7.0-XXX	Phthalic Acid/Phthalic anhydride	110	U	110	UJ	MS-L	ug/kg
OCRI-01	360-24173-4	LC65	OC-SB-416-0.0/1.0-XXX	Phthalic Acid/Phthalic anhydride	100	U	100	UJ	MS-L	ug/kg
OCRI-07	360-24327-11	LC65	OC-SB-410-6.0/8.0-DUP	Phthalic Acid/Phthalic anhydride	130	U	130	UJ	MS-L	ug/kg
OCRI-07	360-24327-12	LC65	OC-SB-410-6.0/8.0-XXX	Phthalic Acid/Phthalic anhydride	130	U	130	UJ	MS-L	ug/kg
OCRI-10	360-24417-10	LC65	OC-SB-465-8.0/10-XXX	Phthalic Acid/Phthalic anhydride	110	U	110	UJ	MS-L	ug/kg
OCRI-10	360-24417-9	LC65	OC-SB-465-8.0/10-DUP	Phthalic Acid/Phthalic anhydride	100	U	100	UJ	MS-L	ug/kg
OCRI-14	360-24563-13	LC65	OC-SB-456-7.0/9.0-DUP	Phthalic Acid/Phthalic anhydride	110	U	110	UJ	MS-L	ug/kg
OCRI-14	360-24563-14	LC65	OC-SB-456-7.0/9.0-XXX	Phthalic Acid/Phthalic anhydride	110	U	110	UJ	MS-L	ug/kg
OCRI-14	360-24563-4	LC65	OC-SB-427-8.0/10-DUP	Phthalic Acid/Phthalic anhydride	100	U	100	UJ	MS-L	ug/kg
OCRI-14	360-24563-5	LC65	OC-SB-427-8.0/10-XXX	Phthalic Acid/Phthalic anhydride	100	U	100	UJ	MS-L	ug/kg
OCRI-17	360-24665-1	LC65	OC-SS-434-0.0/1.0-XXX	Phthalic Acid/Phthalic anhydride	110	U	110	UJ	MS-L	ug/kg
OCRI-18	360-24686-7	LC65	OC-SB-473-0.0/1.0-XXX	Phthalic Acid/Phthalic anhydride	120	U	120	UJ	MS-L	ug/kg

Notes:
Samples analyzed by Modified Method 8000 - LC
Units: ug/kg = micrograms per kilograms
Qualifiers:
U = not-detected
J = estimated

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

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.14 - VALIDATION CODE SUMMARY - HYDRAZINE, MMH, UDMH
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
1160616	5769175	SW8315A MOD	OC-SB-465-8.0/10-DUP	Hydrazine	200		200	J	SP	ng/g
1160616	5769175	SW8315A MOD	OC-SB-465-8.0/10-DUP	UDMH	2.3	U	5.8	UJ	SP	ng/g
1160616	5769175	SW8315A MOD	OC-SB-465-8.0/10-DUP	Monomethylhydrazine (MMH)	2.3	U	5.8	UJ	SP	ng/g
1160616	5769176	SW8315A MOD	OC-SB-465-8.0/10-XXX	Hydrazine	210		210	J	SP	ng/g
1160616	5769176	SW8315A MOD	OC-SB-465-8.0/10-XXX	UDMH	2.3	U	5.8	UJ	SP	ng/g
1160616	5769176	SW8315A MOD	OC-SB-465-8.0/10-XXX	Monomethylhydrazine (MMH)	2.3	U	5.8	UJ	SP	ng/g
1160616	5769179	SW8315A MOD	OC-SB-468-8.0/10-XXX	Hydrazine	280		280	J	SP	ng/g
1160616	5769179	SW8315A MOD	OC-SB-468-8.0/10-XXX	UDMH	2.3	U	5.8	UJ	SP	ng/g
1160616	5769179	SW8315A MOD	OC-SB-468-8.0/10-XXX	Monomethylhydrazine (MMH)	2.3	U	5.8	UJ	SP	ng/g
1160616	5769180	SW8315A MOD	OC-SB-471-3.0/5.0-XXX	Hydrazine	2.3	J	2.3	J	SP	ng/g
1160616	5769180	SW8315A MOD	OC-SB-471-3.0/5.0-XXX	UDMH	2.7	U	6.8	UJ	SP	ng/g
1160616	5769180	SW8315A MOD	OC-SB-471-3.0/5.0-XXX	Monomethylhydrazine (MMH)	2.7	U	6.8	UJ	SP	ng/g
1160615	5769171	SW8315A MOD	OC-SB-459-6.0/8.0-DUP	Hydrazine	7.5		7.5	J	SP	ng/g
1160615	5769171	SW8315A MOD	OC-SB-459-6.0/8.0-DUP	UDMH	2.3	U	5.8	UJ	SP	ng/g
1160615	5769171	SW8315A MOD	OC-SB-459-6.0/8.0-DUP	Monomethylhydrazine (MMH)	2.3	U	5.8	UJ	SP	ng/g
1160615	5769172	SW8315A MOD	OC-SB-459-6.0/8.0-XXX	Hydrazine	8.6		8.6	J	SP	ng/g
1160615	5769172	SW8315A MOD	OC-SB-459-6.0/8.0-XXX	UDMH	2.3	U	5.8	UJ	SP	ng/g
1160615	5769172	SW8315A MOD	OC-SB-459-6.0/8.0-XXX	Monomethylhydrazine (MMH)	2.3	U	5.8	UJ	SP	ng/g

Notes:
Samples analyzed by Modified 8315 - LC/MS/MS
Units: ng/g = nanograms per gram
Qualifiers:
U = not-detected
J = estimated

Validation Reason Codes:
SP = Sample preservation/collection does not meet method requirement

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

TABLE 3.15 - VALIDATION CODE SUMMARY - N,N-DIMETHYLFORMAMIDE
DATA VALIDATION REPORT
2009 REMEDIAL INVESTIGATION / FEASIBILITY STUDY
OU1 SOIL PROGRAM
OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS

Sample Delivery Group	Lab Sample ID	Analysis Method	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Validation Reason Code	Result Units
WIL-7	SC5605-1	SW846 M8033	OC-SB-413-0.0/1.0-XXX	Dimethylformamide	0.79	U	0.79	UJ	LCS-L	MG/KG
WIL-7	SC5605-2	SW846 M8033	OC-SB-413-1.0/5.0-XXX	Dimethylformamide	0.77	U	0.77	UJ	LCS-L	MG/KG
WIL-7	SC5415-1	SW846 M8033	OC-SB-427-0.0/1.0-XXX	Dimethylformamide	0.57	U	0.57	UJ	LCS-L	MG/KG
WIL-7	SC5415-2	SW846 M8033	OC-SB-434-0.0/1.0-XXX	Dimethylformamide	0.81	U	0.81	UJ	LCS-L	MG/KG
WIL-7	SC5415-3	SW846 M8033	OC-SB-434-7.0/9.0-XXX	Dimethylformamide	0.52	U	0.52	UJ	LCS-L	MG/KG
WIL-7	SC5605-3	SW846 M8033	OC-SB-435-0.0/1.0-XXX	Dimethylformamide	2.2	U	2.2	UJ	LCS-L	MG/KG
WIL-7	SC5605-4	SW846 M8033	OC-SB-435-11/15-XXX	Dimethylformamide	0.48	U	0.48	UJ	LCS-L	MG/KG
WIL-7	SC5605-5	SW846 M8033	OC-SB-435-6.0/10-XXX	Dimethylformamide	0.45	U	0.45	UJ	LCS-L	MG/KG
WIL-7	SC5326-1	SW846 M8033	OC-SB-450-0.0/1.0-XXX	Dimethylformamide	0.61	U	0.61	UJ	LCS-L	MG/KG
WIL-7	SC5326-2	SW846 M8033	OC-SB-450-8.0/10-XXX	Dimethylformamide	0.62	U	0.62	UJ	LCS-L	MG/KG
WIL-7	SC5415-4	SW846 M8033	OC-SB-456-0.0/1.0-XXX	Dimethylformamide	0.61	U	0.61	UJ	LCS-L	MG/KG
WIL-7	SC5415-5	SW846 M8033	OC-SB-456-16/18-XXX	Dimethylformamide	0.5	U	0.5	UJ	LCS-L	MG/KG
WIL-7	SC5415-6	SW846 M8033	OC-SB-456-7.0/9.0-DUP	Dimethylformamide	0.7	U	0.7	UJ	LCS-L	MG/KG
WIL-7	SC5415-7	SW846 M8033	OC-SB-456-7.0/9.0-XXX	Dimethylformamide	0.6	U	0.6	UJ	LCS-L	MG/KG
WIL-7	SC5415-8	SW846 M8033	OC-SB-457-0.0/1.0-XXX	Dimethylformamide	0.68	U	0.68	UJ	LCS-L	MG/KG
WIL-7	SC5415-9	SW846 M8033	OC-SB-457-8.0/10-XXX	Dimethylformamide	0.52	U	0.52	UJ	LCS-L	MG/KG
WIL-7	SC5326-3	SW846 M8033	OC-SB-466-30/32-XXX	Dimethylformamide	0.6	U	0.6	UJ	LCS-L	MG/KG
WIL-7	SC5326-4	SW846 M8033	OC-SB-466-6.0/8.0-XXX	Dimethylformamide	0.61	U	0.61	UJ	LCS-L	MG/KG
WIL-7	SC5256-1	SW846 M8033	OC-SB-472-30/32-XXX	Dimethylformamide	0.82	U	0.82	UJ	LCS-L	MG/KG

Notes:
Samples analyzed by Modified 8033 - GC/NPD
Units: mg/kg = milligrams per kilogram
Qualifiers:
U = not-detected
J = estimated

Validation Reason Codes:
LCS-L = LCS recovery low

Prepared by / Date: KJC 06/22/10
Checked by / Date: TLC 06/30/10

Table 4.1
Final Results Summary - Tentatively Identified Compounds - VOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Unknown	10.688	2.5	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	1-Butoxy-2-ethylhexane	11.436	1100	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Hexanal	5.432	200000	NJ	ug/kg	25
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	13.375	54	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	13.504	4.5	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	13.654	40	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	13.783	23	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	13.373	260	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	13.502	20	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	13.652	200	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	13.771	120	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	15.714	7.1	NJ	ug/kg	1
OCRI-01	360-24173-2	OC-SB-405-14/15-XXX	Unknown	6.823	100	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	13.379	84	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	13.503	7.7	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	13.653	55	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	13.777	33	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	7.963	12	NJ	ug/kg	1
OCRI-01	360-24173-5	OC-SB-416-13/14-XXX	2-Pentanone, 4,4-dimethyl-	7.944	11	NJ	ug/kg	1
OCRI-01	360-24173-5	OC-SB-416-13/14-XXX	Unknown	8.657	4.6	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	6.546	270	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	2-Pentene, 2,3,4-trimethyl-	6.84	650	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	6.832	7300	NJ	ug/kg	25
OCRI-01	360-24173-8	OC-EBK-001	Unknown	11.728	5.1	NJ	ug/l	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	13.273	540	NJ	ug/kg	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	13.376	12000	NJ	ug/kg	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	13.506	990	NJ	ug/kg	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	13.656	9400	NJ	ug/kg	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	13.78	4600	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	11.416	1000	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	12.331	480	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Naphthalene, 2-ethenyl-	16.124	3500	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Diphenyl ether	16.429	9600	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	5.422	5000	NJ	ug/kg	1
OCRI-02	360-24194-2	OC-SB-421-10.5/12.5-XXX	Methyl methacrylate	6.533	550	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.179	4.2	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.267	13	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.375	420	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.504	30	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.649	300	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.773	180	NJ	ug/kg	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	13.923	11	NJ	ug/kg	1
OCRI-02	360-24194-4	OC-SB-424-0.0/1.0-XXX	Unknown	10.693	2.3	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Unknown	13.37	20	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Unknown	13.65	15	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Unknown	13.774	9.1	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	12.828	22	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	13.376	320	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	13.5	24	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	13.65	230	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	13.774	150	NJ	ug/kg	1
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	13.913	9.5	NJ	ug/kg	1
OCRI-03	360-24223-1	OC-SB-415-0.0/1.0-XXX	Unknown	10.388	9.3	NJ	ug/kg	1
OCRI-03	360-24223-13	OC-SB-436-0.0/1.0-XXX	Unknown	10.058	2.2	NJ	ug/kg	1
OCRI-03	360-24223-15	OC-SB-436-6.0/8.0-XXX	Unknown	10.054	1.6	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Unknown	8.89	4.2	NJ	ug/kg	1
OCRI-03	360-24223-4	OC-SB-419-0.0/1.0-XXX	Unknown	10.389	6.8	NJ	ug/kg	1
OCRI-03	360-24223-6	OC-SB-419-3.0/5.0-XXX	Unknown	10.062	4.5	NJ	ug/kg	1
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	10.688	1.5	NJ	ug/kg	1
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.412	400	NJ	ug/kg	1
OCRI-04	360-24244-12	OC-SB-437-5.0/7.0-XXX	Unknown	10.388	2.8	NJ	ug/kg	1
OCRI-04	360-24244-12	OC-SB-437-5.0/7.0-XXX	Unknown	12.838	11	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	10.367	2500	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Methyl methacrylate	6.585	350	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	7.453	1400	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	7.494	4100	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	3-Nonene, (E)-	7.696	1500	NJ	ug/kg	1

Table 4.1
Final Results Summary - Tentatively Identified Compounds - VOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	3,5-Dimethyl-3-heptene	7.737	1600	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	7.82	2200	NJ	ug/kg	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	1-Silacyclo-3-pentene	7.877	1300	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	10.047	3200	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	10.099	5800	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	10.362	5600	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Cyclohexane, 1-ethyl-4-methyl-, trans-	7.448	2500	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.494	5200	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.691	2000	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Cyclohexane, 1-ethyl-4-methyl-, cis-	7.737	2600	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.825	3000	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.872	2700	NJ	ug/kg	1
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	9.866	3500	NJ	ug/kg	1
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.042	2.6	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	10.057	4.7	NJ	ug/kg	1
OCRI-05	360-24251-10	OC-SB-440-6.0/8.0-XXX	Unknown	10.393	3.5	NJ	ug/kg	1
OCRI-05	360-24251-13	OC-SB-441-0.0/1.0-XXX	Unknown	10.042	2.7	NJ	ug/kg	1
OCRI-05	360-24251-18	OC-SB-446-5.0/7.0-DUP	Unknown	10.057	2.2	NJ	ug/kg	1
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Unknown	10.69	3.1	NJ	ug/kg	1
OCRI-05	360-24251-20	OC-SB-448-0.0/1.0-XXX	1-Propene, 2-methyl-, tetramer	13.34	12	NJ	ug/kg	1
OCRI-05	360-24251-20	OC-SB-448-0.0/1.0-XXX	Unknown	13.619	6.7	NJ	ug/kg	1
OCRI-05	360-24251-22	OC-SB-448-8.0/10-XXX	Unknown	11.427	6.8	NJ	ug/kg	1
OCRI-05	360-24251-22	OC-SB-448-8.0/10-XXX	Biphenyl	16.14	13	NJ	ug/kg	1
OCRI-05	360-24251-22	OC-SB-448-8.0/10-XXX	Diphenyl ether	16.445	12	NJ	ug/kg	1
OCRI-05	360-24251-25	OC-TBK-007	Unknown	10.667	1.1	NJ	ug/kg	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	2.002	2.5	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	2.963	0.97	NJ	ug/l	1
OCRI-05	360-24251-3	OC-SB-433-5.0/7.0-DUP	Unknown	13.372	27	NJ	ug/kg	1
OCRI-05	360-24251-3	OC-SB-433-5.0/7.0-DUP	Unknown	13.651	15	NJ	ug/kg	1
OCRI-05	360-24251-3	OC-SB-433-5.0/7.0-DUP	Unknown	13.775	7.8	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	13.375	29	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	13.654	14	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	13.778	6.5	NJ	ug/kg	1
OCRI-05	360-24251-5	OC-SB-439-0.0-1.0-XXX	Unknown	1.84	22	NJ	ug/kg	1
OCRI-05	360-24251-8	OC-SB-440-0.0/1.0-XXX	Unknown	10.037	2.6	NJ	ug/kg	1
OCRI-05	360-24251-9	OC-SB-440-23/25-XXX	Naphthalene, 2-ethenyl-	15.02	50	NJ	ug/kg	1
OCRI-05	360-24251-9	OC-SB-440-23/25-XXX	Diphenyl ether	15.137	99	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	Unknown	5.302	6.7	NJ	ug/kg	1
OCRI-06	360-24309-12	OC-SB-414-0.0/1.0-XXX	Unknown	10.042	2.3	NJ	ug/kg	1
OCRI-06	360-24309-14	OC-SB-414-6.0/8.0-XXX	Unknown	10.057	2.8	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	Unknown	2.528	550	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	Unknown	3.84	170	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	Unknown	10.38	1.5	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	Unknown	10.368	3.1	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	Unknown	10.688	1.1	NJ	ug/kg	1
OCRI-06	360-24309-24	OC-TBK-008	Pentane	2.527	2200	NJ	ug/kg	1
OCRI-06	360-24309-24	OC-TBK-008	Unknown	3.84	190	NJ	ug/kg	1
OCRI-06	360-24309-6	OC-SB-402-7.5/9.5-XXX	Unknown	10.687	3.1	NJ	ug/kg	1
OCRI-06	360-24309-6	OC-SB-402-7.5/9.5-XXX	Unknown	12.837	13	NJ	ug/kg	1
OCRI-06	360-24309-7	OC-SB-407-0.0/1.0-XXX	Unknown	10.424	1.5	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	Unknown	10.058	6.2	NJ	ug/kg	1
OCRI-07	360-24327-1	OC-SB-403-0.0/1.0-XXX	Unknown	10.367	5.2	NJ	ug/kg	1
OCRI-07	360-24327-11	OC-SB-410-6.0/8.0-DUP	Unknown	12.811	5.5	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Unknown	10.668	1.8	NJ	ug/kg	1
OCRI-07	360-24327-18	OC-TBK-009	Unknown	10.662	1.7	NJ	ug/kg	1
OCRI-07	360-24327-19	OC-EBK-005	Unknown	2.002	1.5	NJ	ug/l	1
OCRI-07	360-24327-6	OC-SB-409-0.0/1.0-XXX	Unknown	10.363	0.93	NJ	ug/kg	1
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	Unknown	10.662	4.9	NJ	ug/kg	1
OCRI-08	360-24343-1	OC-SB-444-0.0/1.0-XXX	Unknown	5.65	26	NJ	ug/kg	1
OCRI-08	360-24343-11	OC-SB-454-0.0/1.0-XXX	Unknown	10.657	2.1	NJ	ug/kg	1
OCRI-08	360-24343-2	OC-SB-444-12/14-XXX	Unknown	10.649	2.6	NJ	ug/kg	1
OCRI-08	360-24343-2	OC-SB-444-12/14-XXX	Unknown	4.407	13	NJ	ug/kg	1
OCRI-08	360-24343-22	OC-TBK-010	Unknown	10.663	1.3	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Unknown	10.667	2.6	NJ	ug/kg	1
OCRI-08	360-24343-6	OC-SB-449-6.0/8.0-XXX	1-Propene, 2-methyl-, tetramer	13.344	12	NJ	ug/kg	1
OCRI-08	360-24343-6	OC-SB-449-6.0/8.0-XXX	Unknown	13.618	8.5	NJ	ug/kg	1
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	9.127	1.3	NJ	ug/kg	1

