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SENT VIA ELECTRONIC MAIL

March 20, 2020

Ms. Lynne Jennings and Ms. Melanie Morash
U. S. Environmental Protection Agency (USEPA), Region 1
5 Post Office Square, Suite 100,
Mail Stop OSRR07-4, Boston, MA 02109-3912

RE: Summary of Data and Results
Supplemental Characterization of Containment Area Soil – November 2019
Olin Chemical Superfund Site (OCSS; "Site") – Wilmington, MA

Dear Ms. Jennings and Ms. Morash:

Transmitted herewith, summarizes the results of the soil investigation conducted within the Containment Area in November 2019.

Let us know if you have any questions.

Sincerely,
OLIN CORPORATION

James M. Cashwell
Director, Environmental Remediation

Enclosure

cc: Chinny Esakkiperumal (Olin)
Libby Bowen (Wood)

SEMS Doc ID 644569

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Memorandum

To: James Cashwell, Olin
Chinny Esakkiperumal

From: Wood Environment and Infrastructure Solutions
Kerry Tull
Libby Bowen

Date: March 20, 2020

Subject: Supplemental Characterization of Containment Area Soil, November 2019
Olin Chemical Superfund Site, 51 Eames Street, Wilmington, MA

Introduction

As requested by the United States Department of Environmental Protection (EPA) during meetings in June and October 2019, on behalf of Olin Corporation (Olin), Wood Environment and Infrastructure Solutions (Wood) conducted a soil investigation within the Containment Area (CA) located at the above referenced Site in November 2019.

The supplemental soil sampling program described in this memorandum was primarily designed to characterize the top 10 feet (ft.) of the CA soil to determine if fill materials meet the definition of a Resource Conservation and Recovery Act (RCRA) characteristic hazardous waste. Additionally, at the EPA's request, soil samples were also collected below the depth of fill (deeper than 10 ft. below ground surface [bgs]) and at the bedrock interface. During the drilling program, EPA requested collection of additional soil samples, based on appearance, as well as bedrock coring deeper than previously proposed (5 ft. vs. 2 ft.).

RCRA hazardous waste was not observed based on the data collected during this effort. This memo summarizes the associated analytical results as well as a limited assessment of bedrock type and structure beneath the CA.

Background

In 2001, Olin installed a Slurry Wall and Temporary Cap around the on-Property portion of the Dense Aqueous Phase Liquid (DAPL) Pool as a Release Abatement Measure (RAM) consistent with the Massachusetts Contingency Plan (MCP). The CA low-permeability slurry wall was installed onto the bedrock surface and was completed with a temporary cap to minimize infiltration of precipitation.

'Wood' is a trading name for John Wood Group PLC and its subsidiaries.

Prior to this investigation, Toxicity Characteristics Leaching Procedure (TCLP) data had only been collected for soils that were removed from the CA during excavation and removal actions conducted under the MCP. There was no post-excavation TCLP data for soils remaining within the CA. The EPA indicated that TCLP data is needed to verify whether RCRA C or RCRA D design and performance standards are appropriate for a permanent CA cap. As per RCRA, a solid waste is classified as hazardous if it is a characteristic waste (exhibiting toxicity/leachability, corrosivity, ignitability, or reactivity) or if it is a listed hazardous waste. If a solid waste is classified as a hazardous waste, RCRA Subtitle C capping requirements are typically applicable, otherwise, RCRA Subtitle D capping requirements are appropriate. As discussed throughout this memo, the data demonstrate that a RCRA C cap is not required for the CA.

Previous Risk Evaluation for the CA

In 2013 a risk evaluation was conducted at the request of USEPA to determine whether a land use restriction with respect to potential human exposures to subsurface soil beneath the temporary cap was appropriate and to evaluate whether the existing Deed Restriction was sufficient to address potential human health risks. Because the soils within the CA are covered with a temporary cap and the Site is secured, there are no current complete exposure pathways for human receptors associated with soils in the CA.

The risk evaluation indicated that in the absence of the temporary cap, it would be possible for human receptors to come in contact with surface soils in the CA. A Notice and Declaration of Restrictive Covenant (Deed Restriction) is in place for the entire 51 Eames Street Property, which indicates that "*the Property, or any portion thereof, shall not be used for any residential, school, child day care center, playground or public recreation purposes. The Property shall be used solely for commercial or industrial purposes*." Further, the Deed Restriction indicates that no excavation of any kind shall occur within the CA except such excavation necessary to maintain the contours of the existing cap and shaping and grading as required to install a cap on the CA. The Deed Restriction does not allow any human exposure to subsurface soil within the CA. As part of ongoing discussions with EPA and development of the Interim Action Feasibility Study (IAFS), EPA indicated that the existing deed restrictions are not sufficient to protect potential risk to Human Health and that additional institutional and/or engineering controls are required. Additional activity and use limitations will be imposed at the site during remedy implementation.

Rationale, Drilling and Analyses

Prior to conducting this investigation, Olin submitted a memorandum entitled Supplemental Characterization of Soil Samples within the Containment Area (Wood, July 25, 2019). This memo was reviewed by EPA and on August 6, 2019 a memo providing comments and recommending additional soil investigation activities (Nobis, August 6, 2019) was submitted to Olin. In subsequent conversations between EPA and Olin it was agreed to that the recommendations included in Nobis' August 6, 2019 memo would be incorporated into the Containment Area soil investigation.

CA drilling was conducted during the weeks of November 4, and 11, 2019. This work targeted previously excavated areas, former disposal pits and former lagoons to assess current backfill conditions and areas with elevated chromium concentrations that may represent remnants of former disposal features. Previous soil sampling conducted in 2000 within the CA consisted of collection of samples at depths ranging between 3 and 8 ft. bgs. This is consistent with the depths of previous remedial excavations discussed further below.

The field work was witnessed by Wood, EPA and Nobis personnel and included advancing a total of 12 soil/rock boring locations using a track mounted roto-sonic drill rig. The location of each boring

completed as part of this investigation is shown on **Figure 1**. There were no monitoring wells installed, however findings from this investigation may be used to determine placement of at least one new multiport well in the CA during the implementation of the Data Gaps Work Plan (Geomega, 2019).

Several historical disposal areas located within the footprint of the CA were delineated in 2000 under the MCP prior to the construction of the Slurry Wall. The individual disposal areas that were explored during the November 2019 investigation include the following as displayed in **Figure 1**:

Drum Area A – This area was explored by boring **SB-711**. Historically this area has included drums and miscellaneous waste containing N-nitrosodiphenylamine (NDPA), bis 2-ethylhexyl phthalate (BEHP), trimethylpentenes (TMPs), and chromium. This area had been excavated in 2000 to approximately 8 ft. bgs and 3,200 cubic yards (cy) of soil was stockpiled and tested. 160 overpacks of old drums and drum fragments, 34 tons of metal debris, and approximately 200 cy of soil were removed during this excavation and transported off-site for disposal.

Drum Area B – This area was assessed by boring **SB-701***. This area contained drums, laboratory bottles, and miscellaneous wastes that included NDPA, BEHP, phthalates, and chlorobenzenes historically. This area had also reportedly contained Opex and Kempore and was excavated to a depth of 6 ft. Approximately 1,150 cy of soil was excavated, stockpiled and tested in 2000. Three overpacks of drum parts and two tons of metal debris were disposed off-site. Approximately 650 cy of soil was determined to be suitable for re-use in accordance with MassDEP standard and was used to backfill Drum Area B. The remainder of the soil (including peat) was stabilized with cement and calcium sulfate and used as shallow backfill within the CA.

Acid Pits – The three acid pits are located in an east to west pattern across the northern portion of the CA. These areas were explored by **SB-702*, SB-712*, and SB-710***. These areas received acidic, chromium-containing, manufacturing wastewater historically.

Lined Lagoons I and II – These are the two largest former features within the CA. The borings used to explore these former lagoons were **SB-701*, SB-702*, SB-703, SB-707, SB-708, SB-710* and SB-712***. These lagoons replaced the acid pits and were used for the disposal of manufacturing waste waters. The lagoons received acid wastes that did not contain sodium dichromate and were neutralized with lime. This resulted in a calcium sulfate slurry that was dewatered and placed in the Calcium Sulfate Landfill. Lagoons I and II were constructed with poly vinyl chloride liners in 1972 in the vicinity of the three Acid Pits.

Former On-Property West Ditch – **SB-706 and SB-709** were advanced along the western side of the CA and aligned with the former route of a ditch that was filled and abandoned upon completion of the CA.

Chromium > 500 mg/kg – There are several areas within the CA where historical chromium concentrations exceeded 500 mg/kg. These areas, generally located along the former on-property west ditch and in the eastern extent of the CA were explored with boring **SB-705** and **SB-706**.

In addition to the borings described above **SB-704** was placed in an area approximately equidistant to the former Acid Pits and the largest elevated chromium area.

Note: SB-701, 702, 710 and 712 are borings that explored the overlap of two areas of concern.

One known former disposal area, the Buried Debris Area (Figure 1), was not specifically targeted during this investigation as this area previously contained metal debris which was disposed off-site as

non-hazardous solid waste. Analytes detected in historical samples collected from this area were similar to those detected at Lake Poly but at lower concentrations. Approximately 2,315 cy of peat and sediment were excavated from the Buried Debris Area for structural reasons. This soil was tested and transported off site for non-hazardous disposal. Large boulders were placed in the excavation as back-fill.

Objectives

The objectives of this work were as follows:

- Collect soil samples continuously from the ground surface to 10 ft. bgs in the areas described above within the CA to determine if the soil is classified as a RCRA hazardous material.
- Collect soil samples in each boring at two additional depths beyond the first 10 ft.; one at a midpoint between 10 ft. and the bedrock, and another at the bedrock interface. The additional samples were collected per the recommendations provided by USEPA/Nobis in an August 6, 2019 memo entitled *Olin Review: Supplemental Characterization of Soil Within the Containment Area v3* which included the addition of four borings (for a total of 12). At a minimum, seven samples were collected from each boring with additional samples collected in the field based on observations by EPA or Nobis personnel.

It should be noted that the August 2019 Nobis memo expanded the scope of the investigation by requiring the samples be analyzed for the full RI list of compounds in addition to the RCRA characterization originally requested by EPA. This has resulted in two separate data sets that are described further below.

Drilling

During the drilling activities completed in November 2019, soil cores were collected continuously using roto-sonic drilling from ground surface to a depth of 10 ft. bgs and soil samples were collected at 4-foot intervals using dedicated plastic liners. These liners were withdrawn from the drill hole, opened lengthwise and initially screened for volatile organic compounds (VOCs) using a photoionization detector. Samples were then collected for discrete and composite analyses as soil types and lithology were logged. Each composite sample consisted of five discrete samples collected from two-foot intervals (e.g. 0’- 2’ 2’- 4’, etc.). These were composited from the top 10 ft. and the analyses, outlined in the preceding table, included the RCRA metals and RCRA Characteristics including pH, ignitability, leachability, reactivity and corrosivity.

Drilling/sampling was further advanced after the first 10 ft. to include collection of a sample from the midpoint between 10 ft. bgs and the bedrock interface, and just above the bedrock interface before bedrock coring began. At various locations and depths, samples were collected based on physical appearance such as color or grain consistency that was unique or different than the other soils. All borings were continuously logged to refusal and through the length of the rock core. Rock core recoveries combined with drill rig feed-back were used to confirm that a boulder was not providing a false bedrock depth. The soil borings were advanced with a 4-inch diameter coring sampler within a 6-inch diameter outer casing. This provided ample soil and rock core volume from the four-foot interval for all requested analytical parameters. All soil core recoveries met the laboratory volume requirements and the criteria of the revised Quality Assurance Project Plan (QAPP).

Rock coring was advanced with a 3-inch diameter diamond drill bit. Five-foot long cores were advanced with a range of recoveries from almost 90% to only a few pieces of broken rock indicating advanced weathering in some locations. Field assessment of rock cores is described in the following section under subsurface lithology.

Sample collection, handling, preservation, documentation and equipment decontamination followed procedures described in the revised QAPP. All excess soils and drilling fluid were containerized as Investigation Derived Waste (IDW). IDW was stored on-site until receipt of analytical results and managed off-site at an appropriately licensed facility.

Subsurface Lithology

As displayed in the attached boring logs SB-701 through SB-712 (**Attachment 1**), the majority of the subsurface soils in the CA are comprised of various grades of sand with little to no silt or finer materials. The boring logs are predominated with sample descriptions that include fine to coarse sands with occasional gravel and cobbles and very few examples of fines or organic materials. Uncharacteristically dark and/or stained soils were observed intermittently in 9 of the 12 boring. At the request of Nobis, some additional discrete samples were collected from these stained soils. None of these samples provided analytical results that were outside of the parameters found elsewhere on the site. All of these observations and classifications are displayed pictorially in the attached cross sections A-A', B-B' and C-C' (**Figures 2 through 5**). Glacial till was not encountered in any of the borings prior to reaching the bedrock surface.

As displayed in the boring logs and cross sections, weathered bedrock was encountered in all soil borings at depths ranging from 16 to 42 feet bgs. Competent bedrock was encountered at depths ranging from 18 to 45 feet bgs. Bedrock cores were obtained to assess if there was a false positive represented by a boulder and to better characterize the top of bedrock surface within the containment area. The bedrock was classified based on observations of the competent metamorphic bedrock beneath the weathered bedrock zone. Bedrock consists of typical of the Rhode Island batholith, which runs from southwest to northeast across Massachusetts directly south of the Bloody Bluff Fault. These rocks consist of meta plutonic, meta volcanic and meta sedimentary rocks. (The Bedrock Geology of Massachusetts, U.S. Geological Survey Professional Paper 1366-E-J.)

Some borings were terminated based on drilling difficulty rather than the collection of a competent core. This is partially due to the type of drilling equipment, as roto-sonic can produce variable quality core samples. All examples consisted of variations of the metamorphic rocks described above, most with foliations at 45 degrees in schist and gneiss. There were three examples of quartzite typified by quartz like appearance, hardness and lack of foliation. Water bearing fractures were evident in several of the cores however orientation could not be derived as these samples were not oriented nor was bore-hole geophysics conducted.

Bedrock observations in these borings generally confirm earlier portrayals of the shape, geologic morphology and depth of the containment area. There were no findings that would significantly change the previously defined bedrock or DAPL profile. Additional work to further characterize the bedrock surface within the CA will be completed as part of the Data Gaps Work Plan.

Analyses

Samples collected as part of this investigation were analyzed for the RCRA characteristic waste parameters and associated analytical methods identified in the table Laboratory Analytical Methods displayed below. Per discussions with USEPA and Nobis and per the approved work plan, the samples were also analyzed for the OU1 RI Comprehensive Analytical List and Site-Specific Compounds. The OU1 RI Comprehensive Analytical List includes VOCs, SVOCs, NDMA, metals, ammonia, sulfate, and chloride. Specialty compounds included N,N-dimethylformamide, phthalic anhydride**,** hydrazine, formaldehyde and diphenylamine. Neither extractable petroleum hydrocarbons (EPH) nor volatile petroleum hydrocarbons (VPH) were analyzed as these were not specific to CA. In addition to the 12 composites, comprised of 60 individual samples collected for the purpose of RCRA

evaluation, a total of 30 additional samples were submitted to the lab for analysis in accordance with the RI analytical list described above.

Laboratory Analytical Methods used for Characterization of CA Soil

RCRA Analytes	Reference Method	Field Samples	Trip and Field Dups, MS, MSD, rinse blanks	Total Sample No.
TCLP Metals	Method 1311-6010/7471	60	0	60
Corrosivity	1110 (1010A)	60	0	60
Ignitability	1030	60	0	60
Reactivity	9010/9030	60	0	60
RI Analytical List				
NDMA	Modified Method 521 / Method 8270 LL	90	16	106
VOC	8260	90	16 (+5 trip blanks)	111
SVOC	8270	90	16	106
Metals	6010.6020/7471A	90	16	106
Hexavalent Cr	3060A/7471A	90	16	106
Hydrazines	8315A	90	16	106
Formaldehyde	SW-846 8315	90	16	106
Ammonia	EPA 350.1	90	16	106
Sulfate	EPA 300	90	16	106
Chloride	EPA 300	90	16	106
N,N-dimethylforamide (DMF)	Method 8033 – GC/NPD	90	16	106
Phthalic Anhydride	Modified HPLC Method 8000	90	16	106

Data Evaluation and Findings

Olin previously transmitted the raw analytical data and validated data to USEPA and copies of the laboratory analytical reports are included as **Attachment 2**. Soil analysis was completed for target list VOCs, SVOCs, TCLP metals, and hazardous characteristics of ignitability, corrosivity, and reactivity. Results generated by these methods are interpreted to be useable. Data associated with the Containment Area Investigation were validated in accordance with the Revised Final Olin QAPP May 2019. Analytical results for regulated analytes for a subset of samples and methods were qualified as estimated values during validation based on general procedures in the USEPA data validation guidance and procedures in the QAPP as described in the data validation report in the Attachments. In all cases, results and reporting limits qualified as estimated values are reported at concentrations far lower than regulatory limits, and the estimated results are interpreted to be adequate to demonstrate that regulatory limits are not exceeded. The Data Validation Report is included as **Attachment 3**.

Analytical results from soil samples collected during the November 2019 soil investigation have been used to evaluate the primary reason for conducting this investigation; whether soils within the containment area would be classified as RCRA material. **Table 1** provides detected summary of RCRA analytical results, and **Tables 2 and 3** includes analytical data for the RI analytical list. Detected concentrations were compared to PRGs and RSLs.

1. RCRA - Results from the composite soil samples collected from each of the 12 borings did not exceed the RCRA Waste Characteristics. The results indicate a RCRA C cap would not be necessary for the CA.

2. Volatile Organic Compounds (VOCs) – None of the VOCs encountered in the program exceeded EPA Regional Screening Levels (RSL). Generally, these compounds were detected in ranges similar to previous investigations. There were detections of the Site-related compound 2,4,4 trimethyl(1 and 2)pentene – TMP1 and TMP2. The highest concentration was encountered in SB-711 at 8 mg/kg for TMP1, at a depth of 4'–6' bgs.

3. Semi Volatile Organic Compounds (SVOCs) – With the exception of Bis(2-Ethylhexyl)phalate (BEHP), SVOCs detected in CA did not exceed the RSLs. BEHP was detected in 11 of 12 at concentrations ranging from 2.1 mg/kg to 420 mg/kg, with the highest concentration detected in SB-711 at a depth of 4'-6'. The RSL for BEHP is 160 mg/kg.

4. Inorganics –Arsenic was detected at concentrations above the RSL of 3 mg/kg in the majority of soil samples collected from within the CA. With a range of 3.8 to 33 mg/kg, arsenic concentrations averaged 11.3 mg/kg within the top 2 ft. and 7.21 mg/kg at a depth of 2'-10' bgs.

5. Hexavalent chromium did not exceed the RSL in samples collected from the top 2 ft of the CA. The maximum hexavalent chromium concentration detected in samples collected from within the containment area was 22.6 mg/kg at SB-701 at a depth of 31'-32' bgs. The RSL for hexavalent chromium is 6.3 mg/kg.

6. Chromium (total) was encountered in all 90 samples at concentrations ranging from 5.3 to 1,300 mg/kg with the highest concentration detected in boring SB-706 at a depth of 6'-8' bgs. This boring is located in the area of the Former On-Property West Ditch. There is no RSL for total chromium.

Contaminants Encountered by Area

The bullets below provide a summary of compounds detected within the CA which are being considered during development of the final remedy for this area.

Drum Area A – This area was explored by boring **SB-711**, which exhibited the highest concentrations of TMPs (TM1P and TM2P at 8 and 27 mg/kg respectively), BEHP at 460 mg/kg, and NDMA at 54 mg/kg.