Table 4.1
Final Results Summary - Tentatively Identified Compounds - VOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-09	360-24365-11	OC-TBK-011	Unknown	2.83	5.1	NJ	ug/kg	1
OCRI-09	360-24365-12	OC-EBK-006	Unknown	3.07	3.4	NJ	ug/l	1
OCRI-09	360-24365-13	OC-SB-458-0.0/1.0-XXX	Unknown	9.846	1.1	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	Unknown	10.347	3.6	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Unknown	11.959	0.43	NJ	ug/kg	1
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	Unknown	10.646	2.8	NJ	ug/kg	1
OCRI-09	360-24365-6	OC-SB-447-18/20-XXX	Unknown	10.666	1.5	NJ	ug/kg	1
OCRI-09	360-24365-6	OC-SB-447-18/20-XXX	Biphenyl	16.103	76	NJ	ug/kg	1
OCRI-09	360-24365-6	OC-SB-447-18/20-XXX	Diphenyl ether	16.408	110	NJ	ug/kg	1
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Unknown	13.697	380	NJ	ug/kg	1
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Unknown	13.839	320	NJ	ug/kg	1
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Unknown	13.892	170	NJ	ug/kg	1
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Diphenyl ether	15.138	21	NJ	ug/kg	1
OCRI-09	360-24365-8	OC-SB-452-0.0/1.0-XXX	Unknown	7.753	6.4	NJ	ug/kg	1
OCRI-10	360-24417-1	OC-SB-463-0.0/1.0-XXX	Unknown	10.044	3	NJ	ug/kg	1
OCRI-10	360-24417-1	OC-SB-463-0.0/1.0-XXX	Biphenyl	16.106	16	NJ	ug/kg	1
OCRI-10	360-24417-1	OC-SB-463-0.0/1.0-XXX	Diphenyl ether	16.406	37	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Unknown	16.411	3	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	Unknown	10.374	5.3	NJ	ug/kg	1
OCRI-10	360-24417-17	OC-TBK-012	Unknown	10.667	1.5	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Unknown	10.037	2.5	NJ	ug/kg	1
OCRI-10	360-24417-4	OC-SB-464-0.0/1.0-XXX	Unknown	16.408	8.6	NJ	ug/kg	1
OCRI-10	360-24417-6	OC-SB-464-5.0/7.0-XXX	Unknown	10.662	2	NJ	ug/kg	1
OCRI-10	360-24417-7	OC-SB-465-0.0/1.0-XXX	Unknown	16.405	6.1	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	10.057	5000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	10.15	6100	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	11.271	15000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	13.328	5900	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	13.607	4000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	9.504	20000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	3-Heptene, 2,2,4,6,6-pentamethyl-	9.561	31000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	9.602	8000	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	9.829	4100	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	9.891	12000	NJ	ug/kg	1
OCRI-11	360-24444-13	OC-SB-459-26/28-XXX	Unknown	10.663	1.6	NJ	ug/kg	1
OCRI-11	360-24444-16	OC-EBK-007	Propene	1.682	3.2	NJ	ug/l	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	10.046	5200	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	10.139	7700	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	1-Propene, 2-methyl-, tetramer	13.307	5000	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	13.586	3400	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	9.498	22000	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	9.55	31000	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	9.592	9000	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	9.736	2800	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	9.819	4200	NJ	ug/kg	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Unknown	9.881	12000	NJ	ug/kg	1
OCRI-11	360-24444-4	OC-SB-462-31/33-XXX	Unknown	10.661	2.3	NJ	ug/kg	1
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	1-Propene, 2-methyl-, tetramer	13.313	21	NJ	ug/kg	1
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Unknown	13.587	20	NJ	ug/kg	1
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	Unknown	10.346	3.5	NJ	ug/kg	1
OCRI-12	360-24454-18	OC-EBK-008	Propene	1.682	3.8	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Unknown	8.17	0.58	NJ	ug/l	1
OCRI-12	360-24454-2	OC-SB-461-28/30-XXX	Unknown	16.389	1.7	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	Unknown	10.637	1.3	NJ	ug/kg	1
OCRI-12	360-24454-5	OC-SB-470-31/33-XXX	Unknown	16.388	1	NJ	ug/kg	1
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Unknown	12.766	2.7	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	Unknown	10.373	2.1	NJ	ug/kg	1
OCRI-12	360-24454-8	OC-SB-472-30/32-XXX	2-Butene, (Z)-	1.856	16	NJ	ug/kg	1
OCRI-12	360-24454-8	OC-SB-472-30/32-XXX	Unknown	2.538	7.8	NJ	ug/kg	1
OCRI-12	360-24454-9	OC-SB-472-8.0/10-XXX	Unknown	10.378	1.7	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	Unknown	9.154	3	NJ	ug/kg	1
OCRI-13	360-24499-16	OC-SB-417-8.0/10-XXX	Unknown	13.349	3500	NJ	ug/kg	1
OCRI-13	360-24499-16	OC-SB-417-8.0/10-XXX	Unknown	13.479	310	NJ	ug/kg	1
OCRI-13	360-24499-16	OC-SB-417-8.0/10-XXX	Unknown	13.623	2700	NJ	ug/kg	1
OCRI-13	360-24499-16	OC-SB-417-8.0/10-XXX	Unknown	13.747	1700	NJ	ug/kg	1
OCRI-13	360-24499-17	OC-SB-434-0.0/1.0-XXX	Unknown	10.67	3.4	NJ	ug/kg	1
OCRI-13	360-24499-2	OC-SB-469-0.0/1.0-XXX	Unknown	9.157	2.1	NJ	ug/kg	1

Table 4.1
Final Results Summary - Tentatively Identified Compounds - VOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Unknown	10.673	4.4	NJ	ug/kg	1
OCRI-13	360-24499-22	OC-SB-450-8.0/10-XXX	Unknown	10.675	5.5	NJ	ug/kg	1
OCRI-13	360-24499-23	OC-TBK-016	Unknown	10.671	1.2	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Unknown	10.255	38	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Unknown	11.315	19	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	4-Octene, (E)-	6.969	19	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Octane	7.01	32	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	3-Ethyl-3-hexene	7.036	29	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Unknown	8.255	21	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Unknown	9.315	24	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Benzene, 1-ethyl-2-methyl-	9.429	31	NJ	ug/kg	1
OCRI-13	360-24499-5	OC-SB-469-7.0/9.0-XXX	Unknown	9.149	2.1	NJ	ug/kg	1
OCRI-13	360-24499-6	OC-SB-466-0.0/1.0-XXX	Unknown	10.217	3	NJ	ug/kg	1
OCRI-13	360-24499-8	OC-TBK-015	Unknown	10.672	0.99	NJ	ug/kg	1
OCRI-14	360-24563-1	OC-SB-427-0.0/1.0-XXX	Unknown	10.667	9.8	NJ	ug/kg	1
OCRI-14	360-24563-11	OC-SB-456-0.0/1.0-XXX	Unknown	3.629	9.5	NJ	ug/kg	1
OCRI-14	360-24563-12	OC-SB-456-16/18-XXX	Unknown	9.143	2.5	NJ	ug/kg	1
OCRI-14	360-24563-13	OC-SB-456-7.0/9.0-DUP	Unknown	10.667	4.5	NJ	ug/kg	1
OCRI-14	360-24563-2	OC-SB-427-12/14-XXX	Unknown	6.538	1900	NJ	ug/kg	10
OCRI-14	360-24563-23	OC-EBK-009	Unknown	2.026	2	NJ	ug/l	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	10.04	4.7	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	11.249	14	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	13.352	31	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	13.621	19	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	13.745	11	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	5.042	33	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	2-Pentanone, 4,4-dimethyl-	7.952	18	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	9.797	15	NJ	ug/kg	1
OCRI-14	360-24563-4	OC-SB-427-8.0/10-DUP	Unknown	9.89	29	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	11.251	13	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	13.246	5.4	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	13.349	220	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	1-Propene, 2-methyl-, tetramer	13.473	14	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	13.623	130	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	13.747	63	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	7.949	16	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	9.793	12	NJ	ug/kg	1
OCRI-14	360-24563-5	OC-SB-427-8.0/10-XXX	Unknown	9.892	38	NJ	ug/kg	1
OCRI-14	360-24563-6	OC-SB-428-0.0/1.0-XXX	Unknown	9.153	7	NJ	ug/kg	1
OCRI-14	360-24563-9	OC-SB-428-8.0/10-XXX	Unknown	13.345	7.5	NJ	ug/kg	1
OCRI-15	360-24582-1	OC-SB-457-28/30-XXX	1-Propene, 2-methyl-	1.846	10	NJ	ug/kg	1
OCRI-15	360-24582-10	OC-SS-405-0.0/1.0-XXX	Unknown	10.032	4.4	NJ	ug/kg	1
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Unknown	10.033	4.2	NJ	ug/kg	1
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Unknown	10.032	3.4	NJ	ug/kg	1
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Unknown	13.324	6.1	NJ	ug/kg	1
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Unknown	10.029	2.2	NJ	ug/kg	1
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Unknown	10.036	4.8	NJ	ug/kg	1
OCRI-15	360-24582-19	OC-SS-414-0.0/1.0-XXX	Unknown	10.032	7.7	NJ	ug/kg	1
OCRI-15	360-24582-2	OC-TBK-018	Unknown	3.614	5	NJ	ug/kg	1
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	Unknown	10.036	17	NJ	ug/kg	1
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Unknown	10.657	1.8	NJ	ug/kg	1
OCRI-15	360-24582-22	OC-SS-416-0.0/1.0-XXX	Unknown	10.047	4.5	NJ	ug/kg	1
OCRI-15	360-24582-23	OC-TBK-019	Unknown	10.673	1.4	NJ	ug/kg	1
OCRI-15	360-24582-4	OC-EBK-010	Propene	1.682	3.4	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Unknown	3.212	1.5	NJ	ug/l	1
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Unknown	10.028	4.1	NJ	ug/kg	1
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Unknown	10.037	9.8	NJ	ug/kg	1
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	1R-.alpha.-Pinene	8.879	14	NJ	ug/kg	1
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Unknown	7.613	15	NJ	ug/kg	1
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	Unknown	10.032	2.3	NJ	ug/kg	1
OCRI-16	360-24634-1	OC-SS-417-0.0/1.0-XXX	1-Propene, 2-methyl-	1.859	22	NJ	ug/kg	1
OCRI-16	360-24634-1	OC-SS-417-0.0/1.0-XXX	Unknown	13.347	4.7	NJ	ug/kg	1
OCRI-16	360-24634-10	OC-SS-426-0.0/1.0-XXX	Unknown	3.633	7.1	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	Unknown	10.668	3.8	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Unknown	10.652	1.9	NJ	ug/kg	1
OCRI-16	360-24634-18	OC-EBK-011	Unknown	1.67	3	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	Unknown	2.026	1.6	NJ	ug/l	1

Table 4.1
Final Results Summary - Tentatively Identified Compounds - VOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	1R-.alpha.-Pinene	8.885	19	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	Unknown	9.138	7.4	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	.beta.-Pinene	9.438	16	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	Unknown	10.089	2.8	NJ	ug/kg	1
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Unknown	8.467	0.9	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	Unknown	10.668	2	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	Unknown	10.666	1.5	NJ	ug/kg	1
OCRI-16	360-24634-9	OC-SS-425-0.0/1.0-XXX	Unknown	10.672	1.3	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	Unknown	3.624	10	NJ	ug/kg	1
OCRI-17	360-24665-15	OC-SB-406-8.0/10-XXX	Unknown	9.143	2	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	1R-.alpha.-Pinene	8.88	110	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	.beta.-Pinene	9.438	100	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	3-Carene	9.66	21	NJ	ug/kg	1
OCRI-17	360-24665-17	OC-SB-413-1.0/5.0-XXX	Unknown	9.428	2.1	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	1R-.alpha.-Pinene	8.869	6000	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Unknown	9.128	360	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	9.428	4900	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	1R-.alpha.-Pinene	9.65	1100	NJ	ug/kg	1
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	Unknown	12.802	19	NJ	ug/kg	1
OCRI-18	360-24686-20	OC-EBK-012	Propene	1.694	2.3	NJ	ug/l	1
OCRI-18	360-24686-20	OC-EBK-012	Unknown	5.253	1.3	NJ	ug/l	1
OCRI-18	360-24686-4	OC-SB-435-6.0/10-XXX	Unknown	10.373	1.4	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	Unknown	8.237	12	NJ	ug/kg	1
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Unknown	3.619	12	NJ	ug/kg	1

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

Prepared by / Date: KJC 06/30/10
Checked by / Date: TLC 06/30/10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	10.292	140	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	16.038	330	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	16.61	230	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	17.197	1800	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	17.861	650	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	23.338	290	NJ	ug/kg	1
OCRI-01	360-24173-1	OC-SB-405-0.0/1.0-XXX	Unknown	7.156	1900	NJ	ug/kg	1
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Unknown	10.196	53	NJ	ug/kg	1
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	1,2-Diphenylhydrazine	11.802	10	NJ	ug/kg	1
OCRI-01	360-24173-11	OC-SB-412-6.0/7.0-XXX	Unknown	7.171	2300	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	Unknown	17.048	1200	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	1,1"-Biphenyl, 5,2",3",4"-tetramethoxy-3	21.458	9.4	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	4-Penten-2-one, 4-methyl-	6.19	57	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	3-Penten-2-one, 4-methyl-	6.657	69	NJ	ug/kg	1
OCRI-01	360-24173-12	OC-SB-420-0.0/1.0-XXX	Alpha-Terpineol	9.778	100	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Unknown	10.339	240	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Unknown	10.368	1000	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Unknown	10.387	560	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Unknown	17.038	240	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	1,1"-Biphenyl, 2,3",4,5"-tetrachloro-4"-	17.514	96	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Unknown	7.156	980	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Heptane, 2,2,6,6-tetramethyl-4-methylene	8.42	270	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	8.483	450	NJ	ug/kg	1
OCRI-01	360-24173-14	OC-SB-420-6.5/8.5-XXX	Cyclohexane, 1-methyl-3-pentyl-	8.709	260	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	10.307	1700	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	10.341	400	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	10.37	1500	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	10.418	1000	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	10.538	84	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	11.038	140	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	11.188	97	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	11.572	130	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	23.335	8.6	NJ	ug/kg	1
OCRI-01	360-24173-15	OC-SB-423-0.0/1.0-XXX	Unknown	7.148	1700	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	10.312	1800	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	10.341	400	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	10.369	1300	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	10.417	1200	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	10.451	170	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	16.938	520	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	21.329	7.5	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	22.305	69	NJ	ug/kg	1
OCRI-01	360-24173-17	OC-SB-423-5.0/6.0-XXX	Unknown	7.167	1800	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	10.316	2400	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	10.388	2000	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	10.46	430	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,	11.018	540	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	13.163	620	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	17.077	2100	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	1-Pentene, 2,4,4-trimethyl-	5.469	410	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Cyclohexane, 1,3-dimethyl-, trans-	6.503	820	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	Unknown	7.162	460	NJ	ug/kg	1
OCRI-01	360-24173-3	OC-SB-405-8.0/9.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	8.494	460	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	10.307	1800	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	10.369	1300	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	10.417	1200	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	20.074	6.4	NJ	ug/kg	1
OCRI-01	360-24173-4	OC-SB-416-0.0/1.0-XXX	Unknown	7.181	1600	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	10.315	2100	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	10.344	450	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	10.373	1300	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	10.421	1100	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	1,2-Benzenedicarboxylic acid, isodecyl o	16.841	91	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	17.528	120	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Cobalt, (.eta.-4-1,5-cyclooctadiene)(1-c	19.082	3.8	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	Unknown	7.175	740	NJ	ug/kg	1
OCRI-01	360-24173-6	OC-SB-416-8.0/9.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	8.493	540	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-01	360-24173-8	OC-EBK-001	Benzene	4.878	0.34	NJ	ug/l	1
OCRI-01	360-24173-8	OC-EBK-001	Heptanoic acid	8.884	1.5	NJ	ug/l	1
OCRI-01	360-24173-8	OC-EBK-001	Octanoic Acid	9.393	3.5	NJ	ug/l	1
OCRI-01	360-24173-9	OC-SB-412-0.0/1.0-XXX	Unknown	21.393	2.4	NJ	ug/kg	1
OCRI-01	360-24173-9	OC-SB-412-0.0/1.0-XXX	Unknown	7.169	1900	NJ	ug/kg	1
OCRI-01	360-24173-9	OC-SB-412-0.0/1.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	8.487	120	NJ	ug/kg	1
OCRI-01A	360-24173-10	OC-SB-412-12/13-XXX	Unknown	14.615	140	NJ	ug/kg	1
OCRI-01A	360-24173-10	OC-SB-412-12/13-XXX	Unknown	7.161	2100	NJ	ug/kg	1
OCRI-01A	360-24173-13	OC-SB-420-12/14-XXX	Unknown	10.864	46	NJ	ug/kg	1
OCRI-01A	360-24173-13	OC-SB-420-12/14-XXX	Lenthionine	12.076	110	NJ	ug/kg	1
OCRI-01A	360-24173-13	OC-SB-420-12/14-XXX	Unknown	7.171	2000	NJ	ug/kg	1
OCRI-01A	360-24173-13	OC-SB-420-12/14-XXX	1,2,4-Trithiolane	9.258	190	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	1,2,4,5-Tetrathiane	10.866	330	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	Lenthionine	12.073	470	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	Unknown	7.173	1900	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	Undecane	9.029	71	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	1,2,4-Trithiolane	9.26	650	NJ	ug/kg	1
OCRI-01A	360-24173-16	OC-SB-423-13/14-XXX	Dodecane	9.592	49	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	10.296	150	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	10.353	88	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	13.551	65	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	13.724	87	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	15.085	920	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	17.013	170	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Erucylamide	17.764	150	NJ	ug/kg	1
OCRI-01A	360-24173-2	OC-SB-405-14/15-XXX	Unknown	7.17	2000	NJ	ug/kg	1
OCRI-01A	360-24173-5	OC-SB-416-13/14-XXX	dl-2-Ethylhexyl chloroformate	17.135	110	NJ	ug/kg	1
OCRI-01A	360-24173-5	OC-SB-416-13/14-XXX	Unknown	7.18	2300	NJ	ug/kg	1
OCRI-01A	360-24173-5	OC-SB-416-13/14-XXX	Bicyclo[4.2.0]octa-1,3,5-triene	7.656	120	NJ	ug/kg	1
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	10.306	19000	NJ	ug/kg	5
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	10.364	15000	NJ	ug/kg	5
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	10.412	12000	NJ	ug/kg	5
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	12.119	6100	NJ	ug/kg	5
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	15.25	11000	NJ	ug/kg	5
OCRI-02	360-24194-1	OC-SB-421-0.0/1.0-XXX	Unknown	17.534	5500	NJ	ug/kg	5
OCRI-02	360-24194-12	OC-EBK-002	Phenol, 2,4-bis(1,1-dimethylethyl)-	11.131	0.6	NJ	ug/l	1
OCRI-02	360-24194-12	OC-EBK-002	p,p"-Dioctyldiphenylamine	19.364	8.4	NJ	ug/l	1
OCRI-02	360-24194-12	OC-EBK-002	Benzene	4.918	11	NJ	ug/l	1
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	10.696	2000	NJ	ug/kg	10
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	12.6	410	NJ	ug/kg	10
OCRI-02	360-24194-3	OC-SB-421-8.0/10.0-XXX	Unknown	18.505	1900	NJ	ug/kg	10
OCRI-02	360-24194-4	OC-SB-424-0.0/1.0-XXX	n-Hexadecanoic acid	11.796	130	NJ	ug/kg	1
OCRI-02	360-24194-4	OC-SB-424-0.0/1.0-XXX	Tetracosane	13.542	78	NJ	ug/kg	1
OCRI-02	360-24194-4	OC-SB-424-0.0/1.0-XXX	Hexatriacontane	14.129	120	NJ	ug/kg	1
OCRI-02	360-24194-4	OC-SB-424-0.0/1.0-XXX	Hexatriacontane	17.572	180	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Quinoline, 2,4-dimethyl-	10.001	32	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	1,2-Diphenylhydrazine	10.732	48	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Octadecanoic acid, methyl ester	12.362	130	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Erucylamide	16.026	210	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Unknown	16.791	160	NJ	ug/kg	1
OCRI-02	360-24194-6	OC-SB-424-7.0/9.0-XXX	Unknown	9.313	100	NJ	ug/kg	1
OCRI-02	360-24194-7	OC-SB-425-0.0/1.0-XXX	1,2-Diphenylhydrazine	10.732	70	NJ	ug/kg	5
OCRI-02	360-24194-7	OC-SB-425-0.0/1.0-XXX	Unknown	15.291	810	NJ	ug/kg	5
OCRI-02	360-24194-7	OC-SB-425-0.0/1.0-XXX	Unknown	18.239	790	NJ	ug/kg	5
OCRI-02	360-24194-7	OC-SB-425-0.0/1.0-XXX	Unknown	18.393	670	NJ	ug/kg	5
OCRI-02	360-24194-7	OC-SB-425-0.0/1.0-XXX	Unknown	19.028	570	NJ	ug/kg	5
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	17.538	6.5	NJ	ug/kg	5
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	9.32	6200	NJ	ug/kg	5
OCRI-02	360-24194-9	OC-SB-425-6.0/8.0-XXX	Unknown	9.378	4500	NJ	ug/kg	5
OCRI-02A	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	10.361	410	NJ	ug/kg	1
OCRI-02A	360-24194-2	OC-SB-421-10.5/12.5-XXX	1,2-Benzenedicarboxylic acid, bis(2-meth	14.473	680	NJ	ug/kg	1
OCRI-02A	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	15.093	32	NJ	ug/kg	1
OCRI-02A	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	15.137	70	NJ	ug/kg	1
OCRI-02A	360-24194-2	OC-SB-421-10.5/12.5-XXX	Unknown	17.147	25	NJ	ug/kg	1
OCRI-02A	360-24194-5	OC-SB-424-17/19-XXX	Erucylamide	16.026	97	NJ	ug/kg	1
OCRI-02A	360-24194-5	OC-SB-424-17/19-XXX	Unknown	5.456	110	NJ	ug/kg	1
OCRI-02A	360-24194-8	OC-SB-425-18/20-XXX	Unknown	11.821	88	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-02A	360-24194-8	OC-SB-425-18/20-XXX	Heptadecane, 2-methyl-	13.543	50	NJ	ug/kg	1
OCRI-02A	360-24194-8	OC-SB-425-18/20-XXX	Unknown	13.721	60	NJ	ug/kg	1
OCRI-02A	360-24194-8	OC-SB-425-18/20-XXX	Pentacosane	14.13	52	NJ	ug/kg	1
OCRI-02A	360-24194-8	OC-SB-425-18/20-XXX	Erucylamide	16.024	150	NJ	ug/kg	1
OCRI-03	360-24223-1	OC-SB-415-0.0/1.0-XXX	Hexatriacontane	14.133	72	NJ	ug/kg	1
OCRI-03	360-24223-1	OC-SB-415-0.0/1.0-XXX	1-Docosene	15.575	140	NJ	ug/kg	1
OCRI-03	360-24223-1	OC-SB-415-0.0/1.0-XXX	Unknown	16.792	120	NJ	ug/kg	1
OCRI-03	360-24223-10	OC-SB-426-5.0/7.0-DUP	Butylated Hydroxytoluene	10.686	24	NJ	ug/kg	1
OCRI-03	360-24223-10	OC-SB-426-5.0/7.0-DUP	Unknown	12.24	35	NJ	ug/kg	1
OCRI-03	360-24223-10	OC-SB-426-5.0/7.0-DUP	Unknown	12.278	36	NJ	ug/kg	1
OCRI-03	360-24223-11	OC-SB-431-0.0/1.0-XXX	Butylated Hydroxytoluene	10.684	28	NJ	ug/kg	1
OCRI-03	360-24223-11	OC-SB-431-0.0/1.0-XXX	Erucylamide	16.777	130	NJ	ug/kg	1
OCRI-03	360-24223-12	OC-SB-431-7.0/9.0-XXX	Butylated Hydroxytoluene	10.686	32	NJ	ug/kg	1
OCRI-03	360-24223-13	OC-SB-436-0.0/1.0-XXX	Unknown	11.177	82	NJ	ug/kg	1
OCRI-03	360-24223-15	OC-SB-436-6.0/8.0-XXX	Butylated Hydroxytoluene	10.688	23	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Thunbergol	13.017	81	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Unknown	14.046	150	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Unknown	14.228	80	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Unknown	18.691	86	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	1R-.alpha.-Pinene	7.472	1700	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	7.828	73	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	D-Limonene	8.169	200	NJ	ug/kg	1
OCRI-03	360-24223-3	OC-SB-415-5.0/7.0-XXX	Alpha-Terpineol	9.17	69	NJ	ug/kg	1
OCRI-03	360-24223-4	OC-SB-419-0.0/1.0-XXX	Erucylamide	16.032	270	NJ	ug/kg	1
OCRI-03	360-24223-4	OC-SB-419-0.0/1.0-XXX	Methenamine	8.905	130	NJ	ug/kg	1
OCRI-03	360-24223-4	OC-SB-419-0.0/1.0-XXX	Methenamine	8.934	850	NJ	ug/kg	1
OCRI-03	360-24223-6	OC-SB-419-3.0/5.0-XXX	Butylated Hydroxytoluene	10.686	30	NJ	ug/kg	1
OCRI-03	360-24223-6	OC-SB-419-3.0/5.0-XXX	Unknown	17.765	41	NJ	ug/kg	1
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	11.087	520	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	11.227	550	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	11.736	440	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	11.77	490	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Pentacosane	15.502	16	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	17.56	15	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	18.007	11	NJ	ug/kg	2
OCRI-03	360-24223-7	OC-SB-426-0.0/1.0-XXX	Unknown	18.647	8.2	NJ	ug/kg	2
OCRI-03	360-24223-9	OC-SB-426-5.0/7.0-XXX	Unknown	12.278	36	NJ	ug/kg	1
OCRI-03	360-24223-9	OC-SB-426-5.0/7.0-XXX	Unknown	19.178	25	NJ	ug/kg	1
OCRI-03A	360-24223-14	OC-SB-436-13/15-XXX	Unknown	11.869	29	NJ	ug/kg	1
OCRI-03A	360-24223-14	OC-SB-436-13/15-XXX	Unknown	12.331	71	NJ	ug/kg	1
OCRI-03A	360-24223-14	OC-SB-436-13/15-XXX	9-Octadecenamide, (Z)-	14.36	72	NJ	ug/kg	1
OCRI-03A	360-24223-14	OC-SB-436-13/15-XXX	Erucylamide	16.779	120	NJ	ug/kg	1
OCRI-03A	360-24223-14	OC-SB-436-13/15-XXX	Unknown	9.575	38	NJ	ug/kg	1
OCRI-03A	360-24223-2	OC-SB-415-16/18-XXX	Butylated Hydroxytoluene	10.689	28	NJ	ug/kg	1
OCRI-03A	360-24223-5	OC-SB-419-17/19-XXX	Butylated Hydroxytoluene	10.686	42	NJ	ug/kg	1
OCRI-03A	360-24223-5	OC-SB-419-17/19-XXX	Unknown	17.765	59	NJ	ug/kg	1
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	10.73	2500	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	10.84	5500	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	10.903	3600	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.042	3200	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.528	16000	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.557	10000	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.581	13000	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.624	11000	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	11.72	6800	NJ	ug/kg	10
OCRI-04	360-24244-1	OC-SB-432-0.0/1.0-XXX	Unknown	5.916	26000	NJ	ug/kg	10
OCRI-04	360-24244-10	OC-SB-437-0.0/1.0-XXX	1,7-Dimethyl-4-(1-methylethyl)cyclodecan	14	250	NJ	ug/kg	1
OCRI-04	360-24244-12	OC-SB-437-5.0/7.0-XXX	Pentacosane	13.894	33	NJ	ug/kg	1
OCRI-04	360-24244-12	OC-SB-437-5.0/7.0-XXX	13-Tertadecen-1-ol acetate	14.067	34	NJ	ug/kg	1
OCRI-04	360-24244-14	OC-EBK-003	4-Nonylphenol	12.038	2.5	NJ	ug/l	1
OCRI-04	360-24244-14	OC-EBK-003	Cyclohexane	4.8	2.5	NJ	ug/l	1
OCRI-04	360-24244-14	OC-EBK-003	Benzene	4.911	3.5	NJ	ug/l	1
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	10.19	2700	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	2,5-Cyclohexadiene, 1,4-diethyl-1,4-dime	10.469	18000	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	11.267	700	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	11.291	1800	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	11.33	4000	NJ	ug/kg	10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
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Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	11.459	1200	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Unknown	15.249	18000	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Nonane, 3-methyl-5-propyl-	7.569	960	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Hexane, 2,2,4-trimethyl-	7.699	770	NJ	ug/kg	10
OCRI-04	360-24244-2	OC-SB-432-14/16-XXX	Butanoic acid, phenyl ester	9.945	2300	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	11.389	780	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	11.629	750	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	11.826	290	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	11.937	470	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	12.1	590	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Undecane, 3,8-dimethyl-	7.57	410	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.647	390	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Hexane, 2,2,4-trimethyl-	7.705	400	NJ	ug/kg	10
OCRI-04	360-24244-3	OC-SB-432-5.0/7.0-XXX	Unknown	7.739	310	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.836	2600	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.893	9000	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.922	7800	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.956	5100	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	10.994	1700	NJ	ug/kg	10
OCRI-04	360-24244-4	OC-SB-443-0.0/1.0-XXX	Unknown	11.052	6700	NJ	ug/kg	10
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	10.833	89	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.871	160	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	13.66	86	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	13.723	95	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Pentacosane	13.896	83	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	14.305	150	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	15.065	110	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Unknown	15.19	170	NJ	ug/kg	1
OCRI-04	360-24244-6	OC-SB-443-6.0/8.0-XXX	Acetonitrile, (2,7-dibromo-1-naphthyl)-	15.791	470	NJ	ug/kg	1
OCRI-04	360-24244-7	OC-SB-445-0.0/1.0-XXX	Unknown	5.916	4600	NJ	ug/kg	1
OCRI-04	360-24244-9	OC-SB-445-8.0/10-XXX	Unknown	10.888	56	NJ	ug/kg	1
OCRI-04	360-24244-9	OC-SB-445-8.0/10-XXX	Unknown	12.287	26	NJ	ug/kg	1
OCRI-04	360-24244-9	OC-SB-445-8.0/10-XXX	Pentacosane	13.893	110	NJ	ug/kg	1
OCRI-04A	360-24244-11	OC-SB-437-21/23-XXX	Erucylamide	15.849	54	NJ	ug/kg	1
OCRI-04A	360-24244-11	OC-SB-437-21/23-XXX	Unknown	5.923	59	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Unknown	10.834	110	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.873	130	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Unknown	10.892	120	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Unknown	10.916	100	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Unknown	10.955	110	NJ	ug/kg	1
OCRI-04A	360-24244-5	OC-SB-443-18/20-XXX	Unknown	11.046	120	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Unknown	10.238	61	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	1-Docosene	16.057	640	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Unknown	16.807	370	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	1-Docosene	17.221	740	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Unknown	20.019	2.3	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Unknown	20.621	0.32	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Unknown	20.986	0.54	NJ	ug/kg	1
OCRI-05	360-24251-1	OC-SB-433-0.0/1.0-XXX	Acetic acid	4.559	190	NJ	ug/kg	1
OCRI-05	360-24251-10	OC-SB-440-6.0/8.0-XXX	Cyclopentadecane	13.89	88	NJ	ug/kg	1
OCRI-05	360-24251-12	OC-SB-438-5.0/7.0-XXX	Phosphonic acid, dioctadecyl ester	14.58	11	NJ	ug/kg	1
OCRI-05	360-24251-12	OC-SB-438-5.0/7.0-XXX	2-Pentanone, 4-hydroxy-4-methyl-	4.804	6100	NJ	ug/kg	1
OCRI-05	360-24251-12	OC-SB-438-5.0/7.0-XXX	Unknown	5.838	15	NJ	ug/kg	1
OCRI-05	360-24251-12	OC-SB-438-5.0/7.0-XXX	D-Limonene	6.978	15	NJ	ug/kg	1
OCRI-05	360-24251-13	OC-SB-441-0.0/1.0-XXX	Unknown	15.67	4.9	NJ	ug/kg	2
OCRI-05	360-24251-15	OC-SB-441-8.0/10-XXX	Unknown	4.809	10	NJ	ug/kg	1
OCRI-05	360-24251-15	OC-SB-441-8.0/10-XXX	Unknown	5.838	14	NJ	ug/kg	1
OCRI-05	360-24251-15	OC-SB-441-8.0/10-XXX	Thiophene, tetrahydro-, 1,1-dioxide	8.257	7.5	NJ	ug/kg	1
OCRI-05	360-24251-16	OC-SB-446-0.0/1.0-XXX	dl-2-Ethylhexyl chloroformate	14.537	880	NJ	ug/kg	1
OCRI-05	360-24251-16	OC-SB-446-0.0/1.0-XXX	Unknown	15.662	11	NJ	ug/kg	1
OCRI-05	360-24251-16	OC-SB-446-0.0/1.0-XXX	Unknown	15.961	20	NJ	ug/kg	1
OCRI-05	360-24251-16	OC-SB-446-0.0/1.0-XXX	Unknown	17.206	1.6	NJ	ug/kg	1
OCRI-05	360-24251-18	OC-SB-446-5.0/7.0-DUP	Unknown	10.874	12	NJ	ug/kg	1
OCRI-05	360-24251-18	OC-SB-446-5.0/7.0-DUP	Hexatriacontane	13.88	38	NJ	ug/kg	1
OCRI-05	360-24251-18	OC-SB-446-5.0/7.0-DUP	Tetracosane	14.207	21	NJ	ug/kg	1
OCRI-05	360-24251-19	OC-SB-446-5.0/7.0-XXX	Pentacosane	15.962	150	TJN	ug/kg	1
OCRI-05	360-24251-20	OC-SB-448-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	15.052	140	NJ	ug/kg	1