Drum Area B – This area was assessed by boring **SB-701**. Low levels of TMPs were detected in samples collected from this boring.

Acid Pits – These areas were explored by **SB-702, SB-710, and SB-712**. These borings did not encounter elevated concentrations of the analytes for the CA.

Lined Lagoons I and II – These are the two largest former features within the CA. The borings used to explore these former lagoons were **SB-701, SB-702, SB-703, SB-707, SB-708, SB-710 and SB-712**. Compounds of specific concern within the CA were not detected at elevated concentrations within these borings.

Former On-Property West Ditch – **SB-706 and SB-709** were advanced along the western side of the CA and aligned with the former route of a ditch that was filled and abandoned upon completion of the CA. A sample from SB-706 exhibited the highest concentration of chromium at 1,300 mg/kg. This boring also encountered TM1P and TM2P at concentrations of 75 and 25 mg/kg respectively.

Chromium > 500 mg/kg – There are four of these areas delineated on the CA; three located along the former on-property west ditch and a larger area located in the eastern portion of the CA. The larger area of historical chromium impact was explored with samples collected from boring **SB-705**. This boring did not display elevated concentrations of chromium or the other contaminants of specific concern within the CA.

In addition to the borings described above **SB-704** was placed in an area between the former Acid Pits and the largest elevated chromium area. This boring exhibited the highest concentrations of chloride and sulfate with 100 mg/kg and 33,000 mg/kg respectively, however none of the other analytes or PRGs for the site were reported.

Conclusions

During the November 2019 Containment Area Investigation, a total of 12 soils borings were advanced from ground surface to approximately 5' into the bedrock surface. The primary objective of the CA soil investigation was to determine if a RCRA C or RCRA D cap would be needed for the containment area. The conclusions of this investigation are summarized below:

- The boring and sampling program for this CA investigation did not encounter any unknown or unexpected conditions.
- Shallow bedrock coring (approximately 5' into bedrock) confirmed previous conceptual models of the CA. The shape of the bedrock surface will be further refined during implementation of the seismic and drilling work associated with the Data Gaps Work Plan.
- As described throughout this report no RCRA exceedances were encountered and, therefore, a RCRA C cap is not needed to as a final remedy for the CA.
- As requested by EPA, samples collected during this investigation were also analyzed for the full list of OU1/OU2 RI compounds (as presented in **Tables 2** and **3**). This data will be further

evaluated in conjunction with data to be collected during Data Gaps Work Plan and will be considered when implementing the final remedy for the CA.

Enclosures:

Table 1 – Analytical Data – RCRA Analytes

Table 2 – Analytical Data – VOCs and SVOCs

Table 3 – Analytical Data – Metals, DMF, Hydraziene, Aldehydes, and Inorganics

Figure 1 – Soil Boring Locations

Figure 2 – Containment Area Cross Section Overview

Figure 3- Cross Section A-A'

Figure 4 – Cross Section B-B'

Figure 5 – Cross Section C-C'

Attachment 1 – Boring Logs

Attachment 2 – Laboratory Analytical Reports (provided electronically)

Attachment 3 – Data Validation Report

TABLES

Table 1 - RCRA Samples
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-702		SB-703		SB-704		SB-705		SB-706		SB-707	
		Sample Date	11/11/2019		11/8/2019		11/5/2019		11/7/2019		11/8/2019		11/6/2019		11/7/2019	
		Sample ID	OC-SB-701-0.0/10-XXX		OC-SB-702-0.0/10-XXX		OC-SB-703-0.0/10-XXX		OC-SB-704-0.0/10-XXX		OC-SB-705-0.0/10-XXX		OC-SB-706-0.0/10-XXX		OC-SB-707-0.0/10-XXX	
		Sample Depth (ft bgs)	0-10		0-10		0-10		0-10		0-10		0-10		0-10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
TCLP Metals																
SW6010C	Arsenic	mg/l	0.0097	J	0.0077	J	0.015	U	0.011	J	0.017		0.015	U	0.035	J+
SW6010C	Barium	mg/l	0.21	J	0.2	J	0.2	J	0.18	J	0.15	J	0.19	J	0.15	J
SW6010C	Cadmium	mg/l	0.0011	J	0.002	U	0.00061	J	0.0014	J	0.0047		0.0028		0.0018	J
SW6010C	Chromium	mg/l	0.13		0.017	J	0.095		0.24		0.19		0.18		0.057	
SW6010C	Lead	mg/l	0.011	J	0.012	J	0.012	J	0.012	J	0.0097	J	0.014	J	0.027	
SW7470A	Mercury	mg/l	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	UJ	0.0002	U
SW6010C	Selenium	mg/l	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U
SW6010C	Silver	mg/l	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U
Inorganics and Waste Characterization																
SW1030	Burn Rate	mm/sec	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U
SW9012	Cyanide, Reactive	mg/kg	10	U	10	U	10	U	10	U	10	U	10	U	10	U
SW9034	Sulfide, Reactive	mg/kg	10	UJ	10	U	10	UJ	10	UJ	10	U	10	U	10	UJ
SW9045D	pH	pH Units	8.4	J	7.4	J	5.4	J	7.7	J	7.6	J	6.1	J	7.4	J
SW9045D	Temperature	Deg C	19.6	HF	18.9	HF	19.1	HF	18.9	HF	18.8	HF	19.3	HF	19.4	HF

Notes

Units:

Deg C = Degrees Celcius
mg/kg = milligrams per kilogram
mg/l = milligrams per liter
mm/sec = millimeters per second

Lab Qualifiers:

HF = field parameter with a holding time of 15 minutes; test performed by laboratory at client's request
J = concentration is an approximate value
U = not detected

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 1 - RCRA Samples
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-709		SB-710		SB-711		SB-712		SB-712	
		Sample Date	11/4/2019		11/6/2019		11/4/2019		11/12/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-708-0.0/10-XXX		OC-SB-709-0.0/10-XXX		OC-SB-710-0.0/10XXX		OC-SB-711-0.0/10-XXX		OC-SB-712-0.0/10-XXX		OC-SB-712-0.0/10-DUP	
		Sample Depth (ft bgs)	0-10		0-10		0-10		0-10		0-10		0-10	
		Qc Code	FS		FS		FS		FS		FS		FD	
Method	**Parameter**	**Units**	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
TCLP Metals														
SW6010C	Arsenic	mg/l	0.015	U	0.015	U	0.015		0.012	J	0.013	J	0.011	J
SW6010C	Barium	mg/l	0.45	J	0.27	J	0.23	J	0.28	J	0.29	J	0.26	J
SW6010C	Cadmium	mg/l	0.002	U	0.0037		0.0016	J	0.0025		0.0012	J	0.0015	J
SW6010C	Chromium	mg/l	0.035		0.056		0.045		0.1		0.12		0.15	
SW6010C	Lead	mg/l	0.02	U	0.015	J	0.0068	J	0.011	J	0.059	J	0.022	J
SW7470A	Mercury	mg/l	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U
SW6010C	Selenium	mg/l	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U
SW6010C	Silver	mg/l	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U
Inorganics and Waste Characterization														
SW1030	Burn Rate	mm/sec	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U
SW9012	Cyanide, Reactive	mg/kg	10	U	10	U	10	U	10	U	10	U	10	U
SW9034	Sulfide, Reactive	mg/kg	10	UJ	10	U	10	UJ	10	U	10	UJ	10	UJ
SW9045D	pH	pH Units	5.8	J	6.3	J	5.5	J	8.5	J	8.9	J	8.9	J
SW9045D	Temperature	Deg C	19.3	HF	19.3	HF	18.9	HF	18.9	HF	18.9	HF	19.1	HF

Notes

Units:

Deg C = Degrees Celcius
mg/kg = milligrams per kilogram
mg/l = milligrams per liter
mm/sec = millimeters per second

Lab Qualifiers:

HF = field parameter with a holding time of 15 minutes; test performed by laboratory at client's request
J = concentration is an approximate value
U = not detected

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
		Sample Depth (ft bgs)	0 - 2		0 - 2		8 - 10		6 - 8		4 - 6		2 - 4		31 - 32		20 - 21	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1-Dichloroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	0.7	J	4.6	U	4.1	U	5.2	U
SW8260C	1,1-Dichloroethene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,1-Dichloropropene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	0.54	J	1.9	J	4.1	U	5.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	16		3.8	J	4.1	U	5.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	29	UJ	22	UJ	26	U	21	U	26	U	23	U	20	U	26	U
SW8260C	1,2-Dibromoethane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2-Dichloroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,2-Dichloropropane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	0.79	J	0.82	J	4.1	U	5.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	0.32	J	4.1	U	5.2	U
SW8260C	1,3-Dichloropropane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	1,4-Dioxane	ug/kg	290	UJ	220	UJ	260	U	210	U	260	U	230	U	200	U	260	U
SW8260C	2,2-Dichloropropane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	0.76	J	67		59		4.1	U	0.58	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	34		24		4.1	U	5.2	U
SW8260C	2-Butanone	ug/kg	29	U	22	U	26	U	21	U	23	J+	21	J+	20	U	26	U
SW8260C	2-Chlorotoluene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	2-Hexanone	ug/kg	29	UJ	22	UJ	26	U	21	U	26	U	23	U	20	U	26	U
SW8260C	4-Chlorotoluene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	0.48	J	0.41	J	4.1	U	5.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	29	U	22	U	26	U	21	U	26	U	23	U	20	U	26	U
SW8260C	Acetic acid, methyl ester	ug/kg	58	UJ	43	UJ	52	U	43	U	52	U	46	U	41	U	52	U
SW8260C	Acetone	ug/kg	7.4	J-	14	J-	12	J	16	J	99	J	82	J	14	J	16	J
SW8260C	Benzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	0.82	J	4.6	U	4.1	U	5.2	U
SW8260C	Bromobenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Bromochloromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
		Sample Depth (ft bgs)	0 - 2		0 - 2		8 - 10		6 - 8		4 - 6		2 - 4		31 - 32		20 - 21	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Bromodichloromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Bromoform	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Bromomethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Carbon disulfide	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	6.6		4.2	J	4.1	U	5.2	U
SW8260C	Carbon tetrachloride	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Chlorobenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Chloroethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Chloroform	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Chloromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Cyclohexane	ug/kg	29	U	22	U	26	U	21	U	26	U	23	U	20	U	26	U
SW8260C	Dibromochloromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Dibromomethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Diethyl ether	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Ethylbenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	1.4	J	0.49	J	4.1	U	5.2	U
SW8260C	Hexachlorobutadiene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Isopropyl ether	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Isopropylbenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	3.7	J	1.2	J	4.1	U	5.2	U
SW8260C	Methyl cyclohexane	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Methylene chloride	ug/kg	18	U	19	U	26	U	25	U	17	U	26	U	15	U	26	U
SW8260C	n-Butylbenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Naphthalene	ug/kg	29	UJ	22	UJ	26	U	15	J	180		3	J	20	U	26	U
SW8260C	Propylbenzene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	7		1.2	J	4.1	U	5.2	U
SW8260C	sec-Butylbenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Styrene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	tert-Butylbenzene	ug/kg	5.8	UJ	4.3	UJ	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Tetrachloroethene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Tetrahydrofuran	ug/kg	58	UJ	43	UJ	52	U	43	U	52	U	46	U	41	U	52	U
SW8260C	Toluene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	0.43	J	4.1	U	5.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Trichloroethene	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Trichlorofluoromethane	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Vinyl chloride	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	5.2	U	4.6	U	4.1	U	5.2	U
SW8260C	Xylene, o	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	1.6	J	0.75	J	4.1	U	5.2	U
SW8260C	Xylenes (m&p)	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	0.98	J	4.6	U	4.1	U	5.2	U
SW8260C	Xylenes, Total	ug/kg	5.8	U	4.3	U	5.2	U	4.3	U	2.6	J	4.6	U	4.1	U	5.2	U

Notes

Units:
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Lab Qualifiers:
J = concentration is an approximate value
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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX	
		Sample Depth (ft bgs)	0 - 2		0 - 2		8 - 10		6 - 8		4 - 6		2 - 4		31 - 32	
		Qc Code	FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	1-Methylnaphthalene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2,4-Dichlorophenol	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	2,4-Dimethylphenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2,4-Dinitrophenol	ug/kg	410	U	400	U	400	U	380	U	390	U	380	U	340	U
SW8270D	2,4-Dinitrotoluene	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2,6-Dinitrotoluene	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2-Chloronaphthalene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	2-Chlorophenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2-Methylnaphthalene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	2-Methylphenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	2-Nitroaniline	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U
SW8270D	2-Nitrophenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	3 & 4 Methylphenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	3-Nitroaniline	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	4-Chloroaniline	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	4-Nitroaniline	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U
SW8270D	4-Nitrophenol	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U
SW8270D	Acenaphthene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	Acenaphthylene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	Acetophenone	ug/kg	2.2	J	82	U	81	U	78	U	79	U	77	U	70	U
SW8270D	Aniline	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	Anthracene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	2.1	J	7.7	U	7	U
SW8270D	Atrazine	ug/kg	83	U	82	U	81	U	78	U	79	U	77	U	70	U
SW8270D	Azobenzene	ug/kg	400	U	400	U	390	U	380	U	400	U	1900	U	350	U
SW8270D	Benzaldehyde	ug/kg	83	UJ	82	UJ	81	U	78	U	79	U	77	U	70	U
SW8270D	Benzo(a)anthracene	ug/kg	5.4	J	8.2	U	8.1	U	7.8	U	4.2	J	7.7	U	7	U
SW8270D	Benzo(a)pyrene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	Benzo(b)fluoranthene	ug/kg	5.7	J	8.2	U	8.1	U	7.8	U	3.2	J	7.7	U	7	U
SW8270D	Benzo(ghi)perylene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	Benzo(k)fluoranthene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U
SW8270D	Benzoic Acid	ug/kg	210	UJ	210	UJ	200	U	200	U	200	U	200	U	180	U
SW8270D	Benzyl alcohol	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	Biphenyl	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
		Sample Depth (ft bgs)	0 - 2		0 - 2		8 - 10		6 - 8		4 - 6		2 - 4		31 - 32		20 - 21	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	800		640		400	U	380	U	150	J	3900		340	U	370	U
SW8270D	Butylbenzylphthalate	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Caprolactam	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U	190	U
SW8270D	Carbazole	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	Chrysene	ug/kg	6	J	8.2	U	8.1	U	7.8	U	4.6	J	7.7	U	7	U	7.5	U
SW8270D	Di-n-butylphthalate	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Di-n-octylphthalate	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	Dibenzofuran	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Diethylphthalate	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Dimethylphthalate	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Fluoranthene	ug/kg	7.9	J	3.5	J	8.1	U	7.8	U	6.3	J	8.2		7	U	7.5	U
SW8270D	Fluorene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	Hexachlorobenzene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	41	UJ	40	UJ	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Hexachloroethane	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	Isophorone	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SW8270D	N-Nitrosodimethylamine	ug/kg	41	U	40	U	40	U	38	U	39	U	38	U	34	U	37	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	120		93		40	U	38	U	1500		430		34	U	37	U
SW8270D	Nitrobenzene	ug/kg	82	U	82	U	80	U	77	U	79	U	77	U	69	U	74	U
SW8270D	Pentachlorophenol	ug/kg	210	U	210	U	200	U	200	U	200	U	200	U	180	U	190	U
SW8270D	Phenanthrene	ug/kg	4.6	J	2.4	J	8.1	U	2.8	J	5.6	J	6.5	J	7	U	7.5	U
SW8270D	Phenol	ug/kg	41	U	40	U	40	U	38	U	39	U	23	J	34	U	37	U
SW8270D	Phthalic anhydride	ug/kg	12000	UJ	12000	UJ	12000	UJ	11000	UJ	12000	UJ	56000	UJ	11000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.6	J	8.6		7	U	7.5	U
SW8270D	Pentachlorophenol	ug/kg	210	U	210	U	200	U	200	U	810	U	2000	U	180	U	190	U
SW8270D	Phenanthrene	ug/kg	4.6	J	2.4	J	8.1	U	2.8	J	5.6	U	77	U	7	U	7.5	U
SW8270D	Phenol	ug/kg	41	U	40	U	40	U	38	U	39	U	380	U	34	U	37	U
SW8270D	Phthalic anhydride	ug/kg	12000	U	12000	U	12000	U	11000	U	12000	U	56000	U	11000	U	11000	U
SW8270D	Pyrene	ug/kg	8.3	U	8.2	U	8.1	U	7.8	U	7.6	U	8.6	U	7	U	7.5	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
		Sample Depth (ft bgs)	0 - 2		2 - 4		4 - 6		6 - 8		8 - 10		34 - 35		28 - 29		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1-Dichloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1-Dichloroethene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,1-Dichloropropene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	23	U	21	U	25	U	21	U	23	U	54	U	21	U	24	U
SW8260C	1,2-Dibromoethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2-Dichloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,2-Dichloropropane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,3-Dichlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,3-Dichloropropane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	1,4-Dioxane	ug/kg	230	U	210	U	250	U	210	U	230	U	540	U	210	U	240	U
SW8260C	2,2-Dichloropropane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.7	U	2.4	J	1.2	J	13		16		11	U	4.2	U	0.9	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	4.7	U	0.84	J	4.9	U	4.4		3.1	J	11	U	4.2	U	4.7	U
SW8260C	2-Butanone	ug/kg	23	U	14	J+	29	J+	4.4	J+	23	U	54	U	21	U	6.6	J
SW8260C	2-Chlorotoluene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	2-Hexanone	ug/kg	23	U	21	U	25	U	21	U	23	U	54	U	21	U	24	U
SW8260C	4-Chlorotoluene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	4-iso-Propyltoluene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	4-Methyl-2-pentanone	ug/kg	23	U	21	U	25	U	21	U	23	U	54	U	21	U	24	U
SW8260C	Acetic acid, methyl ester	ug/kg	47	U	41	U	8.1	J	42	U	6.3	J	7.5	J	42	U	47	U
SW8260C	Acetone	ug/kg	23	J	54	J	54	J	20	J	5.6	J	12	J	5.1	J	30	J
SW8260C	Benzene	ug/kg	4.7	U	4.1	U	4.9	U	0.37	J	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Bromobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Bromochloromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
		Sample Depth (ft bgs)	0 - 2		2 - 4		4 - 6		6 - 8		8 - 10		34 - 35		28 - 29		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Bromodichloromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Bromoform	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Bromomethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Carbon disulfide	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Carbon tetrachloride	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Chlorobenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Chloroethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Chloroform	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Chloromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Cyclohexane	ug/kg	23	U	21	U	25	U	21	U	23	U	54	U	21	U	24	U
SW8260C	Dibromochloromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Dibromomethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Diethyl ether	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Ethylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Hexachlorobutadiene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Isopropyl ether	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Isopropylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Methyl cyclohexane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Methylene chloride	ug/kg	6.5	U	5.6	U	8.4	U	4.5	U	20	U	57	U	21	U	4.7	U
SW8260C	n-Butylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Naphthalene	ug/kg	23	U	21	U	25	U	21	U	23	U	54	U	21	U	24	U
SW8260C	Propylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	sec-Butylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Styrene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	tert-Butylbenzene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Tetrachloroethene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Tetrahydrofuran	ug/kg	47	U	41	U	49	U	42	U	46	U	110	U	42	U	47	U
SW8260C	Toluene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Trichloroethene	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Trichlorofluoromethane	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Vinyl chloride	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Xylene, o	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Xylenes (m&p)	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
SW8260C	Xylenes, Total	ug/kg	4.7	U	4.1	U	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
		Sample Depth (ft bgs)	0 - 2		2 - 4		4 - 6		6 - 8		8 - 10		34 - 35		28 - 29		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	1-Methylnaphthalene	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	2,4-Dimethylphenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2,4-Dinitrophenol	ug/kg	380	U	350	U	370	U	750	U	350	U	350	U	380	U	430	U
SW8270D	2,4-Dinitrotoluene	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2,6-Dinitrotoluene	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2-Chloronaphthalene	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	2-Chlorophenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2-Methylnaphthalene	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	2-Methylphenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	2-Nitroaniline	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	2-Nitrophenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	3 & 4 Methylphenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	3-Nitroaniline	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	4-Chloroaniline	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	4-Nitroaniline	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	4-Nitrophenol	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	Acenaphthene	ug/kg	7.7	U	7.1	U	7.5	U	5.5	J	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	Acenaphthylene	ug/kg	7.7	U	1.7	J	7.5	U	3.3	J	7.1	U	7.2	U	7.7	U	3	J
SW8270D	Acetophenone	ug/kg	77	U	71	U	75	U	150	U	71	U	72	U	77	U	87	U
SW8270D	Aniline	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Anthracene	ug/kg	7.7	U	2.2	J	7.5	U	15		7.1	U	7.2	U	7.7	U	3.1	J
SW8270D	Atrazine	ug/kg	77	U	71	U	75	U	150	U	71	U	72	U	77	U	87	U
SW8270D	Azobenzene	ug/kg	380	U	350	U	370	U	360	U	350	U	350	U	370	U	430	U
SW8270D	Benzaldehyde	ug/kg	77	R	71	R	75	R	150	R	71	U	72	U	77	U	10	J
SW8270D	Benzo(a)anthracene	ug/kg	8.8		11		3.9	J	49		7.1	U	7.2	U	7.7	U	6.9	J
SW8270D	Benzo(a)pyrene	ug/kg	9.7		10		3.7	J	45		7.1	U	7.2	U	7.7	U	7.3	J
SW8270D	Benzo(b)fluoranthene	ug/kg	11		17		5.3	J	43		7.1	U	7.2	U	7.7	U	10	
SW8270D	Benzo(ghi)perylene	ug/kg	8.5		10		3.2	J	29		7.1	U	7.2	U	7.7	U	7.6	J
SW8270D	Benzo(k)fluoranthene	ug/kg	5.3	J	5.9	J	7.5	U	20		7.1	U	7.2	U	7.7	U	3.1	J
SW8270D	Benzoic Acid	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	Benzyl alcohol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Biphenyl	ug/kg	38	U	2	J	37	U	75	U	35	U	35	U	38	U	2.6	J
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
		Sample Depth (ft bgs)	0 - 2		2 - 4		4 - 6		6 - 8		8 - 10		34 - 35		28 - 29		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	230	J	270	J	3500		800		630		350	U	380	U	1600	
SW8270D	Butylbenzylphthalate	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Caprolactam	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	Carbazole	ug/kg	7.7	U	1.8	J	7.5	U	3.7	J	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	Chrysene	ug/kg	10		14		4.5	J	46		7.1	U	7.2	U	7.7	U	9.3	
SW8270D	Di-n-butylphthalate	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Di-n-octylphthalate	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	3.4	J	2.7	J	7.5	U	9.6	J	7.1	U	7.2	U	7.7	U	2.4	J
SW8270D	Dibenzofuran	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Diethylphthalate	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Dimethylphthalate	ug/kg	38	U	35	U	2	J	75	U	35	U	35	U	38	U	43	U
SW8270D	Fluoranthene	ug/kg	14		15		5.9	J	81		3	J	7.2	U	7.7	U	14	
SW8270D	Fluorene	ug/kg	7.7	U	7.1	U	7.5	U	5.3	J	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	Hexachlorobenzene	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Hexachloroethane	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.3	J	8.7		2.8	J	25		7.1	U	7.2	U	7.7	U	6	J
SW8270D	Isophorone	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U	7.7	U	8.7	U
SW8270D	N-Nitrosodimethylamine	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	13	J	35	U	12	J	75	U	35	U	35	U	38	U	37	J
SW8270D	Nitrobenzene	ug/kg	77	U	70	U	75	U	150	U	71	U	71	U	76	U	86	U
SW8270D	Pentachlorophenol	ug/kg	200	U	180	U	190	U	390	U	180	U	180	U	190	U	220	U
SW8270D	Phenanthrene	ug/kg	6.4	J	9.4		4.5	J	48		7.1	U	7.2	U	7.7	U	8.1	J
SW8270D	Phenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	10000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ	13000	UJ
SW8270D	Pyrene	ug/kg	13		14		6.4	J	87		3	J	7.2	U	7.7	U	12	
SW8270D	Pentachlorophenol	ug/kg	200	U	180	U	950	U	390	U	180	U	180	U	190	U	220	U
SW8270D	Phenanthrene	ug/kg	6.4	J	9.4		4.5	U	48		7.1	U	7.2	U	7.7	U	8.1	J
SW8270D	Phenol	ug/kg	38	U	35	U	37	U	75	U	35	U	35	U	38	U	43	U
SW8270D	Phthalic anhydride	ug/kg	11000	U	10000	U	11000	U	11000	U	11000	U	11000	U	11000	U	13000	U
SW8270D	Pyrene	ug/kg	13		14		6.4	U	87		3	J	7.2	U	7.7	U	12	