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Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-05	360-24251-21	OC-SB-448-17/19-XXX	Unknown	17.111	48	NJ	ug/kg	1
OCRI-05	360-24251-21	OC-SB-448-17/19-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	6.714	20	NJ	ug/kg	1
OCRI-05	360-24251-22	OC-SB-448-8.0/10-XXX	Unknown	19.335	330	NJ	ug/kg	1
OCRI-05	360-24251-23	OC-SB-438-0.0/1.0-XXX	Butylated Hydroxytoluene	11.104	72	NJ	ug/kg	1
OCRI-05	360-24251-23	OC-SB-438-0.0/1.0-XXX	Unknown	11.945	140	NJ	ug/kg	1
OCRI-05	360-24251-23	OC-SB-438-0.0/1.0-XXX	Octadecanoic acid, methyl ester	13.672	59	NJ	ug/kg	1
OCRI-05	360-24251-23	OC-SB-438-0.0/1.0-XXX	.alpha.-Methylstyrene	8.272	21	NJ	ug/kg	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	11.034	15	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Phenol, 2,4-bis(1,1-dimethylethyl)-	11.087	0.92	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	11.924	7.9	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	12.766	2.3	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Unknown	4.821	1.5	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Pyridine	6.009	0.2	NJ	ug/l	1
OCRI-05	360-24251-26	OC-EBK-004	Tetrachloroethylene	6.769	0.88	NJ	ug/l	1
OCRI-05	360-24251-3	OC-SB-433-5.0/7.0-DUP	Undecane	8.951	160	NJ	ug/kg	1
OCRI-05	360-24251-3	OC-SB-433-5.0/7.0-DUP	Dodecane	9.528	67	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	11.007	72	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	15.931	280	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	16.032	140	NJ	ug/kg	1
OCRI-05	360-24251-4	OC-SB-433-5.0/7.0-XXX	Unknown	9.06	84	NJ	ug/kg	1
OCRI-05	360-24251-5	OC-SB-439-0.0-1.0-XXX	9H-Fluorene, 9,9-diphenyl-	14.563	240	NJ	ug/kg	2
OCRI-05	360-24251-5	OC-SB-439-0.0-1.0-XXX	Unknown	9.673	28	NJ	ug/kg	2
OCRI-05	360-24251-7	OC-SB-439-8.0/10-XXX	Unknown	11.141	25	NJ	ug/kg	1
OCRI-05	360-24251-8	OC-SB-440-0.0/1.0-XXX	3-Eicosene, (E)-	13.882	31	NJ	ug/kg	1
OCRI-05	360-24251-8	OC-SB-440-0.0/1.0-XXX	Bicyclo[3.1.1]hept-2-ene, 2,6-dimethyl-6	9.588	17	NJ	ug/kg	1
OCRI-05A	360-24251-14	OC-SB-441-17/19-XXX	3-Penten-2-one, 4-methyl-	4.752	17	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Heneicosane	12.86	7.6	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Heneicosane	13.225	11	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Tetratriacontane	13.576	14	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Tetratetracontane	14.249	20	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Hexatriacontane	14.581	18	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	3-Hexen-2-one	4.757	12	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	2-Propanone, (1-methylethylidene)hydrazo	5.545	74	NJ	ug/kg	1
OCRI-05A	360-24251-17	OC-SB-446-15/17-XXX	Limonene	7.445	7.8	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	Phenol, nonyl-	11.428	25	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	Cyclic octaatomic sulfur	13.096	16	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	Nonadecane, 9-methyl-	13.914	13	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	Docosane, 11-butyl-	14.582	14	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	3-Penten-2-one, 4-methyl-	4.758	14	NJ	ug/kg	1
OCRI-05A	360-24251-2	OC-SB-433-20/22-XXX	1,4-Benzenediamine, N,N-dimethyl-	9.653	19	NJ	ug/kg	1
OCRI-05A	360-24251-24	OC-SB-438-20/22-XXX	Triacontane	13.913	19	NJ	ug/kg	1
OCRI-05A	360-24251-24	OC-SB-438-20/22-XXX	Pentacosane	14.249	21	NJ	ug/kg	1
OCRI-05A	360-24251-24	OC-SB-438-20/22-XXX	3-Hexen-2-one	4.757	12	NJ	ug/kg	1
OCRI-05A	360-24251-9	OC-SB-440-23/25-XXX	Hexatriacontane	13.228	16	NJ	ug/kg	1
OCRI-05A	360-24251-9	OC-SB-440-23/25-XXX	Docosane	13.915	24	NJ	ug/kg	1
OCRI-05A	360-24251-9	OC-SB-440-23/25-XXX	Nonadecane, 9-methyl-	14.252	26	NJ	ug/kg	1
OCRI-05A	360-24251-9	OC-SB-440-23/25-XXX	3-Hexen-2-one	4.755	15	NJ	ug/kg	1
OCRI-05A	360-24251-9	OC-SB-440-23/25-XXX	D-Limonene	7.443	8.1	NJ	ug/kg	1
OCRI-06	360-24309-1	OC-SB-400-0.0/1.0-XXX	5-Eicosene, (E)-	13.9	77	NJ	ug/kg	1
OCRI-06	360-24309-1	OC-SB-400-0.0/1.0-XXX	Cyclotetracosane	14.564	84	NJ	ug/kg	1
OCRI-06	360-24309-1	OC-SB-400-0.0/1.0-XXX	Friedelin	17.699	47		ug/kg	1
OCRI-06	360-24309-1	OC-SB-400-0.0/1.0-XXX	2-Pentanone, 4-hydroxy-4-methyl-	4.816	6300	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	1-Octadecene	12.95	91	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	1-Nonadecene	13.633	690	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	1-Docosene	14.282	1300	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	Cyclotetracosane	14.926	700	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	Oxirane, heptadecyl-	15.354	140	NJ	ug/kg	1
OCRI-06	360-24309-10	OC-SB-408-0.0/1.0-XXX	Friedelin	17.201	150	NJ	ug/kg	1
OCRI-06	360-24309-11	OC-SB-408-7.0/9.9-XXX	Octadecanoic acid, methyl ester	12.354	27	NJ	ug/kg	1
OCRI-06	360-24309-11	OC-SB-408-7.0/9.9-XXX	Cyclohexadecane	13.643	41	NJ	ug/kg	1
OCRI-06	360-24309-11	OC-SB-408-7.0/9.9-XXX	Unknown	14.908	55	NJ	ug/kg	1
OCRI-06	360-24309-11	OC-SB-408-7.0/9.9-XXX	Butylated Hydroxytoluene	9.704	30	NJ	ug/kg	1
OCRI-06	360-24309-12	OC-SB-414-0.0/1.0-XXX	Unknown	11.643	44	NJ	ug/kg	1
OCRI-06	360-24309-12	OC-SB-414-0.0/1.0-XXX	1-Eicosene	15.663	77	NJ	ug/kg	1
OCRI-06	360-24309-12	OC-SB-414-0.0/1.0-XXX	1-Docosene	16.755	180	NJ	ug/kg	1
OCRI-06	360-24309-12	OC-SB-414-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	21.751	300	NJ	ug/kg	1
OCRI-06	360-24309-14	OC-SB-414-6.0/8.0-XXX	1-Nonadecene	15.595	76	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-06	360-24309-14	OC-SB-414-6.0/8.0-XXX	1-Docosene	16.672	260	NJ	ug/kg	1
OCRI-06	360-24309-14	OC-SB-414-6.0/8.0-XXX	2-Pentacosanone	17.999	190	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	n-Hexadecanoic acid	12.514	52	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	1-Docosene	15.611	37	NJ	ug/kg	1
OCRI-06	360-24309-15	OC-SB-422-0.0/1.0-XXX	Erucylamide	17.183	130	NJ	ug/kg	1
OCRI-06	360-24309-17	OC-SB-422-6.0/8.0-XXX	1-Docosene	16.673	160	NJ	ug/kg	1
OCRI-06	360-24309-17	OC-SB-422-6.0/8.0-XXX	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	22.049	76	NJ	ug/kg	1
OCRI-06	360-24309-19	OC-SB-429-6.0/8.0-XXX	1-Docosene	15.581	290	NJ	ug/kg	1
OCRI-06	360-24309-19	OC-SB-429-6.0/8.0-XXX	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alp	17.279	180	NJ	ug/kg	1
OCRI-06	360-24309-19	OC-SB-429-6.0/8.0-XXX	Hentriacontane	19.395	220	NJ	ug/kg	1
OCRI-06	360-24309-19	OC-SB-429-6.0/8.0-XXX	2-Heptacosanone	19.635	130	NJ	ug/kg	1
OCRI-06	360-24309-19	OC-SB-429-6.0/8.0-XXX	Unknown	22.996	140	NJ	ug/kg	1
OCRI-06	360-24309-2	OC-SB-400-5.0/7.0-XXX	1-Pentadecene	13.214	83	NJ	ug/kg	1
OCRI-06	360-24309-2	OC-SB-400-5.0/7.0-XXX	Cyclohexadecane	13.882	300	NJ	ug/kg	1
OCRI-06	360-24309-2	OC-SB-400-5.0/7.0-XXX	Cyclotetracosane	14.551	440	NJ	ug/kg	1
OCRI-06	360-24309-2	OC-SB-400-5.0/7.0-XXX	Unknown	15.859	100	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	Butylated Hydroxytoluene	10.807	32	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	Unknown	11.644	59	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	Heneicosane, 11-decyl-	17.188	48	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	1,4-Dimethyl-8-isopropylidenetricyclo[5.	21.747	96	NJ	ug/kg	1
OCRI-06	360-24309-20	OC-SB-430-0.0/1.0-XXX	Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	8.013	56	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	Butylated Hydroxytoluene	10.806	35	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	Unknown	11.643	70	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	1-Docosene	15.591	76	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	1-Docosene	16.683	54	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	Heptadecane	17.183	100	NJ	ug/kg	1
OCRI-06	360-24309-22	OC-SB-430-8.0/10-DUP	Unknown	6.849	2900	NJ	ug/kg	1
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	Heneicosane, 11-pentyl-	15.54	27	NJ	ug/kg	1
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	17-Pentatriacontene	15.593	32	NJ	ug/kg	1
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	1-Docosene	16.694	28	NJ	ug/kg	1
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	9-Octadecenamide, (Z)-	17.179	58	NJ	ug/kg	1
OCRI-06	360-24309-23	OC-SB-430-8.0/10-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	17.348	140	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	1-Octadecene	13.21	71	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	1-Heptadecene	13.883	330	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	Cyclotetracosane	14.547	560	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	9-Eicosene, (E)-	15.845	120	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	16.499	210	NJ	ug/kg	1
OCRI-06	360-24309-3	OC-SB-401-0.0/1.0-XXX	Friedelin	17.696	120	NJ	ug/kg	1
OCRI-06	360-24309-4	OC-SB-401-7.5/9.5-XXX	Benzene, (1-methyldecyl)-	10.883	9	NJ	ug/kg	1
OCRI-06	360-24309-4	OC-SB-401-7.5/9.5-XXX	Unknown	5.839	14	NJ	ug/kg	1
OCRI-06	360-24309-4	OC-SB-401-7.5/9.5-XXX	Thiophene, tetrahydro-, 1,1-dioxide	8.258	7.7	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	E-15-Heptadecenal	13.89	270	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	Cyclotetracosane	14.553	460	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	Cyclotetracosane	15.222	180	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	Z-14-Nonacosane	15.852	130	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	16.414	170	NJ	ug/kg	1
OCRI-06	360-24309-5	OC-SB-402-0.0/1.0-XXX	D:A-Friedoolean-6-ene	16.491	130	NJ	ug/kg	1
OCRI-06	360-24309-6	OC-SB-402-7.5/9.5-XXX	E-15-Heptadecenal	13.629	68	NJ	ug/kg	1
OCRI-06	360-24309-6	OC-SB-402-7.5/9.5-XXX	Cyclotetracosane	14.283	96	NJ	ug/kg	1
OCRI-06	360-24309-6	OC-SB-402-7.5/9.5-XXX	Unknown	14.908	38	NJ	ug/kg	1
OCRI-06	360-24309-7	OC-SB-407-0.0/1.0-XXX	1-Heneicosyl formate	15.017	1100	NJ	ug/kg	1
OCRI-06	360-24309-7	OC-SB-407-0.0/1.0-XXX	Unknown	16.167	3700	NJ	ug/kg	1
OCRI-06	360-24309-7	OC-SB-407-0.0/1.0-XXX	Unknown	16.705	14	NJ	ug/kg	1
OCRI-06	360-24309-7	OC-SB-407-0.0/1.0-XXX	Unknown	17.297	17	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	Heptacosane, 1-chloro-	13.641	94	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	Heptadecane	14.28	95	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	2-Nonadecanone	14.333	57	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	2-Heptacosanone	14.968	190	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	Stigmastan-6,22-dien, 3,5-dedihydro-	16.108	63	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	.gamma.-Sitosterol	16.3	79	NJ	ug/kg	1
OCRI-06	360-24309-9	OC-SB-407-8.0/10.0-XXX	Unknown	16.526	330	NJ	ug/kg	1
OCRI-06A	360-24309-13	OC-SB-414-20/22-XXX	Butylated Hydroxytoluene	10.806	44	NJ	ug/kg	1
OCRI-06A	360-24309-13	OC-SB-414-20/22-XXX	Octadecanoic acid, methyl ester	13.239	34	NJ	ug/kg	1
OCRI-06A	360-24309-13	OC-SB-414-20/22-XXX	Heneicosane, 11-pentyl-	17.187	51	NJ	ug/kg	1
OCRI-06A	360-24309-16	OC-SB-422-13/15-XXX	Butylated Hydroxytoluene	10.806	25	NJ	ug/kg	1
OCRI-06A	360-24309-16	OC-SB-422-13/15-XXX	Unknown	11.643	45	NJ	ug/kg	1
OCRI-06A	360-24309-16	OC-SB-422-13/15-XXX	Heptadecanoic acid, 16-methyl-, methyl e	13.239	22	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-06A	360-24309-18	OC-SB-429-16/18-XXX	Pentacosane	15.538	79	TJ N	ug/kg	1
OCRI-06A	360-24309-18	OC-SB-429-16/18-XXX	Heptadecane	17.183	120	TJ N	ug/kg	1
OCRI-06A	360-24309-21	OC-SB-430-19/21-XXX	Tricosane, 2-methyl-	14.893	22	NJ	ug/kg	1
OCRI-06A	360-24309-21	OC-SB-430-19/21-XXX	Pentacosane	15.542	38	NJ	ug/kg	1
OCRI-06A	360-24309-21	OC-SB-430-19/21-XXX	Heptacosane, 1-chloro-	16.609	54	NJ	ug/kg	1
OCRI-06A	360-24309-21	OC-SB-430-19/21-XXX	Erucylamide	17.177	180	NJ	ug/kg	1
OCRI-06A	360-24309-8	OC-SB-407-26/28-XXX	Benzene, (1-methyldecyl)-	10.653	12	NJ	ug/kg	1
OCRI-06A	360-24309-8	OC-SB-407-26/28-XXX	Farnesol isomer a	14.654	31	NJ	ug/kg	1
OCRI-06A	360-24309-8	OC-SB-407-26/28-XXX	Unknown	5.561	17	NJ	ug/kg	1
OCRI-07	360-24327-1	OC-SB-403-0.0/1.0-XXX	Unknown	13.354	40	NJ	ug/kg	1
OCRI-07	360-24327-1	OC-SB-403-0.0/1.0-XXX	Pentacosane	15.542	60	NJ	ug/kg	1
OCRI-07	360-24327-1	OC-SB-403-0.0/1.0-XXX	1-Docosene	16.682	120	NJ	ug/kg	1
OCRI-07	360-24327-1	OC-SB-403-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	21.751	97	NJ	ug/kg	1
OCRI-07	360-24327-11	OC-SB-410-6.0/8.0-DUP	Cyclic octaatomic sulfur	12.12	20	NJ	ug/kg	1
OCRI-07	360-24327-11	OC-SB-410-6.0/8.0-DUP	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	14.466	64	NJ	ug/kg	1
OCRI-07	360-24327-12	OC-SB-410-6.0/8.0-XXX	Cyclic octaatomic sulfur	12.12	20	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Benzoic acid, 2,4-dihydroxy-6-methyl-, m	10.275	130	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Cyclohexadecane	12.81	18	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Cyclotetracosane	14.122	150	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Hexadecane-1,2-diol	14.445	120	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Oxirane, hexadecyl-	15.166	42	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Unknown	15.368	73	NJ	ug/kg	1
OCRI-07	360-24327-13	OC-SB-411-0.0/1.0-XXX	Unknown	16.094	350	NJ	ug/kg	1
OCRI-07	360-24327-14	OC-SB-411-4.7/6.7-XXX	1-Heneicosyl formate	13.476	58	NJ	ug/kg	1
OCRI-07	360-24327-14	OC-SB-411-4.7/6.7-XXX	1-Docosene	14.12	170	NJ	ug/kg	1
OCRI-07	360-24327-14	OC-SB-411-4.7/6.7-XXX	1,4-Dimethyl-8-isopropylidenetricyclo[5.	16.202	120	NJ	ug/kg	1
OCRI-07	360-24327-15	OC-SB-418-0.0/1.0-XXX	Cyclotetracosane	14.119	49	NJ	ug/kg	1
OCRI-07	360-24327-17	OC-SB-418-8/10-XXX	Cyclic octaatomic sulfur	12.124	21	NJ	ug/kg	1
OCRI-07	360-24327-19	OC-EBK-005	Unknown	11.033	3.1	NJ	ug/l	1
OCRI-07	360-24327-19	OC-EBK-005	Homomenthyl salicylate	12.697	1.1	NJ	ug/l	1
OCRI-07	360-24327-19	OC-EBK-005	Homomenthyl salicylate	12.783	9.3	NJ	ug/l	1
OCRI-07	360-24327-19	OC-EBK-005	Oxybenzone	13.533	6.7	NJ	ug/l	1
OCRI-07	360-24327-19	OC-EBK-005	Pyridine	6.056	0.2	NJ	ug/l	1
OCRI-07	360-24327-19	OC-EBK-005	Tetrachloroethylene	6.772	3.2	NJ	ug/l	1
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	2,4-Diphenyl-4-methyl-1(E)-pentene	12.08	1000	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	1-Octadecene	14.273	2700	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	Cyclohexadecane, 1,2-diethyl-	15.605	4600	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	Z-12-Pentacosene	16.687	6300	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	1,21-Docosadiene	17.48	2500	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	16-Octadecenal	18.961	2500	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	Heneicosane, 11-pentyl-	19.404	5100	NJ	ug/kg	10
OCRI-07	360-24327-3	OC-SB-403-6.0/8.0-XXX	2-Pentacosanone	19.639	4800	NJ	ug/kg	10
OCRI-07	360-24327-5	OC-SB-404-5.0/7.0-XXX	Tridecane	12.23	14	NJ	ug/kg	1
OCRI-07	360-24327-5	OC-SB-404-5.0/7.0-XXX	Ethanol, 2-(tetradecyloxy)-	13.643	26	NJ	ug/kg	1
OCRI-07	360-24327-5	OC-SB-404-5.0/7.0-XXX	17-(1,5-Dimethylhexyl)-10,13-dimethyl-2,	15.716	51	NJ	ug/kg	1
OCRI-07	360-24327-5	OC-SB-404-5.0/7.0-XXX	Unknown	5.56	15	NJ	ug/kg	1
OCRI-07	360-24327-6	OC-SB-409-0.0/1.0-XXX	Unknown	10.64	17	NJ	ug/kg	1
OCRI-07	360-24327-6	OC-SB-409-0.0/1.0-XXX	5-Eicosene, (E)-	13.636	130	NJ	ug/kg	1
OCRI-07	360-24327-6	OC-SB-409-0.0/1.0-XXX	Cyclotetracosane	14.285	160	NJ	ug/kg	1
OCRI-07	360-24327-6	OC-SB-409-0.0/1.0-XXX	1-Nonadecene	14.93	140	NJ	ug/kg	1
OCRI-07	360-24327-8	OC-SB-409-6.0/8.0-XXX	Unknown	10.746	20	NJ	ug/kg	1
OCRI-07	360-24327-8	OC-SB-409-6.0/8.0-XXX	Unknown	14.699	38	NJ	ug/kg	1
OCRI-07	360-24327-8	OC-SB-409-6.0/8.0-XXX	Unknown	9.722	84	NJ	ug/kg	1
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	4H-Cyclopenta[def]phenanthrene	11.524	2800	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	11H-Benzo[b]fluorene	12.663	400	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	11H-Benzo[a]fluorene	12.731	260	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	Pyrene, 1,3-dimethyl-	13.077	160	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	7H-Benz[de]anthracen-7-one	13.154	180	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	Benzo[b]naphtho[2,3-d]thiophene	13.26	170	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	Chrysene, 1-methyl-	13.894	140	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	Benz[e]acephenanthrylene	14.765	2300	NJ	ug/kg	10
OCRI-07	360-24327-9	OC-SB-410-0.0/1.0-XXX	13H-Dibenzo[a,h]fluorene	15.034	1400	NJ	ug/kg	10
OCRI-07A	360-24327-10	OC-SB-410-17/19-XXX	D-Limonene	6.565	19	NJ	ug/kg	1
OCRI-07A	360-24327-16	OC-SB-418-15/17-XXX	Unknown	10.469	17	NJ	ug/kg	1
OCRI-07A	360-24327-16	OC-SB-418-15/17-XXX	Unknown	5.338	16	NJ	ug/kg	1
OCRI-07A	360-24327-16	OC-SB-418-15/17-XXX	Butylated Hydroxytoluene	9.54	12	NJ	ug/kg	1
OCRI-07A	360-24327-2	OC-SB-403-13/15-XXX	Tridecane, 7-hexyl-	15.541	66	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-07A	360-24327-2	OC-SB-403-13/15-XXX	Heptadecane, 2,6,10,15-tetramethyl-	17.835	59	NJ	ug/kg	1
OCRI-07A	360-24327-4	OC-SB-404-13/15-XXX	3-Eicosene, (E)-	13.642	25	NJ	ug/kg	1
OCRI-07A	360-24327-4	OC-SB-404-13/15-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	14.652	430	NJ	ug/kg	1
OCRI-07A	360-24327-4	OC-SB-404-13/15-XXX	Unknown	5.559	15	NJ	ug/kg	1
OCRI-07A	360-24327-7	OC-SB-409-15/17-XXX	Cyclic octaatomic sulfur	12.123	52	NJ	ug/kg	1
OCRI-07A	360-24327-7	OC-SB-409-15/17-XXX	Octadecanoic acid, methyl ester	12.19	18	NJ	ug/kg	1
OCRI-07A	360-24327-7	OC-SB-409-15/17-XXX	Butylated Hydroxytoluene	9.541	23	NJ	ug/kg	1
OCRI-08	360-24343-1	OC-SB-444-0.0/1.0-XXX	Heneicosane	13.793	490	NJ	ug/kg	10
OCRI-08	360-24343-1	OC-SB-444-0.0/1.0-XXX	Heptadecane, 9-octyl-	14.105	580	NJ	ug/kg	10
OCRI-08	360-24343-1	OC-SB-444-0.0/1.0-XXX	1,1"-Biphenyl, 2,3",4,5"-tetrachloro-4"-	15.183	1800	NJ	ug/kg	10
OCRI-08	360-24343-1	OC-SB-444-0.0/1.0-XXX	Unknown	15.356	280	NJ	ug/kg	10
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Z-12-Pentacosene	16.518	210	NJ	ug/kg	1
OCRI-08	360-24343-10	OC-SB-451-2.5/4.5-XXX	Unknown	19.995	1.7	NJ	ug/kg	1
OCRI-08	360-24343-11	OC-SB-454-0.0/1.0-XXX	Unknown	6.371	7.1	NJ	ug/kg	1
OCRI-08	360-24343-11	OC-SB-454-0.0/1.0-XXX	Unknown	6.689	11	NJ	ug/kg	1
OCRI-08	360-24343-11	OC-SB-454-0.0/1.0-XXX	Unknown	7.295	19	NJ	ug/kg	1
OCRI-08	360-24343-11	OC-SB-454-0.0/1.0-XXX	Unknown	8.199	6.7	NJ	ug/kg	1
OCRI-08	360-24343-13	OC-SB-454-6.0/8.0-XXX	Benzoic acid, 2-benzoyl-, methyl ester	12.461	9.2	NJ	ug/kg	1
OCRI-08	360-24343-13	OC-SB-454-6.0/8.0-XXX	1R,3Z,9s-4,8,11,11-Tetramethylbicyclo[7.	13.057	140	NJ	ug/kg	1
OCRI-08	360-24343-13	OC-SB-454-6.0/8.0-XXX	9-Octadecenamide, (Z)-	16.947	14	NJ	ug/kg	1
OCRI-08	360-24343-13	OC-SB-454-6.0/8.0-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	6.094	15	NJ	ug/kg	1
OCRI-08	360-24343-13	OC-SB-454-6.0/8.0-XXX	Unknown	7.296	15	NJ	ug/kg	1
OCRI-08	360-24343-16	OC-SB-455-6.0/8.0-DUP	Methylcarbazole	12.671	24	NJ	ug/kg	1
OCRI-08	360-24343-16	OC-SB-455-6.0/8.0-DUP	1-Eicosanol	14.066	120	NJ	ug/kg	1
OCRI-08	360-24343-16	OC-SB-455-6.0/8.0-DUP	Cyclohexadecane, 1,2-diethyl-	15.403	820	NJ	ug/kg	1
OCRI-08	360-24343-16	OC-SB-455-6.0/8.0-DUP	1-Docosene	16.475	1300	NJ	ug/kg	1
OCRI-08	360-24343-16	OC-SB-455-6.0/8.0-DUP	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	21.563	120	NJ	ug/kg	1
OCRI-08	360-24343-17	OC-SB-455-6.0/8.0-XXX	1-Docosene	14.062	110	NJ	ug/kg	1
OCRI-08	360-24343-17	OC-SB-455-6.0/8.0-XXX	1-Docosene	15.394	740	NJ	ug/kg	1
OCRI-08	360-24343-17	OC-SB-455-6.0/8.0-XXX	1-Docosene	16.476	1200	NJ	ug/kg	1
OCRI-08	360-24343-17	OC-SB-455-6.0/8.0-XXX	Friedelin	16.827	1000	NJ	ug/kg	1
OCRI-08	360-24343-3	OC-SB-444-5.0/7.0-XXX	Unknown	10.752	20	NJ	ug/kg	1
OCRI-08	360-24343-3	OC-SB-444-5.0/7.0-XXX	Octadecane, 1-chloro-	12.06	16	NJ	ug/kg	1
OCRI-08	360-24343-3	OC-SB-444-5.0/7.0-XXX	Cyclic octaatomic sulfur	12.127	64	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	1-Octadecene	12.818	9.9	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Isoheptadecanol	13.818	7.3	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Cyclotetracosane	14.116	110	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Cyclotetracosane	14.765	340	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	15.871	380	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Unknown	16.025	110	NJ	ug/kg	1
OCRI-08	360-24343-4	OC-SB-449-0.0/1.0-XXX	Taraxasterol	16.415	180	NJ	ug/kg	1
OCRI-08	360-24343-6	OC-SB-449-6.0/8.0-XXX	Unknown	8.672	86	NJ	ug/kg	1
OCRI-08	360-24343-7	OC-SB-451-0.0/1.0-XXX	11H-Benzo[a]fluorene	12.652	180	NJ	ug/kg	10
OCRI-08	360-24343-7	OC-SB-451-0.0/1.0-XXX	Benzo[j]fluoranthene	14.749	840	NJ	ug/kg	10
OCRI-08	360-24343-9	OC-SB-451-2.5/4.5-DUP	Unknown	16.515	110	NJ	ug/kg	1
OCRI-08	360-24343-9	OC-SB-451-2.5/4.5-DUP	Unknown	22.171	6.1	NJ	ug/kg	1
OCRI-08A	360-24343-12	OC-SB-454-18/20-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	6.103	13	NJ	ug/kg	1
OCRI-08A	360-24343-12	OC-SB-454-18/20-XXX	Unknown	6.373	7.7	NJ	ug/kg	1
OCRI-08A	360-24343-12	OC-SB-454-18/20-XXX	Unknown	7.296	19	NJ	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	13.059	230	TJ N	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	Unknown	14.266	14	TJ	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	14.627	21	TJ N	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	9-Octadecenamide, (Z)-	16.949	19	TJ N	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	6.101	15	TJ N	ug/kg	1
OCRI-08A	360-24343-15	OC-SB-455-28/30-XXX	Unknown	7.293	12	TJ	ug/kg	1
OCRI-08A	360-24343-2	OC-SB-444-12/14-XXX	Lenthionine	10.334	30	NJ	ug/kg	1
OCRI-08A	360-24343-2	OC-SB-444-12/14-XXX	Unknown	10.753	88	NJ	ug/kg	1
OCRI-08A	360-24343-2	OC-SB-444-12/14-XXX	Cyclic octaatomic sulfur	12.118	180	NJ	ug/kg	1
OCRI-08A	360-24343-2	OC-SB-444-12/14-XXX	Hydrazinecarboxamide, 2-(1-methylethylid	8.363	29	NJ	ug/kg	1
OCRI-08A	360-24343-2	OC-SB-444-12/14-XXX	Unknown	9.397	37	NJ	ug/kg	1
OCRI-08A	360-24343-5	OC-SB-449-11/13-XXX	1-Octadecene	10.863	40	NJ	ug/kg	1
OCRI-08A	360-24343-5	OC-SB-449-11/13-XXX	1-Hexanol, 2-ethyl-	6.564	690	NJ	ug/kg	1
OCRI-08A	360-24343-8	OC-SB-451-18/20-XXX	1,4-Benzenediamine, N,N-dimethyl-	10.072	36	NJ	ug/kg	1
OCRI-08A	360-24343-8	OC-SB-451-18/20-XXX	Erucylamide	16.939	23	NJ	ug/kg	1
OCRI-08A	360-24343-8	OC-SB-451-18/20-XXX	2-Pentene, 2,3-dimethyl-	6.096	20	NJ	ug/kg	1
OCRI-08A	360-24343-8	OC-SB-451-18/20-XXX	Unknown	7.293	17	NJ	ug/kg	1
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	10.29	200	NJ	ug/kg	10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	10.53	230	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	10.626	280	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Butylated Hydroxytoluene	10.684	340	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	18.97	6300	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	1-Pentene, 2,4,4-trimethyl-	4.76	450	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	9.871	160	NJ	ug/kg	10
OCRI-09	360-24365-1	OC-SB-442-0.0/1.0-XXX	Unknown	9.919	530	NJ	ug/kg	10
OCRI-09	360-24365-10	OC-SB-452-5.0/7.0-XXX	Butylated Hydroxytoluene	10.479	13	NJ	ug/kg	1
OCRI-09	360-24365-10	OC-SB-452-5.0/7.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.931	8.7	NJ	ug/kg	1
OCRI-09	360-24365-10	OC-SB-452-5.0/7.0-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	12.787	13	NJ	ug/kg	1
OCRI-09	360-24365-10	OC-SB-452-5.0/7.0-XXX	Nonadecane	15.61	12	NJ	ug/kg	1
OCRI-09	360-24365-10	OC-SB-452-5.0/7.0-XXX	Alpha-Terpineol	8.94	27	NJ	ug/kg	1
OCRI-09	360-24365-12	OC-EBK-006	Unknown	12.763	1.6	NJ	ug/l	1
OCRI-09	360-24365-12	OC-EBK-006	Octadecane, 2-methyl-	15.966	1.6	NJ	ug/l	1
OCRI-09	360-24365-12	OC-EBK-006	Hexacosane	16.514	1.6	NJ	ug/l	1
OCRI-09	360-24365-12	OC-EBK-006	Heptacosane	17.101	1.8	NJ	ug/l	1
OCRI-09	360-24365-12	OC-EBK-006	Pyridine	6.012	0.2	NJ	ug/l	1
OCRI-09	360-24365-13	OC-SB-458-0.0/1.0-XXX	1-Docosene	15.515	2700	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	1,6,10-Dodecatrien-3-ol, 3,7,11-trimethy	12.456	10	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	Eicosane, 10-methyl-	12.696	9.4	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	12.783	340	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	Docosane	13.138	9.8	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	Tetracosane	14.254	25	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	Hexadecane, 2,6,10,14-tetramethyl-	14.98	21	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	9-Nonadecene	16.269	23	NJ	ug/kg	1
OCRI-09	360-24365-15	OC-SB-458-5.0/7.0-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.774	65	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	1-Eicosene	14.101	1000	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	1-Docosene	15.519	1400	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	Hentriacontane	17.626	340	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	1-Docosene	17.702	570	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	2-Heptacosanone	17.794	370	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	Unknown	19.857	470	NJ	ug/kg	1
OCRI-09	360-24365-16	OC-SB-460-0.0/1.0-XXX	Unknown	5.926	6000	NJ	ug/kg	1
OCRI-09	360-24365-18	OC-SB-460-5.5/7.5-XXX	1-Docosene	16.173	520	NJ	ug/kg	1
OCRI-09	360-24365-18	OC-SB-460-5.5/7.5-XXX	Nonacosane	17.212	22	NJ	ug/kg	1
OCRI-09	360-24365-18	OC-SB-460-5.5/7.5-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	20.578	57	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	1,2,4,6-Tetrathiepane	11.047	9.2	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	9-Octadecenamide, (Z)-	16.961	38	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	Unknown	6.68	5400	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	Unknown	7.305	12	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	1,2,4-Trithiolane	8.767	11	NJ	ug/kg	1
OCRI-09	360-24365-3	OC-SB-442-8.0/10-DUP	Unknown	9.133	25	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Butylated Hydroxytoluene	10.477	12	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	10.929	11	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Octadecanoic acid, methyl ester	12.809	13	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Docosane	15.608	10	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Nonacosane	16.118	11	NJ	ug/kg	1
OCRI-09	360-24365-4	OC-SB-442-8.0/10-XXX	Erucylamide	16.613	19	NJ	ug/kg	1
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	Anthracene, 1-methyl-	12.487	83	NJ	ug/kg	10
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	Phenanthrene, 1-methyl-	12.521	110	NJ	ug/kg	10
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	4H-Cyclopenta[def]phenanthrene	12.627	230	NJ	ug/kg	10
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	Pyrene, 1-methyl-	13.949	160	NJ	ug/kg	10
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	11H-Benzo[b]fluorene	14.141	240	NJ	ug/kg	10
OCRI-09	360-24365-5	OC-SB-447-0.0/1.0-XXX	Perylene	18.142	1100	NJ	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Phenol, 2-(1-phenylethyl)-	11.221	9100	NJ	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Phenol, 2-[(4-hydroxyphenyl)methyl]-	12.264	15000	NJ	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Phenol, 4,4"-methylenebis-	12.524	16000	NJ	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Tricosane, 2-methyl-	13.885	1300	TJN	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	Pentacosane	15.827	2400	TJN	ug/kg	10
OCRI-09	360-24365-7	OC-SB-447-3.0/5.0-XXX	1-(4-Chlorophenyl)-5-[(2-piperidin-1-yl)	16.073	5200	TJN	ug/kg	10
OCRI-09	360-24365-8	OC-SB-452-0.0/1.0-XXX	Unknown	6.165	3100	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	Butylated Hydroxytoluene	10.479	24	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.931	20	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	12.792	120	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	Pentacosane	14.98	16	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	Hexatriacontane	16.115	23	NJ	ug/kg	1
OCRI-09A	360-24365-14	OC-SB-458-22/24-XXX	Nonacosane	16.639	16	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-09A	360-24365-17	OC-SB-460-30/32-XXX	Butylated Hydroxytoluene	10.476	20	NJ	ug/kg	1
OCRI-09A	360-24365-17	OC-SB-460-30/32-XXX	Octadecanoic acid, methyl ester	12.808	55	NJ	ug/kg	1
OCRI-09A	360-24365-17	OC-SB-460-30/32-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.806	13	NJ	ug/kg	1
OCRI-09A	360-24365-17	OC-SB-460-30/32-XXX	1H-1,2,4-Triazole	7.369	74	NJ	ug/kg	1
OCRI-09A	360-24365-2	OC-SB-442-20/22-XXX	Nonacosane	16.421	18	NJ	ug/kg	1
OCRI-09A	360-24365-2	OC-SB-442-20/22-XXX	Unknown	7.299	15	NJ	ug/kg	1
OCRI-09A	360-24365-6	OC-SB-447-18/20-XXX	3-Hexen-2-one	4.751	14	NJ	ug/kg	1
OCRI-09A	360-24365-6	OC-SB-447-18/20-XXX	Limonene	7.444	8.2	NJ	ug/kg	1
OCRI-09A	360-24365-9	OC-SB-452-13/15-XXX	1-Naphthalenepropanol, .alpha.-ethenylde	12.783	35	NJ	ug/kg	1
OCRI-09A	360-24365-9	OC-SB-452-13/15-XXX	Nonadecane	14.255	15	NJ	ug/kg	1
OCRI-09A	360-24365-9	OC-SB-452-13/15-XXX	Erucylamide	16.611	65	NJ	ug/kg	1
OCRI-10	360-24417-1	OC-SB-463-0.0/1.0-XXX	1-Docosene	16.197	190	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Phenol, 4,4"-methylenebis-	12.235	20	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	1-Octadecene	12.985	200	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Cyclopentadecane	13.499	38	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	14.096	720	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	1-Docosene	15.509	840	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Cyclotetracosane	16.524	190	NJ	ug/kg	1
OCRI-10	360-24417-11	OC-SB-468-0.0/1.0-XXX	Alpha-Terpineol	8.517	49	NJ	ug/kg	1
OCRI-10	360-24417-13	OC-SB-468-8.0/10-XXX	Cyclic octaatomic sulfur	12.005	170	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	Phenol, nonyl-	10.925	14	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	Tridecane, 1-iodo-	12.199	14	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	1-Octadecene	12.988	49	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	1-Eicosene	14.094	510	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	1-Hexacosene	14.834	52	NJ	ug/kg	1
OCRI-10	360-24417-14	OC-SB-471-0.0/1.0-XXX	17-Pentatriacontene	16.022	120	NJ	ug/kg	1
OCRI-10	360-24417-15	OC-SB-471-3.0/5.0-XXX	Octadecanoic acid, methyl ester	12.087	11	NJ	ug/kg	1
OCRI-10	360-24417-15	OC-SB-471-3.0/5.0-XXX	Cyclotetracosane	14.015	93	NJ	ug/kg	1
OCRI-10	360-24417-15	OC-SB-471-3.0/5.0-XXX	.gamma.-Sitosterol	15.958	84	NJ	ug/kg	1
OCRI-10	360-24417-15	OC-SB-471-3.0/5.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	6.234	17	NJ	ug/kg	1
OCRI-10	360-24417-15	OC-SB-471-3.0/5.0-XXX	Butylated Hydroxytoluene	9.437	15	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Butylated Hydroxytoluene	10.479	25	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.931	19	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Octadecanoic acid, methyl ester	12.807	22	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	1-Eicosanol	15.096	28	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Nonacosane	16.12	29	NJ	ug/kg	1
OCRI-10	360-24417-3	OC-SB-463-6.0/8.0-XXX	Z-12-Pentacosene	16.236	31	NJ	ug/kg	1
OCRI-10	360-24417-4	OC-SB-464-0.0/1.0-XXX	1-Eicosene	15.041	470	NJ	ug/kg	1
OCRI-10	360-24417-4	OC-SB-464-0.0/1.0-XXX	1-Docosene	16.185	700	NJ	ug/kg	1
OCRI-10	360-24417-4	OC-SB-464-0.0/1.0-XXX	Alpha-Terpineol	8.943	29	NJ	ug/kg	1
OCRI-10	360-24417-6	OC-SB-464-5.0/7.0-XXX	Octadecanoic acid, methyl ester	12.806	17	NJ	ug/kg	1
OCRI-10	360-24417-6	OC-SB-464-5.0/7.0-XXX	1-Eicosene	15.105	160	NJ	ug/kg	1
OCRI-10	360-24417-6	OC-SB-464-5.0/7.0-XXX	1-Docosene	16.22	240	NJ	ug/kg	1
OCRI-10	360-24417-6	OC-SB-464-5.0/7.0-XXX	Alpha-Terpineol	8.94	26	NJ	ug/kg	1
OCRI-10	360-24417-7	OC-SB-465-0.0/1.0-XXX	1-Eicosanol	13.996	140	NJ	ug/kg	1
OCRI-10	360-24417-9	OC-SB-465-8.0/10-DUP	Cyclic octaatomic sulfur	11.999	32	NJ	ug/kg	1
OCRI-10	360-24417-9	OC-SB-465-8.0/10-DUP	Limonene	6.459	8.1	NJ	ug/kg	1
OCRI-10A	360-24417-12	OC-SB-468-31/33-XXX	Pentadecanoic acid, 14-methyl-, methyl e	12.023	7.6	NJ	ug/kg	1
OCRI-10A	360-24417-12	OC-SB-468-31/33-XXX	Octadecanoic acid, methyl ester	12.807	20	NJ	ug/kg	1
OCRI-10A	360-24417-12	OC-SB-468-31/33-XXX	Tricosane, 2-methyl-	14.254	25	NJ	ug/kg	1
OCRI-10A	360-24417-12	OC-SB-468-31/33-XXX	Docosane	15.61	43	NJ	ug/kg	1
OCRI-10A	360-24417-16	OC-SB-471-26/28-XXX	Heptane, 2,2,6,6-tetramethyl-4-methylene	6.135	25	NJ	ug/kg	1
OCRI-10A	360-24417-16	OC-SB-471-26/28-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	6.236	38	NJ	ug/kg	1
OCRI-10A	360-24417-16	OC-SB-471-26/28-XXX	Limonene	6.457	8.8	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Butylated Hydroxytoluene	10.479	31	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.931	27	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Octadecanoic acid, methyl ester	12.807	26	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Heptadecane	15.61	57	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Nonadecane	16.12	26	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Docosane	16.639	20	NJ	ug/kg	1
OCRI-10A	360-24417-2	OC-SB-463-28/30-XXX	Heneicosane	17.212	17	NJ	ug/kg	1
OCRI-10A	360-24417-5	OC-SB-464-26/28-XXX	Butylated Hydroxytoluene	10.48	13	NJ	ug/kg	1
OCRI-10A	360-24417-5	OC-SB-464-26/28-XXX	Octadecanoic acid, methyl ester	12.808	10	NJ	ug/kg	1
OCRI-10A	360-24417-5	OC-SB-464-26/28-XXX	Triacontane	15.611	55	NJ	ug/kg	1
OCRI-10A	360-24417-5	OC-SB-464-26/28-XXX	Erucylamide	16.626	190	NJ	ug/kg	1
OCRI-10A	360-24417-8	OC-SB-465-16/18-XXX	Cyclic octaatomic sulfur	11.995	32	NJ	ug/kg	1
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	10.391	4700	NJ	ug/kg	10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	3-Heptene, 2,2,4,6,6-pentamethyl-	6.241	2500	NJ	ug/kg	10
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Unknown	10.67	200000	NJ	ug/kg	2000
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Pentacosane	14.368	240000	NJ	ug/kg	2000
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Pentacosane	16.172	290000	NJ	ug/kg	2000
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Heneicosane	16.662	210000	NJ	ug/kg	2000
OCRI-11	360-24444-1	OC-SB-459-6.0/8.0-DUP	Hexatriacontane	17.21	140000	NJ	ug/kg	2000
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	Butylated Hydroxytoluene	10.272	8.5	NJ	ug/kg	1
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	Octadecanoic acid, methyl ester	12.551	14	NJ	ug/kg	1
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	Nonadecane	14.547	12	NJ	ug/kg	1
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	1-Pentadecene	15.869	12	NJ	ug/kg	1
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	1-Propene, 2-methyl-, trimer	7.589	9.5	NJ	ug/kg	1
OCRI-11	360-24444-12	OC-SB-459-0.0/1.0-XXX	Unknown	12.074	130	NJ	ug/kg	20
OCRI-11	360-24444-16	OC-EBK-007	Benzothiazole, 2-(methylthio)-	11.722	1.3	NJ	ug/l	1
OCRI-11	360-24444-16	OC-EBK-007	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3	12.088	1.4	NJ	ug/l	1
OCRI-11	360-24444-16	OC-EBK-007	Unknown	12.766	3.1	NJ	ug/l	1
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	10.388	6100	NJ	ug/kg	10
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	Heptane, 2,2,6,6-tetramethyl-4-methylene	6.142	1700	NJ	ug/kg	10
OCRI-11	360-24444-2	OC-SB-459-6.0/8.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	6.238	2700	NJ	ug/kg	10
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	Cyclotetracosane	14.01	70	NJ	ug/kg	1
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	Squalene	14.352		NJ	ug/kg	1
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	Octadecane	14.607		NJ	ug/kg	1
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	1-Docosene	14.645	53	NJ	ug/kg	1
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	p,p"-Dioctyldiphenylamine	14.823		NJ	ug/kg	1
OCRI-11	360-24444-3	OC-SB-462-0.0/1.0-XXX	Friedelin	16.694	230	NJ	ug/kg	1
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Phenol, 2-(1-phenylethyl)-	10.478	1700	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Phenol, 2-(1-phenylethyl)-	10.848	960	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Phenol, 2,2"-methylenebis-	11.55	750	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Phenol, 2,2"-methylenebis-	11.661	5600	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Phenol, 4,4"-methylenebis-	11.921	6800	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	1,2-Benzenedicarboxylic acid, butyl 2-me	12.551	680	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Benzene, 1-methyl-2-(1-methylethyl)-	6.419	760	NJ	ug/kg	10
OCRI-11	360-24444-5	OC-SB-462-4.0/6.0-XXX	Butylated Hydroxytoluene	9.439	190	NJ	ug/kg	10
OCRI-11	360-24444-8	OC-SB-467-6.0/8.0-DUP	Friedelin	16.689	21	NJ	ug/kg	1
OCRI-11	360-24444-8	OC-SB-467-6.0/8.0-DUP	1,4-Benzenediamine, N,N-dimethyl-	8.697	31	NJ	ug/kg	1
OCRI-11	360-24444-8	OC-SB-467-6.0/8.0-DUP	Butylated Hydroxytoluene	9.437	14	NJ	ug/kg	1
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	Friedelin	16.69	53	NJ	ug/kg	1
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	Heptane, 2,2,6,6-tetramethyl-4-methylene	6.135	15	NJ	ug/kg	1
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	3-Heptene, 2,2,4,6,6-pentamethyl-	6.236	20	NJ	ug/kg	1
OCRI-11	360-24444-9	OC-SB-467-6.0/8.0-XXX	1,4-Benzenediamine, N,N-dimethyl-	8.703	19	NJ	ug/kg	1
OCRI-11A	360-24444-13	OC-SB-459-26/28-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.573	15	NJ	ug/kg	1
OCRI-11A	360-24444-4	OC-SB-462-31/33-XXX	Cyclic octaatomic sulfur	12.001	28	NJ	ug/kg	1
OCRI-11A	360-24444-4	OC-SB-462-31/33-XXX	2-Propenoic acid, 3-(4-methoxyphenyl)-,	12.795	65	NJ	ug/kg	1
OCRI-11A	360-24444-4	OC-SB-462-31/33-XXX	Hexadecane, 2,6,10,14-tetramethyl-	13.838	38	NJ	ug/kg	1
OCRI-11A	360-24444-4	OC-SB-462-31/33-XXX	Butylated Hydroxytoluene	9.438	18	NJ	ug/kg	1
OCRI-11A	360-24444-7	OC-SB-467-30/32-XXX	2-Propenoic acid, 3-(4-methoxyphenyl)-,	12.798	85	NJ	ug/kg	1
OCRI-11A	360-24444-7	OC-SB-467-30/32-XXX	Hexadecane, 2,6,10,14-tetramethyl-	13.837	51	NJ	ug/kg	1
OCRI-11A	360-24444-7	OC-SB-467-30/32-XXX	Butylated Hydroxytoluene	9.437	9.5	NJ	ug/kg	1
OCRI-12	360-24454-18	OC-EBK-008	Diethyltoluamide	10.17	1.4	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Tributyl phosphate	10.357	0.62	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3	10.785	0.37	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Homomenthyl salicylate	11.405	0.49	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Hexadecane, 1-chloro-	11.978	0.4	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Benzidine	12.281	0.7	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Eicosane	13.714	0.44	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Tricosane	15.705	0.42	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Docosa-2,6,10,14,18-pentaen-22-al, 2,6,1	15.806	0.45	NJ	ug/l	1
OCRI-12	360-24454-18	OC-EBK-008	Phenol, 2,4-bis(1,1-dimethylethyl)-	9.838	0.76	NJ	ug/l	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	Butylated Hydroxytoluene	10.272	8.6	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	1-Eicosanol	14.595	29	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	Dotriacontane	15.826	11	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	13-Tertadecen-1-ol acetate	15.884	21	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.574	14	NJ	ug/kg	1
OCRI-12	360-24454-3	OC-SB-461-5.0/7.0-XXX	.alpha.-Methylstyrene	7.43	8.3	NJ	ug/kg	1
OCRI-12	360-24454-4	OC-SB-470-0.0/1.0-XXX	1-Docosene	14.577	370	NJ	ug/kg	1
OCRI-12	360-24454-4	OC-SB-470-0.0/1.0-XXX	1-Docosene	15.861	590	NJ	ug/kg	1
OCRI-12	360-24454-4	OC-SB-470-0.0/1.0-XXX	9-Hexacosene	16.928	21	NJ	ug/kg	1
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Butylated Hydroxytoluene	10.275	8.5	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.723	6.9	NJ	ug/kg	1
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Heptadecanoic acid, 16-methyl-, methyl e	12.55	8.5	NJ	ug/kg	1
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Triacontane	15.83	11	NJ	ug/kg	1
OCRI-12	360-24454-6	OC-SB-470-7.0/9.0-XXX	Heptadecane	16.315	12	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	Perhydrobenzo[a]cycloheptene-6,8-dicarbo	12.95	25	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	1-Eicosene	14.653	48	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	1-Eicosanol	15.913	70	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.442	39	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	1,21-Docosadiene	16.547	33	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	Nonadecane	16.85	22	NJ	ug/kg	1
OCRI-12	360-24454-7	OC-SB-472-0.0/1.0-XXX	1-Nonadecene	16.971	54	NJ	ug/kg	1
OCRI-12	360-24454-8	OC-SB-472-30/32-XXX	Docosane	13.326	13	NJ	ug/kg	1
OCRI-12	360-24454-8	OC-SB-472-30/32-XXX	Nonadecane	14.542	22	NJ	ug/kg	1
OCRI-12	360-24454-8	OC-SB-472-30/32-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.555	12	NJ	ug/kg	1
OCRI-12	360-24454-9	OC-SB-472-8.0/10-XXX	Tricyclo[4.3.3.0(1,6)]dodeca-7,11-diene-	13.512	28	NJ	ug/kg	1
OCRI-12	360-24454-9	OC-SB-472-8.0/10-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.445	12	NJ	ug/kg	1
OCRI-12A	360-24454-2	OC-SB-461-28/30-XXX	9-Octadecenamide, (Z)-	16.288	15	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	Butylated Hydroxytoluene	10.272	8.4	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	Xanthone	11.873	26	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	Benzene, 1-bromo-3-iodo-	11.955	7.3	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	4-Bromophenyl ether	12.378	7.5	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	Octadecanoic acid, methyl ester	12.556	10	NJ	ug/kg	1
OCRI-12A	360-24454-5	OC-SB-470-31/33-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.569	15	NJ	ug/kg	1
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Butylated Hydroxytoluene	10.275	11	NJ	ug/kg	1
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Dotriacontane	14.545	14	NJ	ug/kg	1
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Heneicosane	15.271	13	NJ	ug/kg	1
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	Erucylamide	16.291	63	NJ	ug/kg	1
OCRI-13	360-24499-1	OC-SB-466-6.0/8.0-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.44	60	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	1,2-Diphenylhydrazine	10.689	37	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	Dibenzothiophene, 3-methyl-	11.28	43	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	1-Docosene	16.589	18	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	1,1"-Biphenyl, 2,3",4,5"-tetrachloro-4"-	17.43	90	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	Alpha-Terpineol	8.52	19	NJ	ug/kg	1
OCRI-13	360-24499-14	OC-SB-417-0.0/1.0-XXX	1,3,6,10-Dodecatetraene, 3,7,11-trimethy	9.77	18	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.292	13	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Octadecanoic acid, methyl ester	12.076	8.2	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Nonadecane	13.182	14	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Tricosane, 2-methyl-	13.716	17	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Erucylamide	15.659	52	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Hexanoic acid, 2-ethyl-	7.816	24	NJ	ug/kg	1
OCRI-13	360-24499-19	OC-SB-434-7.0-/9.0-XXX	Butylated Hydroxytoluene	9.855	19	NJ	ug/kg	1
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Pentadecanoic acid, 14-methyl-, methyl e	11.41	88	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	4H-Cyclopenta[def]phenanthrene	11.656	230	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	9,10-Anthracenedione	11.824	97	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Naphthalene, 1-phenyl-	12.382	210	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Nonadecane, 9-methyl-	16.176	830	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Perylene	16.378	650	NJ	ug/kg	10
OCRI-13	360-24499-20	OC-SB-450-0.0/1.0-XXX	Butylated Hydroxytoluene	9.852	140	NJ	ug/kg	10
OCRI-13	360-24499-22	OC-SB-450-8.0/10-XXX	1,1"-Biphenyl, (phenylmethyl)-	11.823	9.5	NJ	ug/kg	1
OCRI-13	360-24499-22	OC-SB-450-8.0/10-XXX	1-Nonadecene	13.843	22	NJ	ug/kg	1
OCRI-13	360-24499-22	OC-SB-450-8.0/10-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	15.81	240	NJ	ug/kg	1
OCRI-13	360-24499-22	OC-SB-450-8.0/10-XXX	3-Penten-2-one, 4-methyl-	5.019	13	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Octadecane, 1-chloro-	14.1	23	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Heptadecane	15.99	17	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.101	140	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Decane	7.291	12	NJ	ug/kg	1
OCRI-13	360-24499-4	OC-SB-469-36/37-XXX	Alpha-Terpineol	8.522	20	NJ	ug/kg	1
OCRI-13	360-24499-5	OC-SB-469-7.0/9.0-XXX	Heptadecane	14.099	10	NJ	ug/kg	1
OCRI-13	360-24499-5	OC-SB-469-7.0/9.0-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.294	14	NJ	ug/kg	1
OCRI-13	360-24499-5	OC-SB-469-7.0/9.0-XXX	Alpha-Terpineol	8.516	14	NJ	ug/kg	1
OCRI-13	360-24499-6	OC-SB-466-0.0/1.0-XXX	Butylated Hydroxytoluene	10.053	200	NJ	ug/kg	10
OCRI-13	360-24499-6	OC-SB-466-0.0/1.0-XXX	Pentadecanoic acid, 14-methyl-, methyl e	11.601	89	NJ	ug/kg	10
OCRI-13	360-24499-6	OC-SB-466-0.0/1.0-XXX	Octadecanoic acid, methyl ester	12.293	230	NJ	ug/kg	10
OCRI-13	360-24499-6	OC-SB-466-0.0/1.0-XXX	Tetradecane, 2,6,10-trimethyl-	15.496	270	NJ	ug/kg	10
OCRI-13	360-24499-7	OC-SB-466-30/32-XXX	Pentacosane	14.1	28	NJ	ug/kg	1
OCRI-13	360-24499-7	OC-SB-466-30/32-XXX	Erucylamide	15.956	90	NJ	ug/kg	1
OCRI-13	360-24499-7	OC-SB-466-30/32-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	16.1	160	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-13	360-24499-7	OC-SB-466-30/32-XXX	Alpha-Terpineol	8.517	20	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.29	16	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	Furan, 2,5-dihydro-2,5-dimethyl-	5.01	23	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	.alpha.-Methylstyrene	6.992	9.4	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	Hexanoic acid, 2-ethyl-	7.814	25	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	1,4-Benzenediamine, N,N-dimethyl-	9.232	61	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	Quinoline, 2,4-dimethyl-	9.66	12	NJ	ug/kg	1
OCRI-13A	360-24499-15	OC-SB-417-20/22-XXX	Butylated Hydroxytoluene	9.853	24	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	Octadecanoic acid, methyl ester	12.077	8.2	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	dl-2-Ethylhexyl chloroformate	13.721	19	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	.alpha.-Methylstyrene	6.989	9.1	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	Hexanoic acid, 2-ethyl-	7.816	20	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	1,4-Benzenediamine, N,N-dimethyl-	9.235	30	NJ	ug/kg	1
OCRI-13A	360-24499-18	OC-SB-434-15/16-XXX	Butylated Hydroxytoluene	9.855	16	NJ	ug/kg	1
OCRI-13A	360-24499-21	OC-SB-450-33/35-XXX	Heptadecane, 2,6,10,15-tetramethyl-	13.718	16	NJ	ug/kg	1
OCRI-13A	360-24499-21	OC-SB-450-33/35-XXX	Docosane	15.704	26	NJ	ug/kg	1
OCRI-13A	360-24499-21	OC-SB-450-33/35-XXX	Butylated Hydroxytoluene	9.852	17	NJ	ug/kg	1
OCRI-13A	360-24499-3	OC-SB-469-28/30-XXX	Phenol, 4-(1,1,3,3-tetramethylbutyl)-	10.497	8.8	NJ	ug/kg	1
OCRI-13A	360-24499-3	OC-SB-469-28/30-XXX	Octadecanoic acid, methyl ester	12.295	8.9	NJ	ug/kg	1
OCRI-13A	360-24499-3	OC-SB-469-28/30-XXX	1-Hexanol, 2-ethyl-	7.51	15	NJ	ug/kg	1
OCRI-14	360-24563-11	OC-SB-456-0.0/1.0-XXX	1-Octadecene	13.773	190	NJ	ug/kg	1
OCRI-14	360-24563-11	OC-SB-456-0.0/1.0-XXX	Z-12-Pentacosene	15.201	290	NJ	ug/kg	1
OCRI-14	360-24563-11	OC-SB-456-0.0/1.0-XXX	Erucylamide	15.677	8.4	NJ	ug/kg	1
OCRI-14	360-24563-11	OC-SB-456-0.0/1.0-XXX	Z-12-Pentacosene	16.255	8.6	NJ	ug/kg	1
OCRI-14	360-24563-12	OC-SB-456-16/18-XXX	Heptadecane	14.379	19	NJ	ug/kg	1
OCRI-14	360-24563-12	OC-SB-456-16/18-XXX	.alpha.-Methylstyrene	6.992	24	NJ	ug/kg	1
OCRI-14	360-24563-12	OC-SB-456-16/18-XXX	Butylated Hydroxytoluene	9.858	15	NJ	ug/kg	1
OCRI-14	360-24563-13	OC-SB-456-7.0/9.0-DUP	3-Hexen-2-one	5.714	13	NJ	ug/kg	1
OCRI-14	360-24563-13	OC-SB-456-7.0/9.0-DUP	1-Hexanol, 2-ethyl-	8.084	28	NJ	ug/kg	1
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	3-Hexen-2-one	5.713	13	NJ	ug/kg	1
OCRI-14	360-24563-14	OC-SB-456-7.0/9.0-XXX	1-Hexanol, 2-ethyl-	8.084	47	NJ	ug/kg	1
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	11.63	74	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Octadecanoic acid, methyl ester	13.678	120	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Phenanthrene-1-carboxylic acid, 1,2,3,4,	14.741	400	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Nonadecane, 9-methyl-	14.996	110	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Nonadecane	15.337	130	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	Docosane	15.674	120	NJ	ug/kg	10
OCRI-14	360-24563-15	OC-SB-457-0.0/1.0-XXX	1-Octadecene	15.78	170	NJ	ug/kg	10
OCRI-14	360-24563-16	OC-SB-457-8.0/10-XXX	Cyclopentadecane	15.07	32	NJ	ug/kg	1
OCRI-14	360-24563-16	OC-SB-457-8.0/10-XXX	Erucylamide	16.075	45	NJ	ug/kg	1
OCRI-14	360-24563-16	OC-SB-457-8.0/10-XXX	Hydrazinecarboxamide, 2-(1-methylethylid	9.896	32	NJ	ug/kg	1
OCRI-14	360-24563-2	OC-SB-427-12/14-XXX	1,2-Diphenylhydrazine	10.319	19000	NJ	ug/kg	20
OCRI-14	360-24563-23	OC-EBK-009	Diethyltoluamide	10.167	1.5	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Tributyl phosphate	10.355	0.48	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Diphenylamine	10.413	0.75	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3	10.783	0.33	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Benzidine	12.288	0.7	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Pentadecane, 2,6,10,14-tetramethyl-	15.13	0.3	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Squalene	15.808	0.62	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Benzothiazole	8.619	0.38	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Ethanone, 1,1"-(1,3-phenylene)bis-	9.562	0.28	NJ	ug/l	1
OCRI-14	360-24563-23	OC-EBK-009	Phenol, 2,4-bis(1,1-dimethylethyl)-	9.836	0.52	NJ	ug/l	1
OCRI-14	360-24563-6	OC-SB-428-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.863	2000	NJ	ug/kg	10
OCRI-14	360-24563-9	OC-SB-428-8.0/10-XXX	.alpha.-Methylstyrene	6.996	120	NJ	ug/kg	10
OCRI-14	360-24563-9	OC-SB-428-8.0/10-XXX	Butylated Hydroxytoluene	9.858	620	NJ	ug/kg	10
OCRI-14A	360-24563-7	OC-SB-428-23/25-XXX	.alpha.-Methylstyrene	6.995	14	NJ	ug/kg	1
OCRI-14A	360-24563-7	OC-SB-428-23/25-XXX	Butylated Hydroxytoluene	9.856	18	NJ	ug/kg	1
OCRI-15	360-24582-1	OC-SB-457-28/30-XXX	Phenol, 2,4-dibromo-	10.544	8.7	NJ	ug/kg	1
OCRI-15	360-24582-1	OC-SB-457-28/30-XXX	3-Hexen-2-one	5.707	15	NJ	ug/kg	1
OCRI-15	360-24582-1	OC-SB-457-28/30-XXX	1-Hexanol, 2-ethyl-	8.092	18	NJ	ug/kg	1
OCRI-15	360-24582-1	OC-SB-457-28/30-XXX	Hydrazinecarboxamide, 2-(1-methylethylid	9.885	11	NJ	ug/kg	1
OCRI-15	360-24582-10	OC-SS-405-0.0/1.0-XXX	Pentacosane	14.994	160	NJ	ug/kg	10
OCRI-15	360-24582-10	OC-SS-405-0.0/1.0-XXX	Dotriacontane	16.004	150	NJ	ug/kg	10
OCRI-15	360-24582-10	OC-SS-405-0.0/1.0-XXX	Hentriacontane	16.336	590	NJ	ug/kg	10
OCRI-15	360-24582-10	OC-SS-405-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	18.625	2400	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Cyclotetracosane	15.721	2700	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Nonacosane	16.341	4000	NJ	ug/kg	10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Cyclotetracosane	16.408	2000	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Hentriacontane	17.091	4800	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	1-Nonadecene	17.197	580	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Oxirane, hexadecyl-	17.836	2400	NJ	ug/kg	10
OCRI-15	360-24582-11	OC-SS-406-0.0/1.0.-XXX	Heneicosane	18.038	740	NJ	ug/kg	10
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Phenol, 2-(1-phenylethyl)-	12.225	440	NJ	ug/kg	10
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Phenol, 2,2"-methylenebis-	13.413	850	NJ	ug/kg	10
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Phenol, 4,4"-methylenebis-	13.663	1100	NJ	ug/kg	10
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Nonadecane	15.678	350	NJ	ug/kg	10
OCRI-15	360-24582-12	OC-SS-407-0.0/1.0-XXX	Tetratetracontane	17.092	590	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	11.626	130	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	2,4-Diphenyl-4-methyl-1(E)-pentene	12.574	190	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Octadecanoic acid, methyl ester	13.68	170	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Heptadecane	14.286	170	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Tetracosane	14.646	240	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Pentacosane	14.993	310	NJ	ug/kg	10
OCRI-15	360-24582-13	OC-SS-408-0.0/1.0-XXX	Tetracosane	16.007	400	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Benzaldehyde, 4-hydroxy-	10.278	110	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Bicyclo[3.1.1]hept-2-ene, 2,6-dimethyl-6	10.749	80	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	11.624	99	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Benzo[b]thiophene, 3-chloro-	12.384	86	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Phenol, 2-[(4-hydroxyphenyl)methyl]-	13.418	1200	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	.alpha.-Methylstyrene	7.763	100	NJ	ug/kg	10
OCRI-15	360-24582-14	OC-SS-409-0.0/1.0-XXX	Benzaldehyde, 2-hydroxy-	8.311	130	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	1-Docosene	15.024	20000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	Cyclotetracosane	15.721	29000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	14-Octadecenal	16.183	6900	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	Nonacosane	16.337	21000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	1-Docosene	16.404	21000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	2-Heptacosanone	16.452	18000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	Hentriacontane	17.092	21000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	2-Nonacosanone	17.25	20000	NJ	ug/kg	10
OCRI-15	360-24582-16	OC-SS-411-0.0/1.0-XXX	Furfural	6.19	9300	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Tricyclo[4.3.3.0(1,6)]dodeca-7,11-diene-	14.495	730	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Pyrene, 4-methyl-	14.649	350	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Nonadecane	14.995	360	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Benzo[b]naphtho[2,1-d]thiophene	15.105	320	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Heptadecane	15.678	570	NJ	ug/kg	10
OCRI-15	360-24582-17	OC-SS-412-0.0/1.0-XXX	Nonacosane	16.337	2300	NJ	ug/kg	10
OCRI-15	360-24582-19	OC-SS-414-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	11.627	78	NJ	ug/kg	10
OCRI-15	360-24582-19	OC-SS-414-0.0/1.0-XXX	Octadecanoic acid, methyl ester	13.68	83	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	9-Nonadecene	15.027	7700	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	Cyclotetracosane	15.72	17000	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	Oxirane, hexadecyl-	16.181	3000	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	Nonacosane	16.34	2500	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	9-Hexacosene	16.407	3900	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	Oxirane, hexadecyl-	16.922	2000	NJ	ug/kg	10
OCRI-15	360-24582-20	OC-SS-415-0.0/1.0-XXX	2,2,4a,6a,8a,9,12b,14a-Octamethyl-1,2,3,	18.773	7800	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Tricosane, 2-methyl-	12.341	250	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Docosane, 11-butyl-	12.73	350	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Nonacosane	13.182	360	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Heptadecane, 9-hexyl-	13.74	460	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Heptadecane	14.418	1400	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Heptadecane, 9-octyl-	15.192	3500	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Benzo[e]pyrene	15.259	320	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	1,1"-Biphenyl, 2,3",4,5"-tetrachloro-4"-	15.62	47000	NJ	ug/kg	10
OCRI-15	360-24582-21	OC-SS-416-0.0/1.0-DUP	Hexadecane	15.721	730	NJ	ug/kg	10
OCRI-15	360-24582-22	OC-SS-416-0.0/1.0-XXX	Hexadecane	12.342	290	NJ	ug/kg	10
OCRI-15	360-24582-22	OC-SS-416-0.0/1.0-XXX	Eicosane, 3-methyl-	15.189	3100	NJ	ug/kg	10
OCRI-15	360-24582-22	OC-SS-416-0.0/1.0-XXX	Stigmast-4-en-3-one	18.271	1700	NJ	ug/kg	10
OCRI-15	360-24582-4	OC-EBK-010	Diethyltoluamide	10.168	1.9	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Benzenesulfonamide, N-ethyl-4-methyl-	10.76	0.35	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Benzenesulfonamide, N-butyl-	11.01	0.33	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Benzidine	12.279	0.69	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Pentadecane, 2,6,10-trimethyl-	13.717	0.76	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Eicosane	14.366	0.69	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Octacosane	15.703	0.77	NJ	ug/l	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
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Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-15	360-24582-4	OC-EBK-010	Squalene	15.809	0.66	NJ	ug/l	1
OCRI-15	360-24582-4	OC-EBK-010	Tricosane	16.17	0.61	NJ	ug/l	1
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Phosphonic acid, dioctadecyl ester	15.033	2200	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Cyclotetracosane	15.731	4100	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Octadecanal	15.846	280	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Oxirane, heptadecyl-	16.183	2200	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Tetracosane	16.337	4700	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Cyclotetracosane	16.414	3600	NJ	ug/kg	10
OCRI-15	360-24582-5	OC-SS-400-0.0/1.0-XXX	Lupeol	19.828	3600	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	11H-Benzo[b]fluorene	14.428	440	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Nonadecane	14.99	320	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Heptadecane	15.673	370	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Cyclotetracosane	15.731	1200	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Tetracosane	16.337	2300	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Benz[e]acephenanthrylene	16.88	420	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Hentriacontane	17.092	1900	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	Oxirane, hexadecyl-	17.837	1200	NJ	ug/kg	10
OCRI-15	360-24582-6	OC-SS-401-0.1/1.0-XXX	.alpha.-Pinene	7.32	570	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Vanillin	10.59	140	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Heneicosane	13.557	210	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Octadecanoic acid, methyl ester	13.677	250	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Heptadecane	14.288	210	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	16-Heptadecenal	14.798	190	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	9,10-Anthracenedione, 1,8-dihydroxy-3-me	14.865	150	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	Oxirane, heptadecyl-	15.505	370	NJ	ug/kg	10
OCRI-15	360-24582-7	OC-SS-402-0.0/1.0-XXX	3-Hexen-2-one	5.685	390	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	4H-Cyclopenta[def]phenanthrene	13.261	390	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	9,10-Anthracenedione	13.453	280	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	Benzo[b]naphtho[2,1-d]furan	14.064	230	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	1,1"-Biphenyl, 2,3,3",4,4",5"-hexachloro	14.636	310	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	1,1"-Biphenyl, 2,2",4,4",5",6-Hexachloro	14.881	350	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	7H-Benz[de]anthracen-7-one	15.204	220	NJ	ug/kg	10
OCRI-15	360-24582-9	OC-SS-404-0.0/1.0-XXX	Nonacosane	16.338	900	NJ	ug/kg	10
OCRI-16	360-24634-1	OC-SS-417-0.0/1.0-XXX	Benzeneacetic acid, 4-amino-.alpha.,.alp	9.755	3200	NJ	ug/kg	10
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	Tetradecanoic acid	10.235	120	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	1-Octadecene	12	610	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	17-Octadecenal	12.481	140	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	1-Docosene	12.74	2200	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	1-Hexacosene	13.202	270	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	1,21-Docosadiene	13.399	200	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	Cyclotetracosane	13.794	3900	NJ	ug/kg	1
OCRI-16	360-24634-11	OC-SS-427-0.0/1.0-XXX	Benzeneacetic acid	8.052	150	NJ	ug/kg	1
OCRI-16	360-24634-12	OC-SS-428-0.0/1.0-XXX	1-Docosene	13.765	120	NJ	ug/kg	1
OCRI-16	360-24634-13	OC-SS-429-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	12.006	77	NJ	ug/kg	1
OCRI-16	360-24634-13	OC-SS-429-0.0/1.0-XXX	1-Eicosene	12.736	390	NJ	ug/kg	1
OCRI-16	360-24634-13	OC-SS-429-0.0/1.0-XXX	1-Docosanol, acetate	13.775	400	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	1-Octadecene	11.38	48	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.087	120	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Trifluoroacetic acid, n-octadecyl ester	12.736	95	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	1-Docosene	13.775	200	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Heptadecane, 9-octyl-	15.212	440	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Heptadecane, 9-octyl-	16.165	400	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	2-Pentacosanone	16.265	100	NJ	ug/kg	1
OCRI-16	360-24634-14	OC-SS-430-0.0/1.0-XXX	Friedelin	19.141	290	NJ	ug/kg	1
OCRI-16	360-24634-15	OC-SS-431-0.0/1.0-XXX	Phenol, 2,2"-methylenebis-	11.095	210	NJ	ug/kg	1
OCRI-16	360-24634-15	OC-SS-431-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.085	65	NJ	ug/kg	1
OCRI-16	360-24634-15	OC-SS-431-0.0/1.0-XXX	1-Heneicosyl formate	12.739	15	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	Tetradecanoic acid	10.24	120	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	Anthracene, 2-methyl-	10.928	51	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	9,10-Anthracenedione	11.197	46	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	Tetradecanamide	11.688	150	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	E-15-Heptadecenal	12.015	16	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	2-Propen-1-one, 1-(2,6-dihydroxy-4-metho	12.539	16	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	1-Docosene	12.741	63	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	1-Heneicosyl formate	13.775	100	NJ	ug/kg	1
OCRI-16	360-24634-16	OC-SS-432-0.0/1.0-XXX	Benzaldehyde, 3-hydroxy-4-methoxy-	8.827	79	NJ	ug/kg	1
OCRI-16	360-24634-18	OC-EBK-011	Hexadecanoic acid, methyl ester	10.14	0.95	NJ	ug/l	1