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		2 - 4		4 - 6		6 - 8		8 - 10		17 - 18		30 - 32		0 - 2	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1-Dichloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1-Dichloroethene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,1-Dichloropropene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	3	J
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	20	UJ	22	UJ	23	U	25	U	25	U	22	U	15	U	37	U
SW8260C	1,2-Dibromoethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,2-Dichloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	1.1	J	7.3	U
SW8260C	1,2-Dichloropropane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	0.27	J-	0.37	J-	4.6	U	5	U	5	U	4.5	U	3	U	1.4	J
SW8260C	1,3-Dichlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,3-Dichloropropane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	1,4-Dioxane	ug/kg	200	UJ	220	UJ	230	U	250	U	250	U	220	U	150	U	370	U
SW8260C	2,2-Dichloropropane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	1.4	J-	1.7	J-	4.6	U	5	U	5	U	4.5	U	3	U	5.1	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	0.46	J-	0.67	J-	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	2-Butanone	ug/kg	9.5	J-	10	J	23	U	25	U	25	U	22	U	15	U	17	J+
SW8260C	2-Chlorotoluene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	2-Hexanone	ug/kg	20	UJ	22	UJ	23	U	25	U	25	U	22	U	15	U	37	U
SW8260C	4-Chlorotoluene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	4-iso-Propyltoluene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	1.9	J
SW8260C	4-Methyl-2-pentanone	ug/kg	20	UJ	22	UJ	23	U	25	U	25	U	22	U	15	U	37	U
SW8260C	Acetic acid, methyl ester	ug/kg	40	UJ	44	UJ	46	U	50	U	50	U	45	U	30	U	73	U
SW8260C	Acetone	ug/kg	43	J-	37	J-	6.5	J	23	J	4.2	J	220	U	7.6	J	93	J
SW8260C	Benzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Bromobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Bromochloromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	0.78	J	7.3	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		2 - 4		4 - 6		6 - 8		8 - 10		17 - 18		30 - 32		0 - 2	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	0.78	J	7.3	U
SW8260C	Bromodichloromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Bromoform	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Bromomethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Carbon disulfide	ug/kg	6.5	J-	4.4	J-	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Carbon tetrachloride	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Chlorobenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Chloroethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Chloroform	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Chloromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Cyclohexane	ug/kg	20	UJ	22	UJ	23	U	25	U	25	U	22	U	15	U	37	U
SW8260C	Dibromochloromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Dibromomethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	4.6		7.3	U
SW8260C	Dichlorodifluoromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Diethyl ether	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	3.4	J
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Ethylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Hexachlorobutadiene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Isopropyl ether	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Isopropylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Methyl cyclohexane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Methylene chloride	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	14	U
SW8260C	n-Butylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Naphthalene	ug/kg	20	UJ	22	UJ	23	U	25	U	25	U	22	U	15	U	2.5	J
SW8260C	Propylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	sec-Butylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Styrene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	tert-Butylbenzene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Tetrachloroethene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Tetrahydrofuran	ug/kg	40	UJ	44	UJ	46	U	50	U	50	U	45	U	30	U	73	U
SW8260C	Toluene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	0.62	J	1.4	J
SW8260C	trans-1,2-Dichloroethene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Trichloroethene	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Trichlorofluoromethane	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Vinyl chloride	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Xylene, o	ug/kg	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Xylenes (m&p)	ug/kg	4	UJ	0.77	J-	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U
SW8260C	Xylenes, Total	ug/kg	4	UJ	0.77	J-	4.6	U	5	U	5	U	4.5	U	3	U	7.3	U

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		2 - 4		4 - 6		6 - 8		8 - 10		17 - 18		30 - 32		0 - 2	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	39	U	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	1-Methylnaphthalene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	23	
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	UJ
SW8270D	2,4,5-Trichlorophenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	UJ
SW8270D	2,4-Dichlorophenol	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	2,4-Dimethylphenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2,4-Dinitrophenol	ug/kg	380	UJ	390	UJ	400	U	410	U	360	UJ	370	U	360	U	840	U
SW8270D	2,4-Dinitrotoluene	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2,6-Dinitrotoluene	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2-Chloronaphthalene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	2-Chlorophenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2-Methylnaphthalene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	37	
SW8270D	2-Methylphenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	2-Nitroaniline	ug/kg	200	U	200	U	210	U	210	U	180	U	190	U	180	U	430	U
SW8270D	2-Nitrophenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	3 & 4 Methylphenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	47	J
SW8270D	3,3'-Dichlorobenzidine	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	3-Nitroaniline	ug/kg	200	U	200	U	210	U	210	U	180	U	190	U	180	U	430	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	200	R	200	R	210	U	210	U	180	U	190	U	180	U	430	UJ
SW8270D	4-Bromophenyl phenyl ether	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	4-Chloroaniline	ug/kg	38	U	39	U	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	31	J
SW8270D	4-Nitroaniline	ug/kg	200	U	200	U	210	U	210	U	180	U	190	U	180	U	430	U
SW8270D	4-Nitrophenol	ug/kg	200	U	200	U	210	U	210	U	180	U	190	U	180	U	430	UJ
SW8270D	Acenaphthene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	16	J
SW8270D	Acenaphthylene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	Acetophenone	ug/kg	2.4	J	79	U	82	U	84	U	73	UJ	74	U	72	U	170	U
SW8270D	Aniline	ug/kg	38	U	39	U	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	Anthracene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	9.1	J
SW8270D	Atrazine	ug/kg	77	U	79	U	82	U	84	U	73	U	74	U	72	U	170	U
SW8270D	Azobenzene	ug/kg	370	U	400	U	410	U	410	U	360	U	360	U	360	U	410	U
SW8270D	Benzaldehyde	ug/kg	5.8	J-	79	R	82	U	84	U	73	R	74	U	72	U	170	R
SW8270D	Benzo(a)anthracene	ug/kg	4.3	J	3.5	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	13	J
SW8270D	Benzo(a)pyrene	ug/kg	4.3	J	3.4	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	10	J
SW8270D	Benzo(b)fluoranthene	ug/kg	6.8	J	4.1	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	14	J
SW8270D	Benzo(ghi)perylene	ug/kg	4.9	J	3.7	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	8.4	J
SW8270D	Benzo(k)fluoranthene	ug/kg	7.7	U	3	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	5.2	J
SW8270D	Benzoic Acid	ug/kg	50	J-	200	R	210	U	210	U	180	R	190	U	180	U	430	R
SW8270D	Benzyl alcohol	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Biphenyl	ug/kg	4.3	J	3.2	J	40	U	41	U	36	U	37	U	36	U	24	J
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	UJ	7.4	U	7.2	U	17	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		2 - 4		4 - 6		6 - 8		8 - 10		17 - 18		30 - 32		0 - 2	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	1400	J	650	J	400	U	410	U	60	J	370	U	360	U	7600	
SW8270D	Butylbenzylphthalate	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Caprolactam	ug/kg	200	U	200	U	210	U	210	U	180	U	190	U	180	U	430	U
SW8270D	Carbazole	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	Chrysene	ug/kg	6.5	J	4.6	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	18	
SW8270D	Di-n-butylphthalate	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Di-n-octylphthalate	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	Dibenzofuran	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	8.8	J
SW8270D	Diethylphthalate	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Dimethylphthalate	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	Fluoranthene	ug/kg	9		6.3	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	47	
SW8270D	Fluorene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	21	
SW8270D	Hexachlorobenzene	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	38	UJ	39	UJ	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	Hexachloroethane	ug/kg	38	U	39	U	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	3.5	J	3	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	8.1	J
SW8270D	Isophorone	ug/kg	38	U	39	U	40	U	41	U	36	U	37	U	36	U	84	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.7	U	7.9	U	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	17	U
SW8270D	N-Nitrosodimethylamine	ug/kg	38	U	39	U	40	U	41	U	36	UJ	37	U	36	U	84	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	350	J	130	J	40	U	41	U	36	U	37	U	36	U	390	
SW8270D	Nitrobenzene	ug/kg	77	U	79	U	82	U	83	U	72	UJ	74	U	72	U	170	U
SW8270D	Pentachlorophenol	ug/kg	200	UJ	200	UJ	210	U	210	U	180	U	190	U	180	U	430	UJ
SW8270D	Phenanthrene	ug/kg	5.4	J	3.9	J	8.2	U	8.4	U	7.3	U	7.4	U	2	J	84	
SW8270D	Phenol	ug/kg	25	J	39	U	40	U	41	U	36	U	37	U	36	U	330	
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	12000	UJ	12000	UJ	12000	UJ	11000	UJ	11000	UJ	11000	UJ	12000	UJ
SW8270D	Pyrene	ug/kg	7.5	J	5.6	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	42	
SW8270D	Pentachlorophenol	ug/kg	200	U	200	U F1 F2	210	U	210	U	180	U	190	U	180	U	430	U F1 F2
SW8270D	Phenanthrene	ug/kg	5.4	J	3.9	J	8.2	U	8.4	U	7.3	U	7.4	U	2	J	84	
SW8270D	Phenol	ug/kg	25	J	39	U	40	U	41	U	36	U F1	37	U	36	U	330	J
SW8270D	Phthalic anhydride	ug/kg	11000	U	12000	U	12000	U	12000	U	11000	U	11000	U	11000	U	12000	U
SW8270D	Pyrene	ug/kg	7.5	J	5.6	J	8.2	U	8.4	U	7.3	U	7.4	U	7.2	U	45	J F1

Notes

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J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		6 - 8		8 - 10		12 - 13		33 - 34		19 - 20		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1-Dichloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1-Dichloroethene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,1-Dichloropropene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	0.58	J	0.36	J	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	2.7	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	27	U	20	U	19	U	23	U	24	U	22	U	21	U	21	U
SW8260C	1,2-Dibromoethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2-Dichloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,2-Dichloropropane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	1.1	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,3-Dichloropropane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	1,4-Dioxane	ug/kg	270	U	200	U	190	U	230	U	240	U	220	U	210	U	210	U
SW8260C	2,2-Dichloropropane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	6.2		1.3	J	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	3	J	0.56	J	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	2-Butanone	ug/kg	23	J+	64	J+	9.6	J+	29	J+	24	U	22	U	21	U	21	U
SW8260C	2-Chlorotoluene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	2-Hexanone	ug/kg	27	U	20	U	19	U	23	U	24	U	22	U	21	U	21	U
SW8260C	4-Chlorotoluene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	1.2	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	27	U	20	U	19	U	23	U	24	U	22	U	21	U	21	U
SW8260C	Acetic acid, methyl ester	ug/kg	54	U	41	U	37	U	45	U	48	U	43	U	43	U	42	U
SW8260C	Acetone	ug/kg	68	J	64	J	38	J	54	J	18	J	22	J	210	U	14	J
SW8260C	Benzene	ug/kg	0.41	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Bromobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Bromochloromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		6 - 8		8 - 10		12 - 13		33 - 34		19 - 20		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Bromodichloromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Bromoform	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Bromomethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Carbon disulfide	ug/kg	6		2.5	J	3.7	U	2.4	J	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Carbon tetrachloride	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Chlorobenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Chloroethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Chloroform	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Chloromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Cyclohexane	ug/kg	27	U	20	U	19	U	23	U	24	U	22	U	21	U	21	U
SW8260C	Dibromochloromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Dibromomethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Diethyl ether	ug/kg	2.8	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Ethylbenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Hexachlorobutadiene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Isopropyl ether	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Isopropylbenzene	ug/kg	1.3	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Methyl cyclohexane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Methylene chloride	ug/kg	11	U	6.1	U	4.7	U	8.8	U	7.8	U	7.2	U	6.7	U	9.7	U
SW8260C	n-Butylbenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Naphthalene	ug/kg	1.4	J	20	U	19	U	23	U	24	U	22	U	21	U	21	U
SW8260C	Propylbenzene	ug/kg	0.49	J	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	sec-Butylbenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Styrene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	tert-Butylbenzene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Tetrachloroethene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Tetrahydrofuran	ug/kg	54	U	41	U	37	U	45	U	48	U	43	U	43	U	42	U
SW8260C	Toluene	ug/kg	4.2	J	0.5	J	0.38	J	4.5	U	4.8	U	0.53	J	4.3	U	4.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Trichloroethene	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Trichlorofluoromethane	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Vinyl chloride	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Xylene, o	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Xylenes (m&p)	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U
SW8260C	Xylenes, Total	ug/kg	5.4	U	4.1	U	3.7	U	4.5	U	4.8	U	4.3	U	4.3	U	4.2	U

Notes

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November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		6 - 8		8 - 10		12 - 13		33 - 34		19 - 20		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	1-Methylnaphthalene	ug/kg	2	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	UJ	7.4	U	7.8	U
SW8270D	2,4-Dimethylphenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2,4-Dinitrophenol	ug/kg	380	U	360	U	350	U	360	U	360	U	360	UJ	370	U	390	U
SW8270D	2,4-Dinitrotoluene	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	2,6-Dinitrotoluene	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	2-Chloronaphthalene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	2-Chlorophenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2-Methylnaphthalene	ug/kg	1.9	J	7.3	U	2.3	J	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	2-Methylphenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	2-Nitroaniline	ug/kg	190	U	190	U	180	U	190	U	190	U	190	U	190	U	200	U
SW8270D	2-Nitrophenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	3 & 4 Methylphenol	ug/kg	90		36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	3-Nitroaniline	ug/kg	190	U	190	U	180	U	190	U	190	U	190	U	190	U	200	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	190	U	190	U	180	U	190	U	190	U	190	UJ	190	U	200	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	4-Chloroaniline	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	6.4	J	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	4-Nitroaniline	ug/kg	190	U	190	U	180	U	190	U	190	U	190	U	190	U	200	U
SW8270D	4-Nitrophenol	ug/kg	190	U	190	U	180	U	190	U	190	U	190	UJ	190	U	200	U
SW8270D	Acenaphthene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Acenaphthylene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Acetophenone	ug/kg	5.7	J	73	U	72	U	74	U	74	U	74	U	74	U	78	U
SW8270D	Aniline	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Anthracene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Atrazine	ug/kg	76	U	73	U	72	U	74	U	74	U	74	U	74	U	78	U
SW8270D	Azobenzene	ug/kg	370	U	370	U	360	U	340	U	340	U	350	U	360	U	380	U
SW8270D	Benzaldehyde	ug/kg	10	J-	73	R	72	R	74	R	74	R	74	R	74	R	78	R
SW8270D	Benzo(a)anthracene	ug/kg	2.8	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	3	J
SW8270D	Benzo(a)pyrene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.6	J
SW8270D	Benzo(b)fluoranthene	ug/kg	2.6	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	3.1	J
SW8270D	Benzo(ghi)perylene	ug/kg	1.8	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	1.8	J
SW8270D	Benzo(k)fluoranthene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Benzoic Acid	ug/kg	190	U	190	U	180	U	190	U	190	U	190	UJ	190	U	200	U
SW8270D	Benzyl alcohol	ug/kg	38	U	36	U	35	U	36	U	36	U	36	UJ	37	U	39	U
SW8270D	Biphenyl	ug/kg	7.8	J	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U