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Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-16	360-24634-18	OC-EBK-011	2-Mercaptobenzothiazole	10.356	1.4	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	Benzothiazole	7.303	0.78	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	Diethyltoluamide	8.88	2.8	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	Benzothiazole, 2-(methylthio)-	9.053	4.3	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3	9.447	3.9	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	3,5-di-tert-Butyl-4-hydroxyacetophenone	9.774	0.54	NJ	ug/l	1
OCRI-16	360-24634-18	OC-EBK-011	2,4-Diphenyl-4-methyl-2(E)-pentene	9.866	3.3	NJ	ug/l	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	1-Docosene	13.769	1700	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	1,21-Docosadiene	14.76	710	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	Heptadecane, 9-hexyl-	15.198	620	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	1,19-Eicosadiene	15.924	630	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	Nonacosane	16.159	950	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	Octadecanal	16.857	250	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	.gamma.-Sitosterol	17.443	600	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	.beta.-Humulene	18.088	650	NJ	ug/kg	1
OCRI-16	360-24634-2	OC-SS-418-0.0/1.0-XXX	Friedelin	19.15	3300	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	Tetradecanoic acid	10.23	72	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	Perhydrobenzo[a]cycloheptene-6,8-dicarbo	10.918	43	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	Decane, 1-iodo-	11.081	48	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	1-Heptadecene	11.375	30	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	1-Nonadecene	12	33	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	1-Docosene	12.735	200	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	1-Docosene	13.774	350	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	2-Pentacosanone	16.26	62	NJ	ug/kg	1
OCRI-16	360-24634-3	OC-SS-419-0.0/1.0-XXX	Benzaldehyde	6.205	41	NJ	ug/kg	1
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	1-Octadecene	12.002	12	NJ	ug/kg	1
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.079	63	NJ	ug/kg	1
OCRI-16	360-24634-4	OC-SS-420-0.0/1.0-XXX	1-Heneicosyl formate	12.729	38	NJ	ug/kg	1
OCRI-16	360-24634-5	OC-SS-421-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.08	180	NJ	ug/kg	1
OCRI-16	360-24634-5	OC-SS-421-0.0/1.0-XXX	1-Octadecene	12.003	9.5	NJ	ug/kg	1
OCRI-16	360-24634-5	OC-SS-421-0.0/1.0-XXX	1-Docosene	12.729	39	NJ	ug/kg	1
OCRI-16	360-24634-5	OC-SS-421-0.0/1.0-XXX	1-Hexacosene	13.763	47	NJ	ug/kg	1
OCRI-16	360-24634-5	OC-SS-421-0.0/1.0-XXX	1,1"-Biphenyl, 2,3",4,5"-tetrachloro-4"-	15.942	190	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	10.077	190	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	3-Eicosene, (E)-	12	21	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.082	120	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	12.731	93	NJ	ug/kg	1
OCRI-16	360-24634-6	OC-SS-422-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	9.702	11	NJ	ug/kg	1
OCRI-16	360-24634-7	OC-SS-423-0.0/1.0-XXX	1-Docosene	13.764	40	NJ	ug/kg	1
OCRI-16	360-24634-7	OC-SS-423-0.0/1.0-XXX	9-Nonadecene	15.255	72	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	Benzene, 1-methoxy-3-(2-phenylethenyl)-,	12.081	55	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	1-Docosene	12.735	49	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	1-Heneicosyl formate	13.768	58	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	17-Pentatriacontene	15.254	47	NJ	ug/kg	1
OCRI-16	360-24634-8	OC-SS-424-0.0/1.0-XXX	Phenol, (1,1,3,3-tetramethylbutyl)-	9.7	9.7	NJ	ug/kg	1
OCRI-16	360-24634-9	OC-SS-425-0.0/1.0-XXX	1-Docosene	12.736	39	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	1-Eicosanol	12.108	2600	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	1-Docosene	12.868	4300	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	1,19-Eicosadiene	13.561	700	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Heptadecane, 2-methyl-	13.95	3900	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	(Z)14-Tricosenyl formate	15.023	1200	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Triacontane	15.378	2200	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	1,19-Eicosadiene	16.013	900	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	Docosane, 5-butyl-	16.225	460	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	.gamma.-Sitosterol	16.383	670	NJ	ug/kg	1
OCRI-17	360-24665-1	OC-SS-434-0.0/1.0-XXX	2,4a,8,8-Tetramethyldecahydrocyclopropa[	17.576	1400	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	12.109	1400	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	1-Docosene	12.45	190	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	1-Docosene	12.864	2500	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	Oxirane, hexadecyl-	15.028	25	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	Docosane, 9-butyl-	15.379	31	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	16.071	42	NJ	ug/kg	1
OCRI-17	360-24665-10	OC-SS-454-0.0/1.0-XXX	.gamma.-Sitosterol	16.384	12	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	11.668	420	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	1-Docosene	12.293	3500	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	1,21-Docosadiene	12.822	260	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	Cyclotetracosane	13.135	5900	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	13-Octadecenal	15.376	21	NJ	ug/kg	1
OCRI-17	360-24665-11	OC-SS-455-0.0/1.0-XXX	Hexatriacontane	15.655	22	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	1-Octadecene	11.669	430	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Heptadecane, 9-octyl-	11.972	260	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	1-Docosene	12.295	3000	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Ethanol, 2-(tetradecyloxy)-	12.665	430	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	1,21-Docosadiene	12.828	500	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Cyclotetracosane	13.151	7300	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Oxirane, hexadecyl-	15.387	36	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Hexatriacontane	15.656	25	NJ	ug/kg	1
OCRI-17	360-24665-12	OC-SS-460-0.0/1.0-XXX	Friedelin	18.104	260	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	1-Nonadecene	11.67	550	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Nonadecane	11.977	460	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	1,19-Eicosadiene	12.083	220	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Furan, 2,3-dihydro-2,5-dimethyl-	4.586	290	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Phenol, 2-methoxy-4-(1-propenyl)-	8.727	240	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Ethanone, 1-(4-hydroxy-3-methoxyphenyl)-	8.89	240	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-	9.054	250	NJ	ug/kg	1
OCRI-17	360-24665-13	OC-SB-406-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.241	450	NJ	ug/kg	1
OCRI-17	360-24665-15	OC-SB-406-8.0/10-XXX	Pentadecanoic acid, 14-methyl-, methyl e	10.363	9.3	NJ	ug/kg	1
OCRI-17	360-24665-15	OC-SB-406-8.0/10-XXX	Cyclic octaatomic sulfur	11.027	24	NJ	ug/kg	1
OCRI-17	360-24665-15	OC-SB-406-8.0/10-XXX	Docosane	11.82	25	NJ	ug/kg	1
OCRI-17	360-24665-15	OC-SB-406-8.0/10-XXX	Butylated Hydroxytoluene	8.805	16	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	1-Octadecene	11.673	190	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	Nonadecane, 1-chloro-	11.976	73	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	1-Heneicosyl formate	12.303	740	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	Z-5-Nonadecene	12.673	84	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	1-Docosene	13.14	900	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	16-Octadecenal	15.395	28	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	Hexatriacontane	15.669	59	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	Friedelin	18.069	42	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	1R-.alpha.-Pinene	5.547	300	NJ	ug/kg	1
OCRI-17	360-24665-16	OC-SB-413-0.0/1.0-XXX	Caryophyllene	8.648	140	NJ	ug/kg	1
OCRI-17	360-24665-17	OC-SB-413-1.0/5.0-XXX	Pentadecanoic acid, 14-methyl-, methyl e	10.514	22	NJ	ug/kg	1
OCRI-17	360-24665-17	OC-SB-413-1.0/5.0-XXX	1-Hexacosene	12.293	230	NJ	ug/kg	1
OCRI-17	360-24665-17	OC-SB-413-1.0/5.0-XXX	1R-.alpha.-Pinene	5.547	23	NJ	ug/kg	1
OCRI-17	360-24665-17	OC-SB-413-1.0/5.0-XXX	Butylated Hydroxytoluene	8.951	33	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Oleic Acid	11.077	190	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	1-Octadecene	11.52	680	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	1-Docosene	12.116	4300	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Docosanoic acid	12.356	810	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Ethanol, 2-(tetradecyloxy)-	12.452	480	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Cyclotetracosane	12.88	7700	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Bicyclo[10.8.0]eicosane, (E)-	13.568	15	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	(Z)14-Tricosenyl formate	15.03	18	NJ	ug/kg	1
OCRI-17	360-24665-2	OC-SS-435-0.0/1.0-XXX	Triacontane	15.381	29	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	12.107	1700	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	Docosanoic acid	12.338	170	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	1-Nonadecene	12.449	250	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	1-Docosene	12.862	3500	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	Z-12-Pentacosene	13.343	12	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	14-Octadecenal	13.565	9.9	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	16-Heptadecenal	15.017	14	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	Heptacosane, 1-chloro-	15.373	22	NJ	ug/kg	1
OCRI-17	360-24665-3	OC-SS-436-0.0/1.0-XXX	(Z)14-Tricosenyl formate	16.017	14	NJ	ug/kg	1
OCRI-17	360-24665-4	OC-SS-437-0.0/1.0-XXX	1,21-Docosadiene	15.362	10	NJ	ug/kg	1
OCRI-17	360-24665-4	OC-SS-437-0.0/1.0-XXX	Tridecane, 7-hexyl-	15.651	52	NJ	ug/kg	1
OCRI-17	360-24665-4	OC-SS-437-0.0/1.0-XXX	.gamma.-Sitosterol	16.685	18	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	Cyclic octaatomic sulfur	11.2	110	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	9,10-Anthracenedione, 1,8-dihydroxy-3-me	11.936	200	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	Cyclodocosane, ethyl-	13.104	720	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	Dotriacontane	13.638	150	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	Heptadecane, 9-hexyl-	14.306	950	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	Hexadecane	15.638	350	NJ	ug/kg	1
OCRI-17	360-24665-5	OC-SS-440-0.0/1.0-XXX	.gamma.-Sitosterol	16.672	160	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	1-Octadecene	11.666	620	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	1-Eicosene	12.286	2300	NJ	ug/kg	1