Notes

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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		6 - 8		8 - 10		12 - 13		33 - 34		19 - 20		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	2400		360	U	350	U	360	U	360	U	360	U	370	U	110	J
SW8270D	Butylbenzylphthalate	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Caprolactam	ug/kg	190	U	190	U	180	U	190	U	190	U	190	U	190	U	200	U
SW8270D	Carbazole	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Chrysene	ug/kg	3.7	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.8	J
SW8270D	Di-n-butylphthalate	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Di-n-octylphthalate	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.6	J
SW8270D	Dibenzofuran	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Diethylphthalate	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Dimethylphthalate	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Fluoranthene	ug/kg	6.9	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	4.7	J
SW8270D	Fluorene	ug/kg	1.9	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Hexachlorobenzene	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Hexachloroethane	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	2	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	1.7	J
SW8270D	Isophorone	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.6	U	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SW8270D	N-Nitrosodimethylamine	ug/kg	38	U	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	26	J	36	U	35	U	36	U	36	U	36	U	37	U	39	U
SW8270D	Nitrobenzene	ug/kg	76	U	73	U	72	U	74	U	73	U	73	U	74	U	78	U
SW8270D	Pentachlorophenol	ug/kg	190	U	190	U	180	U	190	U	190	U	190	UJ	190	U	200	U
SW8270D	Phenanthrene	ug/kg	9.7		2.8	J	7.2	U	7.4	U	2.4	J	7.4	U	7.4	U	4.8	J
SW8270D	Phenol	ug/kg	68		42		14	J	36	U	36	U	36	UJ	37	U	39	U
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	11000	UJ	11000	UJ	10000	UJ	10000	UJ	11000	UJ	11000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	6.3	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	4.2	J
SW8270D	Pentachlorophenol	ug/kg	770	U	190	U	180	U	190	U	190	U	190	U H	190	U	200	U
SW8270D	Phenanthrene	ug/kg	9.7	J	2.8	J	7.2	U	7.4	U	2.4	J	7.4	U H	7.4	U	4.8	J
SW8270D	Phenol	ug/kg	68	J	42		14	J	36	U	36	U	36	U H	37	U	39	U
SW8270D	Phthalic anhydride	ug/kg	11000	U	11000	U	11000	U	10000	U	10000	U	11000	U	11000	U	11000	U
SW8270D	Pyrene	ug/kg	7.6	J	7.3	U	7.2	U	7.4	U	7.4	U	7.4	U H	7.4	U	4.2	J

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		4 - 6		6 - 8		8 - 10		17 - 18		0 - 2		2 - 4	
		Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1-Dichloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1-Dichloroethene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,1-Dichloropropene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	22	U	23	UJ	24	UJ	21	U	19	U	21	U	23	U	21	U
SW8260C	1,2-Dibromoethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2-Dichloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,2-Dichloropropane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,3-Dichloropropane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	1,4-Dioxane	ug/kg	220	U	230	U	240	U	210	U	190	U	210	U	230	U	210	U
SW8260C	2,2-Dichloropropane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	5.5		11	J-	7.4	J-	4.3	U	3.7	U	4.2	U	4.5	U	1.3	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	2.1	J	3.8	J-	2.3	J-	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	2-Butanone	ug/kg	14	J+	32	J+	20	J+	560	J+	19	U	21	U	23	U	15	J+
SW8260C	2-Chlorotoluene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	2-Hexanone	ug/kg	22	U	23	UJ	24	UJ	21	U	19	U	21	U	23	U	21	U
SW8260C	4-Chlorotoluene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	4.3	U	4.7	UJ	0.52	J-	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	22	U	23	UJ	24	UJ	21	U	19	U	21	U	23	U	21	U
SW8260C	Acetic acid, methyl ester	ug/kg	43	U	150	J+	48	UJ	41	J	37	U	42	U	45	U	42	U
SW8260C	Acetone	ug/kg	46	J	69	J-	74	J-	18	J	190	U	19	J	230	U	210	U
SW8260C	Benzene	ug/kg	4.3	U	0.28	J	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Bromobenzene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Bromochloromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U

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November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		4 - 6		6 - 8		8 - 10		17 - 18		0 - 2		2 - 4	
		Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Bromodichloromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Bromoform	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Bromomethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Carbon disulfide	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Carbon tetrachloride	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Chlorobenzene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Chloroethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Chloroform	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Chloromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Cyclohexane	ug/kg	22	U	23	U	24	U	21	U	19	U	21	U	23	U	21	U
SW8260C	Dibromochloromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Dibromomethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Diethyl ether	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Ethylbenzene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Hexachlorobutadiene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Isopropyl ether	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Isopropylbenzene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Methyl cyclohexane	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Methylene chloride	ug/kg	6.2	U	6.9	U	7.3	U	29	U	26	U	9.1	U	4.5	U	4.2	U
SW8260C	n-Butylbenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Naphthalene	ug/kg	22	U	23	UJ	24	UJ	21	U	19	U	21	U	23	U	21	U
SW8260C	Propylbenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	sec-Butylbenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Styrene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	tert-Butylbenzene	ug/kg	4.3	U	4.7	UJ	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Tetrachloroethene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Tetrahydrofuran	ug/kg	43	U	47	UJ	48	UJ	43	U	37	U	42	U	45	U	42	U
SW8260C	Toluene	ug/kg	0.48	J	0.72	J	0.6	J	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Trichloroethene	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Trichlorofluoromethane	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Vinyl chloride	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Xylene, o	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Xylenes (m&p)	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
SW8260C	Xylenes, Total	ug/kg	4.3	U	4.7	U	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U

Notes

Units:
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UJ = not detected and value is approximate
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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		4 - 6		6 - 8		8 - 10		17 - 18		0 - 2		2 - 4	
		Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	1-Methylnaphthalene	ug/kg	23	U	200	U	60	J	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2,4-Dichlorophenol	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	2,4-Dimethylphenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2,4-Dinitrophenol	ug/kg	1100	U	10000	U	11000	U	370	U	350	U	350	U	720	U	3500	U
SW8270D	2,4-Dinitrotoluene	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2,6-Dinitrotoluene	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2-Chloronaphthalene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	2-Chlorophenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2-Methylnaphthalene	ug/kg	23	U	51	J	100	J	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	2-Methylphenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	2-Nitroaniline	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	2-Nitrophenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	3 & 4 Methylphenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	3-Nitroaniline	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	190	J
SW8270D	4-Chloro-3-methylphenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	4-Chloroaniline	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	4-Nitroaniline	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	4-Nitrophenol	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	Acenaphthene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Acenaphthylene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Acetophenone	ug/kg	230	U	2000	U	2100	U	76	U	72	U	70	U	4.4	J	720	U
SW8270D	Aniline	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Anthracene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Atrazine	ug/kg	230	U	2000	U	2100	U	76	U	72	U	70	U	150	U	720	U
SW8270D	Azobenzene	ug/kg	1800	U	2000	U	2100	U	370	U	360	U	350	U	360	U	3600	U
SW8270D	Benzaldehyde	ug/kg	230	J-	2000	U	2100	U	76	U	72	U	70	U	150	R	720	R
SW8270D	Benzo(a)anthracene	ug/kg	8.9	J	200	U	210	U	7.6	U	7.2	U	7	U	5.3	J	72	U
SW8270D	Benzo(a)pyrene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	4.7	J	72	U
SW8270D	Benzo(b)fluoranthene	ug/kg	8.2	J	200	U	210	U	7.6	U	7.2	U	7	U	6.8	J	72	U
SW8270D	Benzo(ghi)perylene	ug/kg	5.4	J	200	U	210	U	7.6	U	7.2	U	7	U	3.8	J	72	U
SW8270D	Benzo(k)fluoranthene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Benzoic Acid	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	Benzyl alcohol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Biphenyl	ug/kg	33	J	45	J	1100	U	37	U	35	U	35	U	5.3	J	5500	
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		4 - 6		6 - 8		8 - 10		17 - 18		0 - 2		2 - 4	
		Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	2400		2200	J	2100	J	370	U	350	U	350	U	770		370000	
SW8270D	Butylbenzylphthalate	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Caprolactam	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	Carbazole	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	55	J
SW8270D	Chrysene	ug/kg	7.6	J	200	U	210	U	7.6	U	7.2	U	7	U	5.6	J	72	U
SW8270D	Di-n-butylphthalate	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	2100	
SW8270D	Di-n-octylphthalate	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Dibenzofuran	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	29	J
SW8270D	Diethylphthalate	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Dimethylphthalate	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Fluoranthene	ug/kg	11	J	200	U	210	U	7.6	U	7.2	U	7	U	6.6	J	46	J
SW8270D	Fluorene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Hexachlorobenzene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Hexachloroethane	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	3.2	J	72	U
SW8270D	Isophorone	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	23	U	200	U	210	U	7.6	U	7.2	U	7	U	15	U	72	U
SW8270D	N-Nitrosodimethylamine	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	400		2500		2700		37	U	35	U	35	U	52	J	28000	J
SW8270D	Nitrobenzene	ug/kg	230	U	2000	U	2100	U	76	U	72	U	70	U	150	U	710	U
SW8270D	Pentachlorophenol	ug/kg	590	U	5100	U	5400	U	190	U	180	U	180	U	370	U	1800	U
SW8270D	Phenanthrene	ug/kg	7.8	J	200	U	210	U	7.6	U	7.2	U	7	U	4.5	J	150	
SW8270D	Phenol	ug/kg	110	U	1000	U	1100	U	37	U	35	U	35	U	72	U	350	U
SW8270D	Phthalic anhydride	ug/kg	56000	UJ	61000	UJ	65000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ	110000	UJ
SW8270D	Pyrene	ug/kg	12	J	200	U	210	U	7.6	U	7.2	U	7	U	6.9	J	68	J
SW8270D	Pentachlorophenol	ug/kg	590	U	5100	U	5400	U F1	190	U	180	U	180	U	370	U	180000	U
SW8270D	Phenanthrene	ug/kg	7.8	J	200	U	210	U	7.6	U	7.2	U	7	U	4.5	J	7200	U
SW8270D	Phenol	ug/kg	110	U	1000	U	1100	U F1	37	U	35	U	35	U	72	U	35000	U
SW8270D	Phthalic anhydride	ug/kg	56000	U	61000	U	65000	U	11000	U	11000	U	11000	U	11000	U	110000	U
SW8270D	Pyrene	ug/kg	12	J	200	U	210	U	7.6	U	7.2	U	7	U	6.9	J	7200	U

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		10 - 12		20 - 22		26 - 27		0 - 2		2 - 4		4 - 6	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1-Dichloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	0.83	J	4.2	U
SW8260C	1,1-Dichloroethene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,1-Dichloropropene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	3.9	U	3.7	U	0.85	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	3.9	U	3.7	U	1.9	J	5	U	3.1	U	2.5	J	1.4	J	4.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	3.9	U	3.7	U	1.6	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	19	U	19	U	21	U	25	U	15	U	26	U	20	U	21	U
SW8260C	1,2-Dibromoethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	3.9	U	3.7	U	0.5	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2-Dichloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,2-Dichloropropane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	3.9	U	3.7	U	1.5	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	3.9	U	3.7	U	1.2	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,3-Dichloropropane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	3.9	U	3.7	U	0.68	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	1,4-Dioxane	ug/kg	190	U	190	U	210	U	250	U	150	U	260	U	200	U	210	U
SW8260C	2,2-Dichloropropane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	1.9	J	3.7	U	75		0.54	J	1.9	J	5.2	U	6.3		1	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	3.9	U	3.7	U	25		5	U	3.1	U	5.2	U	3.5	J	4.2	U
SW8260C	2-Butanone	ug/kg	8.2	J	19	U	17	J+	25	U	15	U	15	J	21	J+	21	U
SW8260C	2-Chlorotoluene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	2-Hexanone	ug/kg	19	U	19	U	21	U	25	U	15	U	26	U	20	U	21	U
SW8260C	4-Chlorotoluene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	3.9	U	3.7	U	2	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	19	U	19	U	21	U	25	U	15	U	26	U	20	U	21	U
SW8260C	Acetic acid, methyl ester	ug/kg	39	U	37	U	42	U	50	U	31	U	52	U	39	U	42	U
SW8260C	Acetone	ug/kg	190	U	190	U	210	U	250	U	150	U	260	U	200	U	210	U
SW8260C	Benzene	ug/kg	3.9	U	3.7	U	2	J	5	U	3.1	U	5.2	U	0.2	J	4.2	U
SW8260C	Bromobenzene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Bromochloromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		10 - 12		20 - 22		26 - 27		0 - 2		2 - 4		4 - 6	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Bromodichloromethane	ug/kg	3.9	U	3.7	U	2.6	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Bromoform	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Bromomethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Carbon disulfide	ug/kg	3.9	U	3.7	U	2.2	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Carbon tetrachloride	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Chlorobenzene	ug/kg	3.9	U	3.7	U	0.91	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Chloroethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Chloroform	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Chloromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Cyclohexane	ug/kg	19	U	19	U	21	U	25	U	15	U	26	U	20	U	21	U
SW8260C	Dibromochloromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Dibromomethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Diethyl ether	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Ethylbenzene	ug/kg	3.9	U	3.7	U	5.6		5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Hexachlorobutadiene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Isopropyl ether	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Isopropylbenzene	ug/kg	3.9	U	3.7	U	2.9	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Methyl cyclohexane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Methylene chloride	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	n-Butylbenzene	ug/kg	3.9	U	3.7	U	0.94	J	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Naphthalene	ug/kg	19	U	19	U	21	U	25	U	15	U	26	U	20	U	21	U
SW8260C	Propylbenzene	ug/kg	3.9	U	3.7	U	6.1		5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	sec-Butylbenzene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Styrene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	tert-Butylbenzene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Tetrachloroethene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Tetrahydrofuran	ug/kg	39	U	37	U	42	U	50	U	31	U	52	U	39	U	42	U
SW8260C	Toluene	ug/kg	3.9	U	3.7	U	0.5	J	5	U	3.1	U	5.2	U	0.41	J	4.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Trichloroethene	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Trichlorofluoromethane	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Vinyl chloride	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Xylene, o	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Xylenes (m&p)	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U
SW8260C	Xylenes, Total	ug/kg	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U	3.9	U	4.2	U

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		10 - 12		20 - 22		26 - 27		0 - 2		2 - 4		4 - 6	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	1-Methylnaphthalene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	8.4	J	7.3	U	7.2	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	2,4-Dimethylphenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2,4-Dinitrophenol	ug/kg	360	U	720	U	400	U	360	U	350	U	1600	U	360	U	350	U
SW8270D	2,4-Dinitrotoluene	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2,6-Dinitrotoluene	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2-Chloronaphthalene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	2-Chlorophenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2-Methylnaphthalene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	10	J	7.3	U	7.2	U
SW8270D	2-Methylphenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	2-Nitroaniline	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	2-Nitrophenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	3 & 4 Methylphenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	3-Nitroaniline	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	4-Chloroaniline	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	4-Nitroaniline	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	4-Nitrophenol	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	Acenaphthene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Acenaphthylene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Acetophenone	ug/kg	72	U	150	U	81	U	72	U	71	U	330	U	73	U	72	U
SW8270D	Aniline	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Anthracene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Atrazine	ug/kg	72	U	150	U	81	U	72	U	71	U	330	U	73	U	72	U
SW8270D	Azobenzene	ug/kg	360	U	350	U	2000	U	360	U	350	U	410	U	360	U	360	U
SW8270D	Benzaldehyde	ug/kg	72	R	150	R	81	R	72	R	71	R	330	R	73	R	72	R
SW8270D	Benzo(a)anthracene	ug/kg	7.2	U	15	U	3.6	J	7.2	U	7.1	U	17	J	1.4	J	7.2	U
SW8270D	Benzo(a)pyrene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	11	J	7.3	U	7.2	U
SW8270D	Benzo(b)fluoranthene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	22	J	7.3	U	7.2	U
SW8270D	Benzo(ghi)perylene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	16	J	7.3	U	7.2	U
SW8270D	Benzo(k)fluoranthene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Benzoic Acid	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	Benzyl alcohol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Biphenyl	ug/kg	36	U	72	U	910		36	U	35	U	19	J	36	U	35	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		10 - 12		20 - 22		26 - 27		0 - 2		2 - 4		4 - 6	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	170	J	210	J	120000		240	J	350	U	8100		500		2400	
SW8270D	Butylbenzylphthalate	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Caprolactam	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	Carbazole	ug/kg	7.2	U	15	U	8.9		7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Chrysene	ug/kg	7.2	U	15	U	4	J	7.2	U	7.1	U	19	J	7.3	U	7.2	U
SW8270D	Di-n-butylphthalate	ug/kg	36	U	72	U	360		36	U	35	U	160	U	36	U	35	U
SW8270D	Di-n-octylphthalate	ug/kg	36	U	72	U	47		36	U	35	U	160	U	36	U	23	J
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Dibenzofuran	ug/kg	36	U	72	U	4.6	J	36	U	35	U	160	U	36	U	35	U
SW8270D	Diethylphthalate	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Dimethylphthalate	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Fluoranthene	ug/kg	7.2	U	15	U	12		7.2	U	7.1	U	21	J	7.3	U	7.2	U
SW8270D	Fluorene	ug/kg	7.2	U	15	U	3.6	J	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Hexachlorobenzene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Hexachloroethane	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	17	J	7.3	U	7.2	U
SW8270D	Isophorone	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.2	U	15	U	8.1	U	7.2	U	7.1	U	33	U	7.3	U	7.2	U
SW8270D	N-Nitrosodimethylamine	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	36	U	25	J	6200	J	36	U	35	U	510		18	J	35	U
SW8270D	Nitrobenzene	ug/kg	72	U	150	U	80	U	72	U	71	U	320	U	73	U	72	U
SW8270D	Pentachlorophenol	ug/kg	180	U	370	U	200	U	180	U	180	U	820	U	190	U	180	U
SW8270D	Phenanthrene	ug/kg	4.5	J	4.5	J	28		2	J	7.1	U	16	J	3.3	J	2.6	J
SW8270D	Phenol	ug/kg	36	U	72	U	40	U	36	U	35	U	160	U	36	U	35	U
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	11000	UJ	60000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	7.2	U	15	U	15		7.2	U	7.1	U	31	J	1.7	J	7.2	U
SW8270D	Pentachlorophenol	ug/kg	180	U	370	U	41000	U	180	U	180	U	820	U	190	U	730	U
SW8270D	Phenanthrene	ug/kg	4.5	J	4.5	J	28	U	2	J	7.1	U	81	U	3.3	J	29	U
SW8270D	Phenol	ug/kg	36	U	72	U	8000	U	36	U	35	U	400	U	36	U	35	U
SW8270D	Phthalic anhydride	ug/kg	11000	U	11000	U	60000	U	11000	U	11000	U	12000	U	11000	U	11000	U
SW8270D	Pyrene	ug/kg	7.2	U	15	U	1600	U	7.2	U	7.1	U	31	J *	1.7	J *	7.2	U *