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	1-Hexacosene	13.118	4900	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	1-Hexacosene	14.344	4000	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	Oxirane, hexadecyl-	15.373	1400	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	Triacontane	15.657	2100	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	Oxirane, hexadecyl-	16.258	560	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	.gamma.-Sitosterol	16.691	670	NJ	ug/kg	1
OCRI-17	360-24665-6	OC-SS-442-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.257	950	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Oxacyclohexadecan-2-one	10.562	63	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Docosane	11.389	42	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	1-Docosene	13.111	1000	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	16-Octadecenal	15.366	1300	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Friedelin	18.006	660	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Benzeneacetic acid	7.725	39	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Vanillin	8.494	95	NJ	ug/kg	1
OCRI-17	360-24665-7	OC-SS-449-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.182	60	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	1-Heneicosyl formate	12.285	1400	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	1-Docosene	13.122	2800	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	Triacontane	13.651	190	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	Bicyclo[10.8.0]eicosane, (E)-	15.377	1200	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	Dotriacontane	15.656	1500	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	2-Nonadecanone	15.747	210	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	1-Eicosanol	16.545	280	NJ	ug/kg	1
OCRI-17	360-24665-8	OC-SS-450-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.202	180	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1,3,4-Trimethoxydibenzofuran-2-ol (.alph	11.63	140	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1-Octadecene	11.664	380	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1-Eicosene	12.284	1000	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1-Docosene	13.116	1800	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1-Octadecene	14.343	2000	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	1,19-Eicosadiene	15.376	1100	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	Dotriacontane	15.655	1300	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	.gamma.-Sitosterol	16.689	870	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	Vanillin	8.495	67	NJ	ug/kg	1
OCRI-17	360-24665-9	OC-SS-451-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.183	67	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Cyclic octaatomic sulfur	11.207	41	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Docosane	11.395	18	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Heneicosane	11.688	30	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Tritetracontane	12.294	84	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Heneicosane, 11-decyl-	12.664	71	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Heptacosane, 1-chloro-	13.111	110	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	Pentacosane	13.65	120	NJ	ug/kg	1
OCRI-17A	360-24665-14	OC-SB-406-13/15-XXX	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	13.76	150	NJ	ug/kg	1
OCRI-17A	360-24665-18	OC-SB-413-10/12-XXX	Docosane, 9-octyl-	12.294	100	NJ	ug/kg	1
OCRI-17A	360-24665-18	OC-SB-413-10/12-XXX	Tricosane, 2-methyl-	13.65	72	NJ	ug/kg	1
OCRI-17A	360-24665-18	OC-SB-413-10/12-XXX	Butylated Hydroxytoluene	8.952	56	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	1-Octadecene	11.817	160	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	1-Eicosene	12.481	920	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	1-Docosene	13.404	1400	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	Hexatriacontane	14.741	1100	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	1,19-Eicosadiene	15.645	970	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	.gamma.-Sitosterol	17.025	730	NJ	ug/kg	1
OCRI-18	360-24686-10	OC-SS-453-0.0/1.0-XXX	Friedelin	18.497	450	NJ	ug/kg	1
OCRI-18	360-24686-11	OC-SS-457-0.0/1.0-XXX	Hexadecenoic acid, Z-11-	10.742	120	NJ	ug/kg	1
OCRI-18	360-24686-11	OC-SS-457-0.0/1.0-XXX	1-Octadecene	11.814	19	NJ	ug/kg	1
OCRI-18	360-24686-11	OC-SS-457-0.0/1.0-XXX	Trifluoroacetic acid, n-octadecyl ester	12.473	94	NJ	ug/kg	1
OCRI-18	360-24686-11	OC-SS-457-0.0/1.0-XXX	Tricosane, 2-methyl-	14.729	120	NJ	ug/kg	1
OCRI-18	360-24686-11	OC-SS-457-0.0/1.0-XXX	2(3H)-Furanone, 3,4-bis(1,3-benzodioxol-	15.839	30	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	Hexadecenoic acid, Z-11-	10.72	78	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	1-Hexadecene	11.196	99	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	1-Octadecene	11.817	140	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	9,10-Anthracenedione, 1,8-dihydroxy-3-me	12.12	99	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	1-Heneicosyl formate	12.398	75	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	11-Tricosene	12.48	800	NJ	ug/kg	1
OCRI-18	360-24686-13	OC-SS-456-0.0/1.0-XXX	1-Docosene	13.399	980	NJ	ug/kg	1
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	5-Eicosene, (E)-	11.817	210	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	Bicyclo[10.8.0]eicosane, (Z)-	12.25	320	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	1-Octadecene	12.476	920	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	1-Docosene	13.385	860	NJ	ug/kg	10