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Sample Depth (ft bgs)	6 - 8		6 - 8		8 - 10		12 - 13		15 - 17		0 - 2		2 - 4		4 - 6	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1-Dichloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1-Dichloroethene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,1-Dichloropropene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	0.37	J	4.4	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	20	UJ	19	UJ	19	U	25	U	22	U	32	U	30	U	22	U
SW8260C	1,2-Dibromoethane	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2-Dichloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,2-Dichloropropane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	0.63	J	6	U	4.4	U
SW8260C	1,3-Dichlorobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,3-Dichloropropane	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	1,4-Dioxane	ug/kg	200	UJ	190	UJ	190	U	250	U	220	U	320	U	300	U	220	U
SW8260C	2,2-Dichloropropane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	2.7	J	6	U	5.7	
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	0.88	J	6	U	0.76	J
SW8260C	2-Butanone	ug/kg	3.9	J	19	U	19	U	25	U	22	U	32	U	11	J+	22	U
SW8260C	2-Chlorotoluene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	2-Hexanone	ug/kg	20	UJ	19	UJ	19	U	25	U	22	U	32	U	30	U	22	U
SW8260C	4-Chlorotoluene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	4-iso-Propyltoluene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	1.3	J	6	U	4.4	U
SW8260C	4-Methyl-2-pentanone	ug/kg	20	UJ	19	UJ	19	U	25	U	22	U	32	U	30	U	22	U
SW8260C	Acetic acid, methyl ester	ug/kg	41	UJ	38	UJ	39	U	50	U	44	U	64	U	60	U	44	U
SW8260C	Acetone	ug/kg	200	UJ	190	UJ	190	U	250	U	220	U	20	J	41	J	12	J
SW8260C	Benzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Bromobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Bromochloromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Sample Depth (ft bgs)	6 - 8		6 - 8		8 - 10		12 - 13		15 - 17		0 - 2		2 - 4		4 - 6	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Bromodichloromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Bromoform	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Bromomethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Carbon disulfide	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	3.9	J	6	U	4.4	U
SW8260C	Carbon tetrachloride	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Chlorobenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Chloroethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Chloroform	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Chloromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Cyclohexane	ug/kg	20	U	19	U	19	U	25	U	22	U	32	U	30	U	22	U
SW8260C	Dibromochloromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Dibromomethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Diethyl ether	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Ethylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Hexachlorobutadiene	ug/kg	4.1	UJ	3.8	UJ	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Isopropyl ether	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Isopropylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Methyl cyclohexane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Methylene chloride	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	n-Butylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Naphthalene	ug/kg	20	UJ	19	UJ	19	U	25	U	22	U	1.1	J	30	U	22	U
SW8260C	Propylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	sec-Butylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Styrene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	tert-Butylbenzene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Tetrachloroethene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Tetrahydrofuran	ug/kg	41	UJ	38	UJ	39	U	50	U	44	U	64	U	60	U	44	U
SW8260C	Toluene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	0.61	J	6	U	4.4	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Trichloroethene	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Trichlorofluoromethane	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Vinyl chloride	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Xylene, o	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Xylenes (m&p)	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U
SW8260C	Xylenes, Total	ug/kg	4.1	U	3.8	U	3.9	U	5	U	4.4	U	6.4	U	6	U	4.4	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Sample Depth (ft bgs)	6 - 8		6 - 8		8 - 10		12 - 13		15 - 17		0 - 2		2 - 4		4 - 6	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	1-Methylnaphthalene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	2,4-Dimethylphenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2,4-Dinitrophenol	ug/kg	350	U	340	U	360	U	370	U	350	U	360	U	380	U	360	U
SW8270D	2,4-Dinitrotoluene	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2,6-Dinitrotoluene	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2-Chloronaphthalene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	2-Chlorophenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2-Methylnaphthalene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	2-Methylphenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	2-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	2-Nitrophenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	3 & 4 Methylphenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	3-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	4-Chloroaniline	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	4-Nitroaniline	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	4-Nitrophenol	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	Acenaphthene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	Acenaphthylene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	1.6	J	7.7	U	7.4	U
SW8270D	Acetophenone	ug/kg	71	U	69	U	72	U	75	U	71	U	3.4	J	77	U	74	U
SW8270D	Aniline	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Anthracene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	2.6	J	7.7	U	7.4	U
SW8270D	Atrazine	ug/kg	71	U	69	U	72	U	75	U	71	U	72	U	77	U	74	U
SW8270D	Azobenzene	ug/kg	350	U	350	U	360	U	370	U	350	U	360	U	380	U	360	U
SW8270D	Benzaldehyde	ug/kg	71	R	69	R	72	R	75	R	71	R	72	R	77	R	74	R
SW8270D	Benzo(a)anthracene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	10		1.7	J	7.4	U
SW8270D	Benzo(a)pyrene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	8.5		7.7	U	7.4	U
SW8270D	Benzo(b)fluoranthene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	17		7.7	U	7.4	U
SW8270D	Benzo(ghi)perylene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	6.7	J	7.7	U	7.4	U
SW8270D	Benzo(k)fluoranthene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	4.5	J	7.7	U	7.4	U
SW8270D	Benzoic Acid	ug/kg	180	R	180	R	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	Benzyl alcohol	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Biphenyl	ug/kg	35	U	34	U	36	U	37	U	35	U	3.5	J	38	U	36	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Sample Depth (ft bgs)	6 - 8		6 - 8		8 - 10		12 - 13		15 - 17		0 - 2		2 - 4		4 - 6	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	350	U	340	U	360	U	370	U	350	U	500		72	J	57	J
SW8270D	Butylbenzylphthalate	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Caprolactam	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	Carbazole	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	1.9	J	7.7	U	7.4	U
SW8270D	Chrysene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	16		2.1	J	7.4	U
SW8270D	Di-n-butylphthalate	ug/kg	35	U	34	U	36	U	37	U	35	U	18	J	38	U	36	U
SW8270D	Di-n-octylphthalate	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	2.7	J	7.7	U	7.4	U
SW8270D	Dibenzofuran	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Diethylphthalate	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	20	J	25	J
SW8270D	Dimethylphthalate	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Fluoranthene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	9.8		2.8	J	7.4	U
SW8270D	Fluorene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	Hexachlorobenzene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Hexachloroethane	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	5.9	J	7.7	U	7.4	U
SW8270D	Isophorone	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SW8270D	N-Nitrosodimethylamine	ug/kg	35	U	34	U	36	U	37	U	35	U	36	U	38	U	36	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	35	U	34	U	36	U	37	U	35	U	100		38	U	36	U
SW8270D	Nitrobenzene	ug/kg	71	U	69	U	72	U	75	U	70	U	72	U	76	U	73	U
SW8270D	Pentachlorophenol	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	Phenanthrene	ug/kg	2.1	J	2.5	J	7.2	U	7.5	U	7.1	U	7.3		2.9	J	2.3	J
SW8270D	Phenol	ug/kg	35	U	34	U	36	U	37	U	35	U	13	J	38	U	36	U
SW8270D	Phthalic anhydride	ug/kg	10000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	7.1	U	6.9	U	7.2	U	7.5	U	7.1	U	10		2.9	J	7.4	U
SW8270D	Pentachlorophenol	ug/kg	180	U	180	U	180	U	190	U	180	U	180	U	190	U	190	U
SW8270D	Phenanthrene	ug/kg	2.1	J	2.5	J	7.2	U	7.5	U	7.1	U	7.3		2.9	J	2.3	J
SW8270D	Phenol	ug/kg	35	U	34	U	36	U	37	U	35	U	13	J	38	U	36	U
SW8270D	Phthalic anhydride	ug/kg	10000	U	11000	U	11000	U	11000	U	11000	U	11000	U	12000	U	11000	U
SW8270D	Pyrene	ug/kg	7.1	U *	6.9	U *	7.2	U	7.5	U *	7.1	U *	10		2.9	J	7.4	U

Notes

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		16 - 18		28 - 30		33 - 34		22 - 24		0 - 2		2 - 4	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1,1-Trichloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1,2-Trichloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1-Dichloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1-Dichloroethene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,1-Dichloropropene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2,3-Trichloropropane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	0.43	J	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	0.52	J
SW8260C	1,2,4-Trimethylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	19	U	21	U	21	U	22	U	17	U	18	U	22	U	19	U
SW8260C	1,2-Dibromoethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2-Dichlorobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2-Dichloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,2-Dichloropropane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,3-Dichlorobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,3-Dichloropropane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,4-Dichlorobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	1,4-Dioxane	ug/kg	190	U	210	U	210	U	220	U	170	U	180	U	220	U	190	U
SW8260C	2,2-Dichloropropane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	9.1		2.7	J	0.74	J	0.44	J	3.4	U	1	J	4.4	U	3	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	2.1	J	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	1.2	J
SW8260C	2-Butanone	ug/kg	19	U	21	U	4.1	J+	22	U	5.5	J+	18	U	22	U	9.5	J
SW8260C	2-Chlorotoluene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	2-Hexanone	ug/kg	19	U	21	U	21	U	22	U	17	U	18	U	22	U	19	U
SW8260C	4-Chlorotoluene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	4-iso-Propyltoluene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	4-Methyl-2-pentanone	ug/kg	19	U	21	U	21	U	22	U	17	U	18	U	22	U	19	U
SW8260C	Acetic acid, methyl ester	ug/kg	39	U	43	U	41	U	45	U	34	U	36	U	44	U	39	U
SW8260C	Acetone	ug/kg	11	J	5.3	J	13	J	15	J	24	J	4.4	J	5.8	J	33	J
SW8260C	Benzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	1.3	J	3.6	U	4.4	U	3.9	U
SW8260C	Bromobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Bromochloromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		16 - 18		28 - 30		33 - 34		22 - 24		0 - 2		2 - 4	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Bromodichloromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Bromoform	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Bromomethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Carbon disulfide	ug/kg	3.9	U	4.3	U	2.9	J	4.5	U	3	J	3.6	U	4.4	U	3.9	U
SW8260C	Carbon tetrachloride	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Chlorobenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Chloroethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Chloroform	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Chloromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Cyclohexane	ug/kg	19	U	21	U	21	U	22	U	17	U	18	U	22	U	19	U
SW8260C	Dibromochloromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Dibromomethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	1	J	3.6	U	4.4	U	3.9	U
SW8260C	Dichlorodifluoromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Diethyl ether	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Ethylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	0.42	J	0.27	J
SW8260C	Hexachlorobutadiene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Isopropyl ether	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Isopropylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Methyl cyclohexane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Methylene chloride	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	n-Butylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Naphthalene	ug/kg	19	U	21	U	21	U	22	U	0.53	J	18	U	22	U	19	U
SW8260C	Propylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	sec-Butylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Styrene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	0.34	J	3.6	U	4.4	U	3.9	U
SW8260C	tert-Butylbenzene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Tetrachloroethene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Tetrahydrofuran	ug/kg	39	U	43	U	41	U	45	U	34	U	36	U	44	U	39	U
SW8260C	Toluene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	0.99	J	3.6	U	4.4	U	3.9	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Trichloroethene	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Trichlorofluoromethane	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Vinyl chloride	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Xylene, o	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
SW8260C	Xylenes (m&p)	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	1.4	J	0.75	J
SW8260C	Xylenes, Total	ug/kg	3.9	U	4.3	U	4.1	U	4.5	U	3.4	U	3.6	U	1.4	J	0.75	J

Notes

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		16 - 18		28 - 30		33 - 34		22 - 24		0 - 2		2 - 4	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	1-Methylnaphthalene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	2,4-Dimethylphenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2,4-Dinitrophenol	ug/kg	350	U	340	U	340	U	380	U	360	U	350	U	390	U	1100	U
SW8270D	2,4-Dinitrotoluene	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2,6-Dinitrotoluene	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2-Chloronaphthalene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	2-Chlorophenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2-Methylnaphthalene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	2-Methylphenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	2-Nitroaniline	ug/kg	180	U	180	U	180	UJ	200	U	180	UJ	180	UJ	200	U	580	U
SW8270D	2-Nitrophenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	3 & 4 Methylphenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	3-Nitroaniline	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	4-Chloroaniline	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	4-Nitroaniline	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	4-Nitrophenol	ug/kg	180	U	180	U	180	UJ	200	UJ	180	UJ	180	UJ	200	U	580	U
SW8270D	Acenaphthene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	Acenaphthylene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	Acetophenone	ug/kg	71	U	70	U	69	U	78	U	72	U	72	U	4.1	J	230	U
SW8270D	Aniline	ug/kg	17	J	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Anthracene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	Atrazine	ug/kg	71	U	70	U	69	U	78	U	72	U	72	U	80	U	230	U
SW8270D	Azobenzene	ug/kg	340	U	330	U	350	U	380	U	350	U	360	U	390	U	380	U
SW8270D	Benzaldehyde	ug/kg	71	R	70	R	69	R	78	R	72	R	72	R	80	R	230	R
SW8270D	Benzo(a)anthracene	ug/kg	1.6	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	9.4		26	
SW8270D	Benzo(a)pyrene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8.9		22	J
SW8270D	Benzo(b)fluoranthene	ug/kg	2.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	12		28	
SW8270D	Benzo(ghi)perylene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	7.4	J	13	J
SW8270D	Benzo(k)fluoranthene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	5.2	J	11	J
SW8270D	Benzoic Acid	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	Benzyl alcohol	ug/kg	35	U	34	U	34	U	38	U	2.9	J	35	U	39	U	110	U
SW8270D	Biphenyl	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	4.4	J	10	J
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U

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Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		16 - 18		28 - 30		33 - 34		22 - 24		0 - 2		2 - 4	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	2900		340	U	340	U	380	U	360	U	350	U	940		6300	
SW8270D	Butylbenzylphthalate	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Caprolactam	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	Carbazole	ug/kg	2.2	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	5.7	J
SW8270D	Chrysene	ug/kg	2.7	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	12		27	
SW8270D	Di-n-butylphthalate	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	72	J
SW8270D	Di-n-octylphthalate	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	61		110	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	2.1	J	23	U
SW8270D	Dibenzofuran	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Diethylphthalate	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Dimethylphthalate	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Fluoranthene	ug/kg	3.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	14		35	
SW8270D	Fluorene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	Hexachlorobenzene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Hexachloroethane	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	6.3	J	13	J
SW8270D	Isophorone	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	8	U	23	U
SW8270D	N-Nitrosodimethylamine	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	39	U	110	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	280		34	U	34	U	38	U	36	U	35	U	49		1600	
SW8270D	Nitrobenzene	ug/kg	71	U	69	U	69	U	78	U	72	U	72	U	79	U	230	U
SW8270D	Pentachlorophenol	ug/kg	180	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	Phenanthrene	ug/kg	2.3	J	7	U	6.9	U	2.8	J	7.2	U	7.2	U	8.3		15	J
SW8270D	Phenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	80		53	J
SW8270D	Phthalic anhydride	ug/kg	10000	UJ	10000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	4.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U	14		34	
SW8270D	Pentachlorophenol	ug/kg	900	U	180	U	180	U	200	U	180	U	180	U	200	U	580	U
SW8270D	Phenanthrene	ug/kg	36	U	7	U	6.9	U	2.8	J	7.2	U	7.2	U	8.3		77	U
SW8270D	Phenol	ug/kg	35	U	34	U	34	U	38	U	36	U	35	U	80		53	U
SW8270D	Phthalic anhydride	ug/kg	10000	U	10000	U	11000	U	12000	U	11000	U	11000	U	12000	U	11000	U
SW8270D	Pyrene	ug/kg	4.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U	14		36	J

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		8 - 10		8 - 10		16 - 17		32 - 33		2 - 4		4 - 6	
		Qc Code	FS		FS		FD		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1-Dichloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1-Dichloroethene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,1-Dichloropropene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	0.89	J	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	22	U	23	U	25	UJ	18	UJ	22	U	21	U	24	U	18	U
SW8260C	1,2-Dibromoethane	ug/kg	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2-Dichloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,2-Dichloropropane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	0.28	J	4.2	U	4.8	U	3.7	U
SW8260C	1,3-Dichlorobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	0.35	J
SW8260C	1,3-Dichloropropane	ug/kg	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	1,4-Dioxane	ug/kg	220	U	230	U	250	UJ	180	UJ	220	U	210	U	240	U	180	U
SW8260C	2,2-Dichloropropane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	2.7	J	4.5	U	4.9	U	3.7	U	1.2	J	4.2	U	7.1		35	
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	0.77	J	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	1.4	J	18	
SW8260C	2-Butanone	ug/kg	16	J+	23	U	25	U	18	U	22	U	21	U	24	U	7	J+
SW8260C	2-Chlorotoluene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	2-Hexanone	ug/kg	22	U	23	U	25	UJ	18	UJ	22	U	21	U	24	U	18	U
SW8260C	4-Chlorotoluene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	4-iso-Propyltoluene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	4-Methyl-2-pentanone	ug/kg	22	U	23	U	25	UJ	18	UJ	22	U	21	U	24	U	18	U
SW8260C	Acetic acid, methyl ester	ug/kg	44	U	45	U	49	UJ	37	UJ	44	U	42	U	48	U	37	U
SW8260C	Acetone	ug/kg	77	J	22	J	10	J-	11	J-	17	J	9.7	J	15	J	30	J
SW8260C	Benzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Bromobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Bromochloromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U

Notes

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		8 - 10		8 - 10		16 - 17		32 - 33		2 - 4		4 - 6	
		Qc Code	FS		FS		FD		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Bromodichloromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Bromoform	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Bromomethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Carbon disulfide	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	5.7	
SW8260C	Carbon tetrachloride	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Chlorobenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Chloroethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Chloroform	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Chloromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Cyclohexane	ug/kg	22	U	23	U	25	U	18	U	22	U	21	U	24	U	18	U
SW8260C	Dibromochloromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Dibromomethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Diethyl ether	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Ethylbenzene	ug/kg	0.33	J	4.5	U	0.57	J	0.29	J	0.54	J	0.38	J	4.8	U	3.7	U
SW8260C	Hexachlorobutadiene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Isopropyl ether	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Isopropylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Methyl cyclohexane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Methylene chloride	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	n-Butylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Naphthalene	ug/kg	22	U	23	U	25	UJ	18	UJ	22	U	21	U	24	U	18	U
SW8260C	Propylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	sec-Butylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Styrene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	tert-Butylbenzene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Tetrachloroethene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Tetrahydrofuran	ug/kg	44	U	45	U	49	UJ	37	UJ	44	U	42	U	48	U	37	U
SW8260C	Toluene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	0.29	J
SW8260C	trans-1,2-Dichloroethene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Trichloroethene	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Trichlorofluoromethane	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Vinyl chloride	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Xylene, o	ug/kg	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U	4.8	U	3.7	U
SW8260C	Xylenes (m&p)	ug/kg	1.1	J	0.76	J	1.7	J	0.88	J	1.9	J	1.3	J	4.8	U	3.7	U
SW8260C	Xylenes, Total	ug/kg	1.1	J	0.76	J	1.7	J	0.88	J	1.9	J	1.3	J	4.8	U	3.7	U

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November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		8 - 10		8 - 10		16 - 17		32 - 33		2 - 4		4 - 6	
		Qc Code	FS		FS		FD		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	1-Methylnaphthalene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	2,4-Dimethylphenol	ug/kg	3.9	J	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2,4-Dinitrophenol	ug/kg	380	U	380	U	380	U	390	U	350	U	360	U	420	U	370	U
SW8270D	2,4-Dinitrotoluene	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2,6-Dinitrotoluene	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2-Chloronaphthalene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	2-Chlorophenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2-Methylnaphthalene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	2-Methylphenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	2-Nitroaniline	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	UJ	190	UJ
SW8270D	2-Nitrophenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	3 & 4 Methylphenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	3-Nitroaniline	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	4-Chloroaniline	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	4-Nitroaniline	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	4-Nitrophenol	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	UJ	190	UJ
SW8270D	Acenaphthene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Acenaphthylene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Acetophenone	ug/kg	8.3	J	77	U	77	U	78	U	72	U	72	U	85	U	75	U
SW8270D	Aniline	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Anthracene	ug/kg	2.3	J	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Atrazine	ug/kg	77	U	77	U	77	U	78	U	72	U	72	U	85	U	75	U
SW8270D	Azobenzene	ug/kg	380	U	380	U	380	U	380	U	360	U	350	U	420	U	370	U
SW8270D	Benzaldehyde	ug/kg	77	R	77	R	77	R	78	R	72	R	72	R	85	R	75	R
SW8270D	Benzo(a)anthracene	ug/kg	8.5		7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	3.8	J	5.7	J
SW8270D	Benzo(a)pyrene	ug/kg	7.5	J	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	4.4	J	4.7	J
SW8270D	Benzo(b)fluoranthene	ug/kg	13		7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	6.3	J	5.8	J
SW8270D	Benzo(ghi)perylene	ug/kg	6.5	J	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	4.1	J	3.2	J
SW8270D	Benzo(k)fluoranthene	ug/kg	4.3	J	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Benzoic Acid	ug/kg	200	U	190	U	200	R	200	R	180	U	180	U	220	U	190	U
SW8270D	Benzyl alcohol	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Biphenyl	ug/kg	7	J	3.4	J	38	U	39	U	35	U	36	U	42	U	4.4	J
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		8 - 10		8 - 10		16 - 17		32 - 33		2 - 4		4 - 6	
		Qc Code	FS		FS		FD		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	6900		6700		380	U	390	U	50	J	360	U	300	J	1000	
SW8270D	Butylbenzylphthalate	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Caprolactam	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	Carbazole	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Chrysene	ug/kg	12		7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	5.9	J	5.8	J
SW8270D	Di-n-butylphthalate	ug/kg	29	J	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Di-n-octylphthalate	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Dibenzofuran	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Diethylphthalate	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Dimethylphthalate	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Fluoranthene	ug/kg	16		7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	6.7	J	10	
SW8270D	Fluorene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Hexachlorobenzene	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Hexachloroethane	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	6.5	J	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	3.8	J	2.9	J
SW8270D	Isophorone	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.7	U	7.7	U	7.7	U	7.8	U	7.2	U	7.2	U	8.5	U	7.5	U
SW8270D	N-Nitrosodimethylamine	ug/kg	38	U	38	U	38	U	39	U	35	U	36	U	42	U	37	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	450		27	J	38	U	39	U	35	U	36	U	35	J	62	
SW8270D	Nitrobenzene	ug/kg	77	U	76	U	77	U	78	U	72	U	72	U	84	U	75	U
SW8270D	Pentachlorophenol	ug/kg	200	U	190	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	Phenanthrene	ug/kg	9.3		2.5	J	2.1	J	3.6	J	7.2	U	7.2	U	3.9	J	7.9	
SW8270D	Phenol	ug/kg	340		38	U	38	U	39	U	35	U	36	U	42	U	11	J
SW8270D	Phthalic anhydride	ug/kg	12000	UJ	12000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ	13000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	16		1.8	J	7.7	U	7.8	U	7.2	U	7.2	U	6.6	J	8.9	
SW8270D	Pentachlorophenol	ug/kg	2000	U	1900	U	200	U	200	U	180	U	180	U	220	U	190	U
SW8270D	Phenanthrene	ug/kg	9.3	U	77	U	2.1	J	3.6	J	7.2	U	7.2	U	3.9	J	7.9	
SW8270D	Phenol	ug/kg	350	J	380	U	38	U	39	U	35	U	36	U	42	U	11	J
SW8270D	Phthalic anhydride	ug/kg	12000	U	12000	U	11000	U	12000	U	11000	U	11000	U	13000	U	11000	U
SW8270D	Pyrene	ug/kg	18	J	77	U	7.7	U	7.8	U	7.2	U	7.2	U	6.6	J	8.9	

Notes

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Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		23 - 24		36 - 37		0 - 2		4 - 6		2 - 4		6 - 8	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1,1-Trichloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1,2-Trichloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1-Dichloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1-Dichloroethene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,1-Dichloropropene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2,3-Trichloropropane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	19	U	26	U	23	U	19	U	30	U	5200	U	9300	U	24	U
SW8260C	1,2-Dibromoethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2-Dichlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2-Dichloroethane	ug/kg	3.7	U	5.2	U	4.6	U	0.47	J	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,2-Dichloropropane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,3-Dichlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,3-Dichloropropane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,4-Dichlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	1,4-Dioxane	ug/kg	190	U	260	U	230	U	190	U	300	U	52000	U	93000	U	240	U
SW8260C	2,2-Dichloropropane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	3.9		0.81	J	4.6	U	3.7	U	1.7	J	8000		3200		4	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	1.8	J	5.2	U	4.6	U	3.7	U	1.3	J	6300		2600		2	J
SW8260C	2-Butanone	ug/kg	18	J+	26	U	23	U	19	U	30	U	5200	U	9300	U	5.7	J+
SW8260C	2-Chlorotoluene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	2-Hexanone	ug/kg	19	U	26	U	23	U	19	U	30	U	5200	U	9300	U	24	U
SW8260C	4-Chlorotoluene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	4-iso-Propyltoluene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	420	J	1900	U	4.7	U
SW8260C	4-Methyl-2-pentanone	ug/kg	19	U	26	U	23	U	19	U	30	U	5200	U	9300	U	24	U
SW8260C	Acetic acid, methyl ester	ug/kg	37	U	52	U	46	U	37	U	59	U	330	J	19000	U	47	U
SW8260C	Acetone	ug/kg	30	J	8.3	J	230	U	14	J	300	U	52000	U	93000	U	240	UJ
SW8260C	Benzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Bromobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Bromochloromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U

Notes

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		23 - 24		36 - 37		0 - 2		4 - 6		2 - 4		6 - 8	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Bromodichloromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Bromoform	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Bromomethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	UJ	1900	UJ	4.7	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Carbon disulfide	ug/kg	2.7	J	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	3.3	J
SW8260C	Carbon tetrachloride	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Chlorobenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Chloroethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	UJ	1900	UJ	4.7	U
SW8260C	Chloroform	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Chloromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Cyclohexane	ug/kg	19	U	26	U	23	U	19	U	30	U	5200	U	9300	U	24	U
SW8260C	Dibromochloromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Dibromomethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Dichlorodifluoromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	UJ
SW8260C	Diethyl ether	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Ethylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	370	J	1900	U	4.7	U
SW8260C	Hexachlorobutadiene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Isopropyl ether	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Isopropylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	200	J	1900	U	4.7	U
SW8260C	Methyl cyclohexane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Methylene chloride	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	26	U	1000	U	1900	U	10	U
SW8260C	n-Butylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Naphthalene	ug/kg	19	U	26	U	23	U	19	U	30	U	150	J	9300	U	24	U
SW8260C	Propylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	sec-Butylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Styrene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	tert-Butylbenzene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Tetrachloroethene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Tetrahydrofuran	ug/kg	37	U	52	U	46	U	37	U	59	U	10000	U	19000	U	47	U
SW8260C	Toluene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Trichloroethene	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Trichlorofluoromethane	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Vinyl chloride	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Xylene, o	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Xylenes (m&p)	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U
SW8260C	Xylenes, Total	ug/kg	3.7	U	5.2	U	4.6	U	3.7	U	5.9	U	1000	U	1900	U	4.7	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		23 - 24		36 - 37		0 - 2		4 - 6		2 - 4		6 - 8	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	1-Methylnaphthalene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	53	J	15	U	7.6	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	2,4-Dimethylphenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	12	J	38	U
SW8270D	2,4-Dinitrophenol	ug/kg	370	U	360	U	400	U	350	U	400	UJ	9200	U	710	U	380	U
SW8270D	2,4-Dinitrotoluene	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2,6-Dinitrotoluene	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2-Chloronaphthalene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	2-Chlorophenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2-Methylnaphthalene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	2-Methylphenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	2-Nitroaniline	ug/kg	190	UJ	190	U	210	UJ	180	UJ	200	U	4700	U	370	U	190	U
SW8270D	2-Nitrophenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	3 & 4 Methylphenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	27	J	38	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	3-Nitroaniline	ug/kg	190	U	190	U	210	U	180	U	200	U	4700	U	370	U	190	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	190	U	190	U	210	U	180	U	200	U	4700	U	370	U	190	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	4-Chloroaniline	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	4-Nitroaniline	ug/kg	190	U	190	U	210	U	180	U	200	U	4700	U	370	U	190	U
SW8270D	4-Nitrophenol	ug/kg	190	UJ	190	UJ	210	UJ	180	UJ	200	U	4700	U	370	U	190	U
SW8270D	Acenaphthene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	Acenaphthylene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	1.8	J	190	U	15	U	7.6	U
SW8270D	Acetophenone	ug/kg	75	U	73	U	82	U	72	U	80	U	1900	U	150	U	76	U
SW8270D	Aniline	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Anthracene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	6.3	J	60	J	4.3	J	7.6	U
SW8270D	Atrazine	ug/kg	75	U	73	U	82	U	72	U	80	U	1900	U	150	U	76	U
SW8270D	Azobenzene	ug/kg	370	U	350	U	400	U	360	U	400	U	7500	U	1800	U	1900	U
SW8270D	Benzaldehyde	ug/kg	75	R	73	R	82	R	72	R	80	R	1900	U	150	U	76	U
SW8270D	Benzo(a)anthracene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	22		190	U	9.9	J	7.6	U
SW8270D	Benzo(a)pyrene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	17		190	U	15	U	7.6	U
SW8270D	Benzo(b)fluoranthene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	25		190	U	19		7.6	U
SW8270D	Benzo(ghi)perylene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	11		190	U	15	U	7.6	U
SW8270D	Benzo(k)fluoranthene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8.8		190	U	8.3	J	7.6	U
SW8270D	Benzoic Acid	ug/kg	190	U	190	U	210	U	180	U	200	R	4700	U	370	U	190	U
SW8270D	Benzyl alcohol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	59	
SW8270D	Biphenyl	ug/kg	37	U	36	U	40	U	35	U	7.1	J	14000		75		38	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		23 - 24		36 - 37		0 - 2		4 - 6		2 - 4		6 - 8	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	370	U	120	J	400	U	350	U	4900		420000		19000		56	J
SW8270D	Butylbenzylphthalate	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Caprolactam	ug/kg	190	U	190	U	210	U	180	U	200	U	4700	U	370	U	190	U
SW8270D	Carbazole	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	3.5	J	190	U	15	U	7.6	U
SW8270D	Chrysene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	27		190	U	20		7.6	U
SW8270D	Di-n-butylphthalate	ug/kg	37	U	36	U	40	U	35	U	21	J	920	U	71	U	38	U
SW8270D	Di-n-octylphthalate	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	Dibenzofuran	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Diethylphthalate	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Dimethylphthalate	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Fluoranthene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	46		160	J	23		7.6	U
SW8270D	Fluorene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	Hexachlorobenzene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Hexachloroethane	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	11		190	U	15	U	7.6	U
SW8270D	Isophorone	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SW8270D	N-Nitrosodimethylamine	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	71	U	38	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	37	U	36	U	40	U	35	U	40	U	54000		1700		31	J
SW8270D	Nitrobenzene	ug/kg	75	U	73	U	81	U	72	U	80	U	1900	U	140	U	76	U
SW8270D	Pentachlorophenol	ug/kg	190	U	190	U	210	U	180	U	200	UJ	4700	U	370	U	190	U
SW8270D	Phenanthrene	ug/kg	7.5	U	2.2	J	8.2	U	7.2	U	21		660		15		7.6	U
SW8270D	Phenol	ug/kg	37	U	36	U	40	U	35	U	40	U	920	U	8800		120	
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	11000	UJ	12000	UJ	11000	UJ	12000	UJ	230000	UJ	54000	UJ	57000	UJ
SW8270D	Pyrene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	40		190	U	20		7.6	U
SW8270D	Pentachlorophenol	ug/kg	190	U	190	U	210	U	180	U	2000	U F1	76000	U	7400	U	190	U
SW8270D	Phenanthrene	ug/kg	7.5	U	2.2	J	8.2	U	7.2	U	80	U	840	J	290	U	7.6	U
SW8270D	Phenol	ug/kg	37	U	36	U	40	U	35	U	400	U	920	U	8800	E	120	
SW8270D	Phthalic anhydride	ug/kg	11000	U	11000	U	12000	U	11000	U	12000	U	230000	U	54000	U	57000	U
SW8270D	Pyrene	ug/kg	7.5	U	7.3	U	8.2	U	7.2	U	48	J	3000	U	290	U	7.6	U

Notes

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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
		Sample Depth (ft bgs)	8 - 10		35 - 36		18 - 19		0 - 2		2 - 4		4 - 6		6 - 8		8 - 10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																		
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1-Dichloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1-Dichloroethene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,1-Dichloropropene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	6100	U	19	U	20	U	23	U	22	U	26	U	22	U	21	U
SW8260C	1,2-Dibromoethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2-Dichloroethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,2-Dichloropropane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,3-Dichloropropane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	1,4-Dioxane	ug/kg	61000	U	190	U	200	U	230	U	220	U	260	U	220	U	210	U
SW8260C	2,2-Dichloropropane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	1200	U	3.8	U	4	U	4.6	U	2	J	4	J	8.6		2.4	J
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	1200	U	3.8	U	4	U	4.6	U	0.67	J	1.5	J	3.3	J	0.59	J
SW8260C	2-Butanone	ug/kg	6100	U	19	U	20	U	23	U	6.9	J+	26	U	22	U	21	U
SW8260C	2-Chlorotoluene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	2-Hexanone	ug/kg	6100	U	19	U	20	U	23	U	22	U	26	U	22	U	21	U
SW8260C	4-Chlorotoluene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	0.45	J	4.4	U	4.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	6100	U	19	U	20	U	23	U	22	U	26	U	22	U	21	U
SW8260C	Acetic acid, methyl ester	ug/kg	12000	U	38	U	40	U	46	U	43	U	53	U	44	U	42	U
SW8260C	Acetone	ug/kg	61000	U	190	U	200	U	230	U	220	U	260	U	220	U	210	U
SW8260C	Benzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	0.49	J	4.2	U
SW8260C	Bromobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Bromochloromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
		Sample Depth (ft bgs)	8 - 10		35 - 36		18 - 19		0 - 2		2 - 4		4 - 6		6 - 8		8 - 10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Bromodichloromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Bromoform	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Bromomethane	ug/kg	1200	UJ	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Carbon disulfide	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Carbon tetrachloride	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Chlorobenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Chloroethane	ug/kg	1200	UJ	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Chloroform	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Chloromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Cyclohexane	ug/kg	6100	U	19	U	20	U	23	U	22	U	26	U	22	U	21	U
SW8260C	Dibromochloromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Dibromomethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Diethyl ether	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Ethylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Hexachlorobutadiene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Isopropyl ether	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Isopropylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Methyl cyclohexane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Methylene chloride	ug/kg	1200	U	17	U	30	U	27	U	20	U	22	U	21	U	24	U
SW8260C	n-Butylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Naphthalene	ug/kg	6100	U	19	U	20	U	23	U	22	U	0.9	J	22	U	21	U
SW8260C	Propylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	sec-Butylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Styrene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	tert-Butylbenzene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Tetrachloroethene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Tetrahydrofuran	ug/kg	12000	U	38	U	40	U	46	U	43	U	53	U	44	U	42	U
SW8260C	Toluene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Trichloroethene	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Trichlorofluoromethane	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Vinyl chloride	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Xylene, o	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Xylenes (m&p)	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
SW8260C	Xylenes, Total	ug/kg	1200	U	3.8	U	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U

Notes

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Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
		Sample Depth (ft bgs)	8 - 10		35 - 36		18 - 19		0 - 2		2 - 4		4 - 6		6 - 8		8 - 10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs																		
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	1-Methylnaphthalene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	2.1	J	22	U	7.4	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2,4-Dichlorophenol	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U
SW8270D	2,4-Dimethylphenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2,4-Dinitrophenol	ug/kg	430	U	360	U	350	U	2000	U	360	U	370	U	1100	U	360	U
SW8270D	2,4-Dinitrotoluene	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2,6-Dinitrotoluene	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2-Chloronaphthalene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U
SW8270D	2-Chlorophenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2-Methylnaphthalene	ug/kg	2.7	J	7.3	U	7.2	U	40	U	7.3	U	2.3	J	22	U	7.4	U
SW8270D	2-Methylphenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	2-Nitroaniline	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	2-Nitrophenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	3 & 4 Methylphenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	3-Nitroaniline	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	4-Chloroaniline	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	4-Nitroaniline	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	4-Nitrophenol	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	Acenaphthene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	17	J	7.4	U
SW8270D	Acenaphthylene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	4.7	J	6.3	J	7.4	U
SW8270D	Acetophenone	ug/kg	87	U	73	U	72	U	400	U	73	U	4.4	J	220	U	74	U
SW8270D	Aniline	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Anthracene	ug/kg	8.7	U	2.3	J	2	J	40	U	2.6	J	4.3	J	36		7.4	U
SW8270D	Atrazine	ug/kg	87	U	73	U	72	U	400	U	73	U	75	U	220	U	74	U
SW8270D	Azobenzene	ug/kg	420	U	350	U	350	U	390	U	360	U	370	U	1800	U	360	U
SW8270D	Benzaldehyde	ug/kg	87	U	73	U	72	U	400	U	73	U	6.7	J	220	U	74	U
SW8270D	Benzo(a)anthracene	ug/kg	2.2	J	10		9.7		11	J	7.6		20		72		7.4	U
SW8270D	Benzo(a)pyrene	ug/kg	8.7	U	6	J	4.9	J	40	U	9.5		23		67		7.4	U
SW8270D	Benzo(b)fluoranthene	ug/kg	8.7	U	7.9		5.7	J	14	J	12		39		68		7.4	U
SW8270D	Benzo(ghi)perylene	ug/kg	8.7	U	3.2	J	2.1	J	40	U	8.2		24		56		7.4	U
SW8270D	Benzo(k)fluoranthene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	3.7	J	13		32		7.4	U
SW8270D	Benzoic Acid	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	Benzyl alcohol	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Biphenyl	ug/kg	43	U	36	U	35	U	9.7	J	1.7	J	3.4	J	110	U	36	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 2 - VOCs/SVOCs
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
		Sample Depth (ft bgs)	8 - 10		35 - 36		18 - 19		0 - 2		2 - 4		4 - 6		6 - 8		8 - 10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	210	J	360	U	48	J	2100		43	J	570		1200		140	J
SW8270D	Butylbenzylphthalate	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Caprolactam	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	Carbazole	ug/kg	8.7	U	1.9	J	7.2	U	40	U	1.7	J	2.4	J	8.1	J	7.4	U
SW8270D	Chrysene	ug/kg	2.6	J	9.9		9.3		12	J	8.6		27		75		7.4	U
SW8270D	Di-n-butylphthalate	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Di-n-octylphthalate	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	6.1	J	12	J	7.4	U
SW8270D	Dibenzofuran	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	9.4	J	36	U
SW8270D	Diethylphthalate	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Dimethylphthalate	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Fluoranthene	ug/kg	4.8	J	13		8.5		19	J	18		30		120		7.4	U
SW8270D	Fluorene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	2	J	12	J	7.4	U
SW8270D	Hexachlorobenzene	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Hexachloroethane	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	8.7	U	2.7	J	1.7	J	40	U	6.5	J	21		38		7.4	U
SW8270D	Isophorone	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U	22	U	7.4	U
SW8270D	N-Nitrosodimethylamine	ug/kg	43	U	36	U	35	U	200	U	36	U	37	U	110	U	36	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	43	U	36	U	35	U	200	U	36	U	72		130		36	U
SW8270D	Nitrobenzene	ug/kg	86	U	72	U	72	U	400	U	73	U	75	U	220	U	73	U
SW8270D	Pentachlorophenol	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	Phenanthrene	ug/kg	8.1	J	8.5		7.1	J	40	U	10		17		93		7.4	U
SW8270D	Phenol	ug/kg	43	U	36	U	35	U	200	U	36	U	14	J	110	U	36	U
SW8270D	Phthalic anhydride	ug/kg	13000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ	54000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	4.8	J	12		9.2		17	J	15		26		150		7.4	U
SW8270D	Pentachlorophenol	ug/kg	220	U	180	U	180	U	1000	U	190	U	190	U	570	U	190	U
SW8270D	Phenanthrene	ug/kg	8.1	J	8.5		7.1	J	40	U	10		17		93		7.4	U
SW8270D	Phenol	ug/kg	43	U	36	U	35	U	200	U	36	U	14	J	110	U	36	U
SW8270D	Phthalic anhydride	ug/kg	13000	U	11000	U	11000	U	12000	U	11000	U	11000	U	54000	U	11000	U
SW8270D	Pyrene	ug/kg	4.8	J	12		9.2		17	J	15		26		150		7.4	U