Table 4.2
Final Results Summary - Tentatively Identified Compounds - SVOCs
Remedial Investigation Soil Sampling
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab Delivery Group	Lab Sample ID	Field Sample ID	Parameter	TIC Retention Time	Final Value	Final Qualifier	Result Unit	Dilution Factor
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	Heptacosane, 1-chloro-	15.876	810	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	Ethane, 1,1,2,2-tetrachloro-	5.585	510	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	Benzaldehyde, 4-hydroxy-	8.451	230	NJ	ug/kg	10
OCRI-18	360-24686-14	OC-SS-458-0.0/1.0-XXX	Octadecane, 2,6-dimethyl-	9.85	230	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	Cyclohexadecane, 1,2-diethyl-	11.82	400	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	Ethanol, 2-(tetradecyloxy)-	12.479	1400	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	Heptadecane	12.887	290	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	16-Octadecenal	13.065	340	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	1-Docosene	13.392	2300	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	Heptadecane, 2-methyl-	14.724	5900	NJ	ug/kg	10
OCRI-18	360-24686-15	OC-SS-459-0.0/1.0-XXX	Bicyclo[10.8.0]eicosane, (E)-	15.643	14000	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	1-Octadecene	11.817	540	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	Octadecanal	12.25	260	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	1-Eicosene	12.476	1600	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	1,21-Docosadiene	13.063	280	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	17-Pentatriacontene	13.39	1900	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	Heneicosane, 11-pentyl-	14.727	7800	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	Heneicosane, 11-pentyl-	15.876	5600	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	5-Eicosene, (E)-	15.924	1800	NJ	ug/kg	10
OCRI-18	360-24686-16	OC-SS-461-0.0/1.0-XXX	D-Friedoolean-14-ene, 3-methoxy-, (3.bet	16.65	7700	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	1-Docosene	11.817	7200	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	1-Docosene	13.395	19000	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	Heneicosane, 11-pentyl-	14.717	18000	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	Vitamin e	16.035	6000	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	Taraxerol	17.218	25000	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	2-Furancarboxaldehyde, 5-(hydroxymethyl)	7.768	27000	NJ	ug/kg	10
OCRI-18	360-24686-2	OC-SB-435-0.0/1.0-XXX	Benzoic acid, 4-hydroxy-3-methoxy-	9.331	7700	NJ	ug/kg	10
OCRI-18	360-24686-3	OC-SB-435-11/15-XXX	Cyclic octaatomic sulfur	11.361	9.5	NJ	ug/kg	1
OCRI-18	360-24686-3	OC-SB-435-11/15-XXX	Pentacosane	12.477	11	NJ	ug/kg	1
OCRI-18	360-24686-4	OC-SB-435-6.0/10-XXX	3-Eicosene, (E)-	12.478	14	NJ	ug/kg	1
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	Oleyl Alcohol	14.259	79000	NJ	ug/kg	10
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	13-Octadecenal	15.635	110000	NJ	ug/kg	10
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	Hexatriacontane	15.87	270000	NJ	ug/kg	10
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	10-Heneicosene (c,t)	15.918	150000	NJ	ug/kg	10
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	Oxirane, tetradecyl-	16.515	70000	NJ	ug/kg	10
OCRI-18	360-24686-5	OC-SB-453-0.0/1.0-XXX	Taraxerol	17.212	120000	NJ	ug/kg	10
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	Tritetracontane	12.478	450	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	Eicosane, 3-methyl-	14.719	150	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	2-Heptacosanone	14.888	350	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	1-Heneicosyl formate	15.917	610	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	.gamma.-Sitosterol	17.018	400	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	1,4-Dimethyl-8-isopropylidenetricyclo[5.	17.22	120	NJ	ug/kg	1
OCRI-18	360-24686-6	OC-SB-453-1.0/6.0-XXX	3,4-Epoxy-4a-ethyl-2,3,4,4a,5,6-hexahydr	17.518	230	NJ	ug/kg	1
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Triacontane	12.882	460	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	1,21-Docosadiene	14.257	1200	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Docosane	14.714	2500	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	17-Octadecenal	15.632	2200	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	Cyclohexane, [6-cyclopentyl-3-(3-cyclope	15.921	1100	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	11-Tetradecyn-1-ol acetate	16.512	1300	NJ	ug/kg	10
OCRI-18	360-24686-7	OC-SB-473-0.0/1.0-XXX	.gamma.-Sitosterol	17.008	1500	NJ	ug/kg	10

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

Prepared by / Date: KJC 06/30/10
Checked by / Date: TLC 07/02/10

ATTACHMENT A

USEPA SCORE SHEETS

PES SCORING EVALUATION REPORT

PES MS00149 Rev: 1 EPA Sample No.: OC-PE-MS00149-ME1 Report Date: 12/21/2009

Lab Name: Test America
Contract: NA
SDG No.: OCRI-09
Date Received: 09/01/2009
Color Before: NA
Clarity After: NA
Units: mg/Kg

Case No.: NA
Matrix: Soil
Level: N/A
Color After: NA
Texture: NA

Lab Code: TESTAM
SAS/NRAS No.: NA
Lab Sample ID: 360-24365-19
Percent Solids: NA
Clarity Before: NA
Artifacts: NA

Analysis Method: 6010B
Scoring Method: ILM05.3 Metals Analysis ICP
Comments:

CAS No.	Analyte	Laboratory Results				PES Evaluation	
		Concentration	C	Q	M		
7429-90-5	Aluminum	1600				PASS	Within Limits
7440-36-0	Antimony	30				PASS	Within Limits
7440-38-2	Arsenic	40				PASS	Within Limits
7440-39-3	Barium	1.5				N.E.	Not Evaluated
7440-41-7	Beryllium	15				PASS	Within Limits
7440-43-9	Cadmium	2.9				PASS	Within Limits
7440-70-2	Calcium	2300				PASS	Within Limits
7440-47-3	Chromium	0.96				N.E.	Not Evaluated
7440-48-4	Cobalt	100				PASS	Within Limits
7440-50-8	Copper	0.68				N.E.	Not Evaluated
7439-89-6	Iron	2800				PASS	Warning High
7439-92-1	Lead	12				PASS	Within Limits
7439-95-4	Magnesium	2800				PASS	Within Limits
7439-96-5	Manganese	10				PASS	Within Limits
7439-97-6	Mercury	0				N.E.	Scorer Request
7440-02-0	Nickel	80				PASS	Within Limits
7440-09-7	Potassium	0				N.E.	Scorer Request
7782-49-2	Selenium	7.0				PASS	Within Limits
7440-22-4	Silver	0	U			N.E.	Not Evaluated
7440-23-5	Sodium	2500				PASS	Within Limits
7440-28-0	Thallium	0.36	J			N.E.	Not Evaluated
7440-62-2	Vanadium	46				PASS	Within Limits
7440-66-6	Zinc	1.6	J			N.E.	Not Evaluated
****	END Main Analytes	**********	****	****	****	****	**********
	Tin	0.76	J			N.E.	Not a Target
****	END All Analytes	**********	****	****	****	****	**********

PES SCORING EVALUATION REPORT

Lab Name: Test America
Contract: NA
SDG No.: OCRI-09
Date Received: 09/01/2009
Color Before: NA
Clarity After: NA
Units: mg/Kg
Dilution Factor: 1.0

Case No.: NA
Matrix: Soil
Level: N/A
Color After: NA
Texture: NA
GPC Cleanup: Unknown
Extraction Type: N/A

Lab Code: TESTAM
SAS/NRAS No.: NA
Lab Sample ID: 360-24365-19
Percent Solids: NA
Clarity Before: NA
Artifacts: NA
pH: NA
Units: ug/Kg

Analysis Method: 6010B
Scoring Method: ILM05.3 Metals Analysis ICP
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
7429-90-5	Aluminum	1600		PASS	Within Limits
7440-36-0	Antimony	30		PASS	Within Limits
7440-38-2	Arsenic	40		PASS	Within Limits
7440-39-3	Barium	1.5		N.E.	Not Evaluated
7440-41-7	Beryllium	15		PASS	Within Limits
7440-43-9	Cadmium	2.9		PASS	Within Limits
7440-70-2	Calcium	2300		PASS	Within Limits
7440-47-3	Chromium	0.96		N.E.	Not Evaluated
7440-48-4	Cobalt	100		PASS	Within Limits
7440-50-8	Copper	0.68		N.E.	Not Evaluated
7439-89-6	Iron	2800		PASS	Warning High
7439-92-1	Lead	12		PASS	Within Limits
7439-95-4	Magnesium	2800		PASS	Within Limits
7439-96-5	Manganese	10		PASS	Within Limits
7439-97-6	Mercury	0		N.E.	Scorer Request
7440-02-0	Nickel	80		PASS	Within Limits
7440-09-7	Potassium	0		N.E.	Scorer Request
7782-49-2	Selenium	7.0		PASS	Within Limits
7440-22-4	Silver	0		N.E.	Not Evaluated
7440-23-5	Sodium	2500		PASS	Within Limits
7440-28-0	Thallium	0.36		N.E.	Not Evaluated
7440-62-2	Vanadium	46		PASS	Within Limits
7440-66-6	Zinc	1.6		N.E.	Not Evaluated
****	END Main Analytes	**********	****	****	**********
	Tin	0.76		N.E.	Not a Target
****	END All Analytes	**********	****	****	**********
120-12-7	Anthracene	410		PASS	Within Limits
86-74-8	Carbazole	500		PASS	Within Limits
85-68-7	Butylbenzylphthalate	1000		PASS	Within Limits
91-94-1	3,3'-Dichlorobenzidine	46	J	N.E.	Not Evaluated
56-55-3	Benzo(a)anthracene	610		PASS	Within Limits
117-84-0	Di-n-octylphthalate	560		PASS	Within Limits
205-99-2	Benzo(b)fluoranthene	820		PASS	Within Limits
207-08-9	Benzo(k)fluoranthene	370		PASS	Within Limits
90-12-0	1-Methylnaphthalene	740		PASS	TIC Found
****	END Main Analytes	**********	****	****	**********
83-32-9	Acenaphthene	27	J	PASS	Less Than CRQL

PES SCORING EVALUATION REPORT

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
98-55-5	Alpha-Terpineol	25	J	N.E.	Non-spiked TIC
123-42-2	2-Pentanone,4-hydroxy-4-methyl-	5900	JN	N.E.	Non-spiked TIC
92-87-5	Benzidine	17	J	N.E.	Non-spiked TIC
****	END All Analytes	**********	****	****	**********

PES SCORING EVALUATION REPORT

Lab Name: Test America
Contract: NA
SDG No.: OCRI-09
Date Received: 09/01/2009
Color Before: NA
Clarity After: NA
Units: mg/Kg
Dilution Factor: 1.0

Case No.: NA
Matrix: Soil
Level: N/A
Color After: NA
Texture: NA
GPC Cleanup: Unknown
Extraction Type: N/A

Lab Code: TESTAM
SAS/NRAS No.: NA
Lab Sample ID: 360-24365-19
Percent Solids: NA
Clarity Before: NA
Artifacts: NA
pH: NA
Units: ug/Kg

Analysis Method: 6010B
Scoring Method: ILM05.3 Metals Analysis ICP
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
7429-90-5	Aluminum	1600		PASS	Within Limits
7440-36-0	Antimony	30		PASS	Within Limits
7440-38-2	Arsenic	40		PASS	Within Limits

PES SCORING EVALUATION REPORT

Lab Name: Test America
Contract: NA
SDG No.: OCRI-09
Date Received: 09/01/2009
Color Before: NA
Clarity After: NA
Units: mg/Kg
Dilution Factor: 1.0

Case No.: NA
Matrix: Soil
Level: N/A
Color After: NA
Texture: NA
GPC Cleanup: Unknown
Extraction Type: N/A

Lab Code: TESTAM
SAS/NRAS No.: NA
Lab Sample ID: 360-24365-19
Percent Solids: NA
Clarity Before: NA
Artifacts: NA
pH: NA

Analysis Method: 6010B
Scoring Method: ILM05.3 Metals Analysis ICP
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
7429-90-5	Aluminum	1600		PASS	Within Limits
7440-36-0	Antimony	30		PASS	Within Limits
7440-38-2	Arsenic	40		PASS	Within Limits
7440-39-3	Barium	1.5		N.E.	Not Evaluated
7440-41-7	Beryllium	15		PASS	Within Limits
7440-43-9	Cadmium	2.9		PASS	Within Limits
7440-70-2	Calcium	2300		PASS	Within Limits
7440-47-3	Chromium	0.96		N.E.	Not Evaluated
7440-48-4	Cobalt	100		PASS	Within Limits
7440-50-8	Copper	0.68		N.E.	Not Evaluated
7439-89-6	Iron	2800		PASS	Warning High
7439-92-1	Lead	12		PASS	Within Limits
7439-95-4	Magnesium	2800		PASS	Within Limits
7439-96-5	Manganese	10		PASS	Within Limits
7439-97-6	Mercury	0		N.E.	Scorer Request
7440-02-0	Nickel	80		PASS	Within Limits
7440-09-7	Potassium	0		N.E.	Scorer Request
7782-49-2	Selenium	7.0		PASS	Within Limits
7440-22-4	Silver	0		N.E.	Not Evaluated
7440-23-5	Sodium	2500		PASS	Within Limits
7440-28-0	Thallium	0.36		N.E.	Not Evaluated
7440-62-2	Vanadium	46		PASS	Within Limits
7440-66-6	Zinc	1.6		N.E.	Not Evaluated
****	END Main Analytes	**********	****	****	**********
	Tin	0.76		N.E.	Not a Target
****	END All Analytes	**********	****	****	**********
120-12-7	Anthracene	410		PASS	Within Limits
86-74-8	Carbazole	500		PASS	Within Limits
85-68-7	Butylbenzylphthalate	1000		PASS	Within Limits
91-94-1	3,3'-Dichlorobenzidine	46	J	N.E.	Not Evaluated
56-55-3	Benzo(a)anthracene	610		PASS	Within Limits

ATTACHMENT B

LABORATORY REPORTS
(Provided on CD)