Notes

Units:
ug/kg = micrograms per kilogram

Lab Qualifiers:
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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

		Location	SB-712		SB-712	
		Sample Date	11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Sample Depth (ft bgs)	37 - 38		23 - 24	
		Qc Code	FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
VOCs						
SW8260C	1,1,1,2-Tetrachloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1,1-Trichloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1,2,2-Tetrachloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1,2-Trichloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1-Dichloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,1-Dichloroethene	ug/kg	4.3	U	4.2	U
SW8260C	1,1-Dichloropropene	ug/kg	4.3	U	4.2	U
SW8260C	1,2,3-Trichlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,2,3-Trichloropropane	ug/kg	4.3	U	4.2	U
SW8260C	1,2,4-Trichlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,2,4-Trimethylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,2-Dibromo-3-chloropropane	ug/kg	21	U	21	U
SW8260C	1,2-Dibromoethane	ug/kg	4.3	U	4.2	U
SW8260C	1,2-Dichlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,2-Dichloroethane	ug/kg	4.3	U	4.2	U
SW8260C	1,2-Dichloropropane	ug/kg	4.3	U	4.2	U
SW8260C	1,3,5-Trimethylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,3-Dichlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,3-Dichloropropane	ug/kg	4.3	U	4.2	U
SW8260C	1,4-Dichlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	1,4-Dioxane	ug/kg	210	U	210	U
SW8260C	2,2-Dichloropropane	ug/kg	4.3	U	4.2	U
SW8260C	2,4,4-Trimethyl-1-pentene	ug/kg	4.3	U	4.2	U
SW8260C	2,4,4-Trimethyl-2-pentene	ug/kg	4.3	U	4.2	U
SW8260C	2-Butanone	ug/kg	21	U	21	U
SW8260C	2-Chlorotoluene	ug/kg	4.3	U	4.2	U
SW8260C	2-Hexanone	ug/kg	21	U	21	U
SW8260C	4-Chlorotoluene	ug/kg	4.3	U	4.2	U
SW8260C	4-iso-Propyltoluene	ug/kg	4.3	U	4.2	U
SW8260C	4-Methyl-2-pentanone	ug/kg	21	U	21	U
SW8260C	Acetic acid, methyl ester	ug/kg	43	U	42	U
SW8260C	Acetone	ug/kg	210	U	210	U
SW8260C	Benzene	ug/kg	4.3	U	4.2	U
SW8260C	Bromobenzene	ug/kg	4.3	U	4.2	U
SW8260C	Bromochloromethane	ug/kg	4.3	U	4.2	U

Notes

Units:
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J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

		Location	SB-712		SB-712	
		Sample Date	11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Sample Depth (ft bgs)	37 - 38		23 - 24	
		Qc Code	FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
SW8260C	Bromochloromethane	ug/kg	4.3	U	4.2	U
SW8260C	Bromodichloromethane	ug/kg	4.3	U	4.2	U
SW8260C	Bromoform	ug/kg	4.3	U	4.2	U
SW8260C	Bromomethane	ug/kg	4.3	U	4.2	U
SW8260C	Butane, 2-methoxy-2-methyl-	ug/kg	4.3	U	4.2	U
SW8260C	Carbon disulfide	ug/kg	4.3	U	4.2	U
SW8260C	Carbon tetrachloride	ug/kg	4.3	U	4.2	U
SW8260C	Chlorobenzene	ug/kg	4.3	U	4.2	U
SW8260C	Chloroethane	ug/kg	4.3	U	4.2	U
SW8260C	Chloroform	ug/kg	4.3	U	4.2	U
SW8260C	Chloromethane	ug/kg	4.3	U	4.2	U
SW8260C	cis-1,2-Dichloroethene	ug/kg	4.3	U	4.2	U
SW8260C	cis-1,3-Dichloropropene	ug/kg	4.3	U	4.2	U
SW8260C	Cyclohexane	ug/kg	21	U	21	U
SW8260C	Dibromochloromethane	ug/kg	4.3	U	4.2	U
SW8260C	Dibromomethane	ug/kg	4.3	U	4.2	U
SW8260C	Dichlorodifluoromethane	ug/kg	4.3	U	4.2	U
SW8260C	Diethyl ether	ug/kg	4.3	U	4.2	U
SW8260C	Ethyl-t-Butyl Ether	ug/kg	4.3	U	4.2	U
SW8260C	Ethylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	Hexachlorobutadiene	ug/kg	4.3	U	4.2	U
SW8260C	Isopropyl ether	ug/kg	4.3	U	4.2	U
SW8260C	Isopropylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	Methyl cyclohexane	ug/kg	4.3	U	4.2	U
SW8260C	Methyl Tertbutyl Ether	ug/kg	4.3	U	4.2	U
SW8260C	Methylene chloride	ug/kg	20	U	23	U
SW8260C	n-Butylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	Naphthalene	ug/kg	21	U	21	U
SW8260C	Propylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	sec-Butylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	Styrene	ug/kg	4.3	U	4.2	U
SW8260C	tert-Butylbenzene	ug/kg	4.3	U	4.2	U
SW8260C	Tetrachloroethene	ug/kg	4.3	U	4.2	U
SW8260C	Tetrahydrofuran	ug/kg	43	U	42	U
SW8260C	Toluene	ug/kg	4.3	U	4.2	U
SW8260C	trans-1,2-Dichloroethene	ug/kg	4.3	U	4.2	U
SW8260C	trans-1,3-Dichloropropene	ug/kg	4.3	U	4.2	U
SW8260C	Trichloroethene	ug/kg	4.3	U	4.2	U
SW8260C	Trichlorofluoromethane	ug/kg	4.3	U	4.2	U
SW8260C	Vinyl chloride	ug/kg	4.3	U	4.2	U
SW8260C	Xylene, o	ug/kg	4.3	U	4.2	U
SW8260C	Xylenes (m&p)	ug/kg	4.3	U	4.2	U
SW8260C	Xylenes, Total	ug/kg	4.3	U	4.2	U

Notes

Units:
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J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

		Location	SB-712		SB-712	
		Sample Date	11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Sample Depth (ft bgs)	37 - 38		23 - 24	
		Qc Code	FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
SVOCs						
SW8270D	1,2,4,5-Tetrachlorobenzene	ug/kg	35	U	36	U
SW8270D	1-Methylnaphthalene	ug/kg	7.2	U	7.3	U
SW8270D	2,2'-Dichlorodiisopropylether	ug/kg	7.2	U	7.3	U
SW8270D	2,3,4,6-Tetrachlorophenol	ug/kg	35	U	36	U
SW8270D	2,4,5-Trichlorophenol	ug/kg	35	U	36	U
SW8270D	2,4,6-Trichlorophenol	ug/kg	35	U	36	U
SW8270D	2,4-Dichlorophenol	ug/kg	7.2	U	7.3	U
SW8270D	2,4-Dimethylphenol	ug/kg	35	U	36	U
SW8270D	2,4-Dinitrophenol	ug/kg	350	U	360	U
SW8270D	2,4-Dinitrotoluene	ug/kg	35	U	36	U
SW8270D	2,6-Dinitrotoluene	ug/kg	35	U	36	U
SW8270D	2-Chloronaphthalene	ug/kg	7.2	U	7.3	U
SW8270D	2-Chlorophenol	ug/kg	35	U	36	U
SW8270D	2-Methylnaphthalene	ug/kg	7.2	U	7.3	U
SW8270D	2-Methylphenol	ug/kg	35	U	36	U
SW8270D	2-Nitroaniline	ug/kg	180	U	190	U
SW8270D	2-Nitrophenol	ug/kg	35	U	36	U
SW8270D	3 & 4 Methylphenol	ug/kg	35	U	36	U
SW8270D	3,3'-Dichlorobenzidine	ug/kg	35	U	36	U
SW8270D	3-Nitroaniline	ug/kg	180	U	190	U
SW8270D	4,6-Dinitro-2-methylphenol	ug/kg	180	U	190	U
SW8270D	4-Bromophenyl phenyl ether	ug/kg	35	U	36	U
SW8270D	4-Chloro-3-methylphenol	ug/kg	35	U	36	U
SW8270D	4-Chloroaniline	ug/kg	35	U	36	U
SW8270D	4-Chlorophenyl phenyl ether	ug/kg	35	U	36	U
SW8270D	4-Nitroaniline	ug/kg	180	U	190	U
SW8270D	4-Nitrophenol	ug/kg	180	U	190	U
SW8270D	Acenaphthene	ug/kg	7.2	U	7.3	U
SW8270D	Acenaphthylene	ug/kg	7.2	U	7.3	U
SW8270D	Acetophenone	ug/kg	72	U	73	U
SW8270D	Aniline	ug/kg	35	U	36	U
SW8270D	Anthracene	ug/kg	7.2	U	7.3	U
SW8270D	Atrazine	ug/kg	72	U	73	U
SW8270D	Azobenzene	ug/kg	360	U	360	U
SW8270D	Benzaldehyde	ug/kg	72	U	73	U
SW8270D	Benzo(a)anthracene	ug/kg	7.2	U	7.3	U
SW8270D	Benzo(a)pyrene	ug/kg	7.2	U	7.3	U
SW8270D	Benzo(b)fluoranthene	ug/kg	7.2	U	7.3	U
SW8270D	Benzo(ghi)perylene	ug/kg	7.2	U	7.3	U
SW8270D	Benzo(k)fluoranthene	ug/kg	7.2	U	7.3	U
SW8270D	Benzoic Acid	ug/kg	180	U	190	U
SW8270D	Benzyl alcohol	ug/kg	35	U	36	U
SW8270D	Biphenyl	ug/kg	35	U	36	U
SW8270D	Bis(2-Chloroethoxy)methane	ug/kg	35	U	36	U
SW8270D	Bis(2-Chloroethyl)ether	ug/kg	7.2	U	7.3	U

Notes

Units:
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Lab Qualifiers:
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U = not detected
UJ = not detected and value is approximate
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J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

		Location	SB-712		SB-712	
		Sample Date	11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Sample Depth (ft bgs)	37 - 38		23 - 24	
		Qc Code	FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
SW8270D	Bis(2-Ethylhexyl)phthalate	ug/kg	350	U	360	U
SW8270D	Butylbenzylphthalate	ug/kg	35	U	36	U
SW8270D	Caprolactam	ug/kg	180	U	190	U
SW8270D	Carbazole	ug/kg	7.2	U	7.3	U
SW8270D	Chrysene	ug/kg	7.2	U	7.3	U
SW8270D	Di-n-butylphthalate	ug/kg	35	U	36	U
SW8270D	Di-n-octylphthalate	ug/kg	35	U	36	U
SW8270D	Dibenz(a,h)anthracene	ug/kg	7.2	U	7.3	U
SW8270D	Dibenzofuran	ug/kg	35	U	36	U
SW8270D	Diethylphthalate	ug/kg	35	U	36	U
SW8270D	Dimethylphthalate	ug/kg	35	U	36	U
SW8270D	Fluoranthene	ug/kg	7.2	U	7.3	U
SW8270D	Fluorene	ug/kg	7.2	U	7.3	U
SW8270D	Hexachlorobenzene	ug/kg	7.2	U	7.3	U
SW8270D	Hexachlorocyclopentadiene	ug/kg	35	U	36	U
SW8270D	Hexachloroethane	ug/kg	35	U	36	U
SW8270D	Indeno(1,2,3-cd)pyrene	ug/kg	7.2	U	7.3	U
SW8270D	Isophorone	ug/kg	35	U	36	U
SW8270D	N-Nitrosodi-n-propylamine	ug/kg	7.2	U	7.3	U
SW8270D	N-Nitrosodimethylamine	ug/kg	35	U	36	U
SW8270D	N-Nitrosodiphenylamine	ug/kg	35	U	36	U
SW8270D	Nitrobenzene	ug/kg	72	U	73	U
SW8270D	Pentachlorophenol	ug/kg	180	U	190	U
SW8270D	Phenanthrene	ug/kg	7.2	U	2.1	J
SW8270D	Phenol	ug/kg	35	U	36	U
SW8270D	Phthalic anhydride	ug/kg	11000	UJ	11000	UJ
SW8270D	Pyrene	ug/kg	7.2	U	7.3	U
SW8270D	Pentachlorophenol	ug/kg	180	U	190	U
SW8270D	Phenanthrene	ug/kg	7.2	U	2.1	J
SW8270D	Phenol	ug/kg	35	U	36	U
SW8270D	Phthalic anhydride	ug/kg	11000	U	11000	U
SW8270D	Pyrene	ug/kg	7.2	U	7.3	U

Notes

Units:
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Lab Qualifiers:
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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
		Sample Depth (ft bgs)	0 - 2		0 - 2		8 - 10		6 - 8		4 - 6		2 - 4		31 - 32		20 - 21	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	8200		9900		3400		4000		4700		7400		13000		5200	
SW6010D	Antimony	mg/kg	0.53	J-	0.63	J-	19	U	17	U	18	U	17	U	0.85	J	1.1	J
SW6010D	Arsenic	mg/kg	10		8.6		3.5		1.9	J	0.76	J	7.3		2.4		11	
SW6010D	Barium	mg/kg	49	J+	71	J+	9.9		7.5		7		46		58		16	
SW6010D	Beryllium	mg/kg	0.34		0.46	J	0.16	J	0.18	J	0.16	J	0.33		0.58	J	0.31	
SW6010D	Cadmium	mg/kg	0.35		0.37		0.25	U	0.22	U	0.24	U	0.17	J	0.22	U	0.23	U
SW6010D	Calcium	mg/kg	24000		28000		1100		1100		2100		44000		7500		1300	
SW6010D	Chromium	mg/kg	120	J+	72	J+	12		14		8.1		200		460		580	
SW6010D	Chromium, Hexavalent	mg/kg	2.5		2.8		0.98		0.73		0.66		3.7		22.6		8.9	
SW6010D	Cobalt	mg/kg	5.2		3.9		3		1.4		1.1		3.5		11		2.1	
SW6010D	Copper	mg/kg	9.9		10		2.9		1.6		0.75	J	8.2		27		7.7	
SW6010D	Iron	mg/kg	11000		10000		4700		3700		3200		8800		22000		15000	
SW6010D	Lead	mg/kg	12		11		1.9		1.9		2.5		7.8		3.7		3.8	
SW6010D	Magnesium	mg/kg	2900	J+	3700	J+	1200		1200		1000		2400		8700		1600	
SW6010D	Manganese	mg/kg	150	J	180	J	45		41		50		120		340		100	
SW6010D	Mercury	mg/kg	0.036		0.031	J	0.024	U	0.023	U	0.024	U	0.069		0.02	U	0.022	U
SW6010D	Nickel	mg/kg	11		11		6.3		5.2	J	4.1	J	11		15		7.3	
SW6010D	Potassium	mg/kg	1100	J+	1200	J+	530		400		340		920		4100		550	
SW6010D	Selenium	mg/kg	4.9	U	4.8	U	5	U	4.4	U	4.9	U	4.4	U	4.4	U	4.6	U
SW6010D	Silver	mg/kg	0.73	U	0.72	U	0.75	U	0.67	U	0.73	U	0.66	U	0.66	U	0.69	U
SW6010D	Sodium	mg/kg	130	J	150	J	73	J	75	J	97	J	160		1100		240	
SW6010D	Thallium	mg/kg	7.3	U	7.2	U	7.5	U	6.7	U	7.3	U	6.6	U	6.6	U	6.9	U
SW6010D	Tin	mg/kg	1.1	J	0.72	J	2.5	U	2.2	U	2.4	U	1.1	J	0.69	J	0.61	J
SW7199	Vanadium	mg/kg	18	J+	19	J+	6.6		6		6.1		16		58		21	
SW7471A	Zinc	mg/kg	28	J+	26	J+	10		8.4		7		27		36		12	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.18	U	0.18	U	0.16	U	0.15	U	0.22	U	0.2	U	0.17	U	0.17	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2500	UJ	2500	UJ	2400	UJ	2300	UJ	1500	J	1600	J	5300	J	2200	UJ
SW8315A MOD	Hydrazine	ng/g	5.7	J	5.3	J	2.2	J	1.7	J	2.8	J	11		5.3	U	1.8	J
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	6.1	U	6.1	U	6.2	U	5.9	U	6	U	6	U	5.3	U	6.1	U
SW8315A MOD	UDMH	ng/g	6.1	U	6.1	U	6.2	U	5.9	U	6	U	6	U	5.3	U	6.1	U
Inorganics																		
E300	Chloride	mg/kg	12	UJ	12	UJ	12	UJ	11	UJ	12	UJ	11	UJ	390	J	11	UJ
E300	Sulfate	mg/kg	13000	J	12000	J	250	J	130	J	230	J	15000	J	3900	J	190	J
E350.1	Ammonia	mg/kg	6.5		4.7		27		21		35		28		210		25	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	399		415		356		347		352		367		373		356	

Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
		Sample Depth (ft bgs)	0 - 2		2 - 4		4 - 6		6 - 8		8 - 10		34 - 35		28 - 29		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	9200		9000		11000		10000		6300		11000		3700		9000	
SW6010D	Antimony	mg/kg	17	U	16	U	17	U	16	U	0.55	J	0.74	J	18	U	20	U
SW6010D	Arsenic	mg/kg	5.1		7.6		9.7		11		26		3.8		6.5		13	
SW6010D	Barium	mg/kg	46		33		41		41		29		41		24		89	J
SW6010D	Beryllium	mg/kg	0.5		0.44		0.65		0.55		0.28		5.9		0.15	J	0.39	
SW6010D	Cadmium	mg/kg	0.036	J	0.21	U	0.22	U	0.22	U	0.23	U	0.22	U	0.23	U	0.3	J
SW6010D	Calcium	mg/kg	14000		3800		2800		2300		1400		5000		2200		92000	
SW6010D	Chromium	mg/kg	32		20		34		42		22		580		64		180	
SW6010D	Chromium, Hexavalent	mg/kg	1.6		0.98		0.71		0.55		0.44	U	7.5		1		5.8	
SW6010D	Cobalt	mg/kg	5.6		4.1		6.5		6		7		13		3.2		3.5	
SW6010D	Copper	mg/kg	8.2		9.3		9.4		12		9.5		29		7		9.2	
SW6010D	Iron	mg/kg	13000		9800		13000		13000		15000		20000		8000		9200	
SW6010D	Lead	mg/kg	12		22		7.4		14		9.3		5		10		9.7	
SW6010D	Magnesium	mg/kg	4000		2600		3900		4500		3600		6300		1700		2500	
SW6010D	Manganese	mg/kg	270		130		200		200		250		220		72		110	
SW6010D	Mercury	mg/kg	0.041		0.11		0.011	J	0.02	J	0.022	U	0.021	U	0.022	U	0.037	
SW6010D	Nickel	mg/kg	8.2		10		23		23		31		15		3.8	J	8.9	
SW6010D	Potassium	mg/kg	1300		1400		1800		1800		1500		2100		1100		980	
SW6010D	Selenium	mg/kg	4.6	U	4.3	U	0.61	J	4.4	U	4.6	U	4.4	U	0.54	J	5.3	U
SW6010D	Silver	mg/kg	0.69	U	0.64	U	0.66	U	0.65	U	0.68	U	0.66	U	0.7	U	0.8	U
SW6010D	Sodium	mg/kg	220		130	J	160		130	J	110	J	340		200		160	J
SW6010D	Thallium	mg/kg	6.9	U	6.4	U	6.6	U	6.5	U	6.8	U	6.6	U	7	U	8	U
SW6010D	Tin	mg/kg	0.91	J	0.69	J	0.82	J	1.2	J	0.62	J	0.61	J	2.3	U	1.1	J
SW7199	Vanadium	mg/kg	25		18		23		22		16		58		17		16	
SW7471A	Zinc	mg/kg	30		28		28		33		26		32		11		22	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.16	U	0.16	U	0.17	U	0.15	U	0.14	U	0.14	U	0.17	U	0.18	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2300	U	1500	J	2200	UJ	2200	UJ	2200	UJ	2200	UJ	2300	UJ	1800	J
SW8315A MOD	Hydrazine	ng/g	5.8	U	1.5	J	5.4	U	5.5	U	2.1	J	5.5	U	5.5		6.7	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.8	U	5.3	U	5.4	U	5.5	U	5.4	U	5.5	U	5.3	U	6.7	U
SW8315A MOD	UDMH	ng/g	5.8	U	5.3	U	5.4	U	5.5	U	5.4	U	5.5	U	5.3	U	6.7	U
Inorganics																		
E300	Chloride	mg/kg	9.3	J	10	UJ	11	UJ	11	UJ	10	U	5.8	J	5.3	J	5.4	J
E300	Sulfate	mg/kg	610	J	3000	J	6100	J	730	J	180		1000		140		18000	
E350.1	Ammonia	mg/kg	4	J	6		6		7.8		13		41		11		7	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	204		320		419		411		344		373		326		266	

Notes

Units:
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ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		2 - 4		4 - 6		6 - 8		8 - 10		17 - 18		30 - 32		0 - 2	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	6700	J+	6500	J+	4700		4600		6100		1100		4800		7700	
SW6010D	Antimony	mg/kg	18	U	18	U	19	U	18	U	16	U	17	U	17	U	19	U
SW6010D	Arsenic	mg/kg	4.7		4.1		3.4		7.5		4.2		0.91	J	3.3		17	
SW6010D	Barium	mg/kg	15	J-	12	J-	11	J	10	J	15	J	20	J	14	J	61	
SW6010D	Beryllium	mg/kg	0.24		0.21	J	0.19	J	0.22	J	0.3		0.059	J	0.14	J	0.38	
SW6010D	Cadmium	mg/kg	0.11	J	0.06	J	0.26	U	0.25	U	0.22	U	0.044	J	0.23	U	0.45	
SW6010D	Calcium	mg/kg	6300	J+	5900	J+	3800		2000		1200		4800		5400		110000	
SW6010D	Chromium	mg/kg	20	J+	14	J+	6.8		9.9		52		10		190		140	
SW6010D	Chromium, Hexavalent	mg/kg	2.3	J	0.7	J	0.29	J	0.37	J	3.2		0.41	J	9.8		4.1	
SW6010D	Cobalt	mg/kg	2.6		2.2		2.4		2.4		2.8		0.62		4.3		3.7	
SW6010D	Copper	mg/kg	5.3	J	2.9	J	2.1		2.9		7.3		0.5	J	19		8.5	
SW6010D	Iron	mg/kg	6400	J+	5000	J+	5200		7900		7600		1400		11000		10000	
SW6010D	Lead	mg/kg	6.4		3.6		2.3		2.6		3.6		1.6		3		8.3	
SW6010D	Magnesium	mg/kg	1300	J+	1100	J+	1100		1800		1800		250		3100		2300	
SW6010D	Manganese	mg/kg	76	J+	63	J+	61		89		73		32		110		93	
SW6010D	Mercury	mg/kg	0.025		0.032		0.024	U	0.025	U	0.022	U	0.021	U	0.008	J	0.035	
SW6010D	Nickel	mg/kg	8		7		4.6	J	7.3		7.5		0.9	J	5.4	J	8.6	
SW6010D	Potassium	mg/kg	660		550		430		580		670		330		820		770	
SW6010D	Selenium	mg/kg	4.7	U	4.9	U	5.2	U	4.9	U	4.3	U	4.6	U	4.5	U	5	U
SW6010D	Silver	mg/kg	0.71	U	0.73	U	0.77	U	0.74	U	0.65	U	0.68	U	0.68	U	0.75	U
SW6010D	Sodium	mg/kg	170	U	170	U	180	U	170	U	150	U	160	U	260		190	
SW6010D	Thallium	mg/kg	7.1	U	7.3	U	7.7	U	7.4	U	6.5	U	6.8	U	6.8	U	7.5	U
SW6010D	Tin	mg/kg	0.73	J	2.4	U	2.6	U	2.5	U	2.2	U	2.3	U	2.3	U	0.97	J
SW7199	Vanadium	mg/kg	9.7		8.4		7.8		8.9		12		3.6		27		18	
SW7471A	Zinc	mg/kg	29		24		10		11		17		2.9		15		22	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.19	U	0.2	U	0.2	U	0.2	U	0.2	U	0.18	U	0.19	U	0.26	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	4900	J	2900	J	2500	U	2500	U	2200	U	2200	U	1300	J	2500	U
SW8315A MOD	Hydrazine	ng/g	4.2	J	7.4	J	6.6	U	5.8	U	5.8	U	5.8	U	9.4		86	
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	6.4	U	5.8	U	6.6	U	5.8	UJ	5.8	UJ	5.8	U	5.6	U	7	UJ
SW8315A MOD	UDMH	ng/g	6.4	U	5.8	U	6.6	U	5.8	U	5.8	U	5.8	U	5.6	U	7	U
Inorganics																		
E300	Chloride	mg/kg	11	U	12	U	12	U	5.8	J	9.2	J	11	U	210		4.7	J
E300	Sulfate	mg/kg	16000		10000		430		180		160		16000		1300		18000	J
E350.1	Ammonia	mg/kg	10		12		7.9		10		10		5.1		130		15	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	263		321		326		322		320		313		334		260	

Notes

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Qualifiers:
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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		6 - 8		8 - 10		12 - 13		33 - 34		19 - 20		0 - 2	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	5600		4800		15000		9200		5200		3500		6800		5100	
SW6010D	Antimony	mg/kg	18	U	16	U	16	U	16	U	17	U	17	U	17	U	17	U
SW6010D	Arsenic	mg/kg	5.4		4.8		11		7.8		3.1		4.5		14		14	
SW6010D	Barium	mg/kg	11		12		79		37		18		10		22		12	
SW6010D	Beryllium	mg/kg	0.27		0.17	J	0.67	J	0.5	J	0.18	J	0.16	J	0.33		0.28	
SW6010D	Cadmium	mg/kg	0.058	J	0.22	U	0.21	U	0.21	U	0.22	U	0.039	J	0.22	U	0.17	J
SW6010D	Calcium	mg/kg	3700		2200		2100		1800		2100		2400		1700		1200	
SW6010D	Chromium	mg/kg	8.6		13		63		97		58		300		310		13	
SW6010D	Chromium, Hexavalent	mg/kg	0.49	U	0.46	U	2.4		5.3		1.3		6.3		4.1		0.46	U
SW6010D	Cobalt	mg/kg	2.2		2.3		6.1		4.4		2.9		3.6		7.1		1.9	
SW6010D	Copper	mg/kg	0.84	J	3.9		14		11		4.8		12		17		4.5	
SW6010D	Iron	mg/kg	3800		6200		20000		13000		9600		5300		17000		6400	
SW6010D	Lead	mg/kg	3.1		2.7		5.9		5.2		4.1		2.1		4.2		3.9	
SW6010D	Magnesium	mg/kg	820		1700		5200		3100		2500		1600		2800		1600	
SW6010D	Manganese	mg/kg	31		68		210		130		91		98		120		83	
SW6010D	Mercury	mg/kg	0.023	U	0.022	U	0.021	U	0.02	U	0.01	J	0.022	U	0.022	U	0.022	U
SW6010D	Nickel	mg/kg	4.7	J	7.8		18		11		7		6.9		14		6.1	
SW6010D	Potassium	mg/kg	410		640		4300		1700		740		460		1300		650	
SW6010D	Selenium	mg/kg	4.7	U	4.4	U	4.3	U	4.2	U	4.4	U	4.6	U	4.5	U	0.52	J
SW6010D	Silver	mg/kg	0.71	U	0.66	U	0.64	U	0.64	U	0.66	U	0.69	U	0.67	U	0.69	U
SW6010D	Sodium	mg/kg	80	J	130	J	280		240		100	J	2600		110	J	90	J
SW6010D	Thallium	mg/kg	7.1	U	6.6	U	6.4	U	6.4	U	6.6	U	6.9	U	6.7	U	6.9	U
SW6010D	Tin	mg/kg	0.51	J	2.2	U	0.92	J	0.59	J	2.2	U	2.3	U	0.66	J	0.52	J
SW7199	Vanadium	mg/kg	7.5		9.4		34		21		14		9.3		26		9.3	
SW7471A	Zinc	mg/kg	10		13		42		27		15		8.6		24		11	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.18	U	0.18	U	0.15	U	0.18	U	0.16	U	0.14	U	0.16	U	0.17	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2700		2200	U	2200	U	1600	J	2100	U	1600	J	2200	U	1400	J
SW8315A MOD	Hydrazine	ng/g	19		1.3	J	5.5	U	1.7	J	5.3	U	5.6	U	5.7	U	5.6	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	6	UJ	5.7	U	5.5	U	5.3	U	5.3	UJ	5.6	U	5.7	UJ	5.6	U
SW8315A MOD	UDMH	ng/g	6	U	5.7	U	5.5	U	5.3	U	5.3	U	5.6	U	5.7	U	5.6	U
Inorganics																		
E300	Chloride	mg/kg	11	UJ	11	UJ	11	UJ	4.8	J	10	UJ	1300	J	11	UJ	11	UJ
E300	Sulfate	mg/kg	16000	J	760	J	530	J	150	J	68	J	6100	J	270	J	77	J
E350.1	Ammonia	mg/kg	44		40		46		41		29		620		40		3.8	J
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	345		215		268		293		271		319		420		334	

Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Sample Depth (ft bgs)	2 - 4		4 - 6		4 - 6		6 - 8		8 - 10		17 - 18		0 - 2		2 - 4	
		Qc Code	FS		FD		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	5400		5700	J+	5900	J+	3700		5800		9700		5000		13000	
SW6010D	Antimony	mg/kg	17	U	19	U	20	U	17	U	16	U	17	U	0.63	J	1.1	J
SW6010D	Arsenic	mg/kg	7.1		7.1		6.6		6.5		4.4		3.6		11		7.6	
SW6010D	Barium	mg/kg	17		15		16		9.3		23		52		16		43	
SW6010D	Beryllium	mg/kg	0.22		0.24	J	0.23	J	0.14	J	0.34	J	0.4	J	0.27		0.39	
SW6010D	Cadmium	mg/kg	0.26		0.43		0.45		0.23	U	0.21	U	0.22	U	0.5		0.22	U
SW6010D	Calcium	mg/kg	1600		3500	J+	3600	J+	1200		1800		3300		1600		3500	
SW6010D	Chromium	mg/kg	21		130	J	77	J	410		250		330		19		200	
SW6010D	Chromium, Hexavalent	mg/kg	1.1		2.7	J	1.5	J	7.4		9.9		4.2		0.95		2.9	
SW6010D	Cobalt	mg/kg	2.4		2.4		2.9		2.1		3.9		7.4		2.2		9.1	
SW6010D	Copper	mg/kg	5		6.4		5.5		5		11		20		5.7		27	
SW6010D	Iron	mg/kg	6100		7100	J+	7700	J+	4900		9000		16000		7000		16000	
SW6010D	Lead	mg/kg	6.3		8.9		7.9		2.2		3.2		3		4.7		8.2	
SW6010D	Magnesium	mg/kg	1800		1500		1900		920		2500		6900		1700		6200	
SW6010D	Manganese	mg/kg	60		88	J+	98	J+	55		100		170		87		210	
SW6010D	Mercury	mg/kg	0.028		0.031		0.026	J	0.022	U	0.022	U	0.02	U	0.011	J	0.09	
SW6010D	Nickel	mg/kg	7.6		6.9		8.1		4.7	J	11		17		6.3		23	
SW6010D	Potassium	mg/kg	970		570		700		380		950		2600		750		2000	
SW6010D	Selenium	mg/kg	4.5	U	5	U	5.5	U	0.79	J	4.3	U	4.5	U	0.82	J	4.4	U
SW6010D	Silver	mg/kg	0.67	U	0.74	U	0.82	U	0.68	U	0.64	U	0.67	U	0.66	U	0.66	U
SW6010D	Sodium	mg/kg	60	J	58	J	67	J	69	J	140	J	170		82	J	220	
SW6010D	Thallium	mg/kg	6.7	U	7.4	U	8.2	U	6.8	U	6.4	U	6.7	U	6.6	U	6.6	U
SW6010D	Tin	mg/kg	2.2	U	0.57	J	0.69	J	2.3	U	2.1	U	0.53	J	0.59	J	0.78	J
SW7199	Vanadium	mg/kg	10		11		12		7		16		34		10		40	
SW7471A	Zinc	mg/kg	25		22		22		7.5		18		25		14		27	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.17	U	0.17	U	0.2	U	0.15	U	0.2	U	0.19	U	0.2	U	0.18	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2200	U	7200	J	5400	J	1500	J	2200	UJ	2200	UJ	2300	UJ	2200	UJ
SW8315A MOD	Hydrazine	ng/g	5.6	U	5.8	UJ	1.7	J	5.5	U	5.8	U	5.7	U	5.4	U	5.7	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.6	U	5.8	UJ	5.8	UJ	5.5	U	5.8	U	5.7	U	5.4	U	5.7	U
SW8315A MOD	UDMH	ng/g	5.6	U	5.8	U	5.8	U	5.5	U	5.8	U	5.7	U	5.4	U	5.7	U
Inorganics																		
E300	Chloride	mg/kg	11	UJ	12	U	13	U	11	U	11	U	5.4	J	11	UJ	11	UJ
E300	Sulfate	mg/kg	1400	J	3400	J	3400	J	160		190		200	J	1000	J-	410	J
E350.1	Ammonia	mg/kg	5.8		11		7.5		8.2		29		39		10		14	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	358		373		385		355		351		385		337		275	

Notes

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Qualifiers:
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UJ = not detected and value is approximate
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J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		10 - 12		20 - 22		26 - 27		0 - 2		2 - 4		4 - 6	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	9000		11000		3800		5400		8100		8300		14000		6400	
SW6010D	Antimony	mg/kg	0.95	J	83	U	18	U	0.6	J	1.3	J	1	J	1.2	J	15	U
SW6010D	Arsenic	mg/kg	6.2		17		3.2		3.3		3.1		33		29		5	
SW6010D	Barium	mg/kg	34		41		10		25		42		28		55		16	
SW6010D	Beryllium	mg/kg	0.35		0.48		0.14	J	0.24		0.23		0.38		0.62		0.32	
SW6010D	Cadmium	mg/kg	0.23	U	0.22	U	0.24	U	0.22	U	0.22	U	0.18	J	0.22	U	0.051	J
SW6010D	Calcium	mg/kg	1700		3800		1500		770		3200		12000		3700		7000	
SW6010D	Chromium	mg/kg	890		1300		310		460		460		79		44		120	
SW6010D	Chromium, Hexavalent	mg/kg	6.6		20.8		3.6		4.7		5.6		2.7		1		7.6	
SW6010D	Cobalt	mg/kg	4.4		6.8		1.6		3.3		6.2		5.7		13		3.2	
SW6010D	Copper	mg/kg	11		25		3.5		9.9		39		11		22		12	
SW6010D	Iron	mg/kg	12000		23000		4500		11000		14000		16000		19000		7700	
SW6010D	Lead	mg/kg	5.6		21		3.4		3		3.8		11		14		4.8	
SW6010D	Magnesium	mg/kg	2700		4200		1100		1700		3900		3000		6400		3200	
SW6010D	Manganese	mg/kg	130		180		53		89		140		110		310		150	
SW6010D	Mercury	mg/kg	0.022	U	0.022	U	0.065		0.01	J	0.0089	J	0.042		0.022	U	0.0086	J
SW6010D	Nickel	mg/kg	12		17		4	J	7		12		15		40		13	
SW6010D	Potassium	mg/kg	1500		2000		460		730		1500		890		2700		750	
SW6010D	Selenium	mg/kg	4.6	U	4.4	U	4.8	U	4.4	U	4.3	U	5	U	4.4	U	4.1	U
SW6010D	Silver	mg/kg	0.68	U	0.66	U	0.71	U	0.66	U	0.65	U	0.75	U	0.66	U	0.62	U
SW6010D	Sodium	mg/kg	210		330		58	J	97	J	290		86	J	170		130	J
SW6010D	Thallium	mg/kg	6.8	U	6.6	U	7.1	U	6.6	U	6.5	U	7.5	U	6.6	U	6.2	U
SW6010D	Tin	mg/kg	2.3	U	0.81	J	2.4	U	2.2	U	2.2	U	0.61	J	0.84	J	2.1	U
SW7199	Vanadium	mg/kg	19		35		8.3		18		35		19		33		15	
SW7471A	Zinc	mg/kg	23		46		9.5		19		26		28		43		16	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.16	U	0.17	U	0.23	U	0.16	U	0.17	U	0.17	U	0.22	U	0.16	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2200	UJ	2200	UJ	2400	J	2200	UJ	2200	UJ	3200	J	2200	UJ	2200	UJ
SW8315A MOD	Hydrazine	ng/g	5.6	U	5.5	U	6.1	U	5.6	U	5.6	U	5.6	J	2	J	9.3	
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.6	U	5.5	U	6.1	U	5.6	U	5.6	U	6.1	U	5.8	U	5.4	U
SW8315A MOD	UDMH	ng/g	5.6	U	5.5	U	6.1	U	5.6	U	5.6	U	6.1	U	5.8	U	5.4	U
Inorganics																		
E300	Chloride	mg/kg	7	J	4.8	J	12	UJ	11	UJ	15	J	5.2	J	11	UJ	11	UJ
E300	Sulfate	mg/kg	120	J	160	J	290	J	66	J	140	J	170	J	2100	J	7100	J
E350.1	Ammonia	mg/kg	9.6		12		11		11		12		6		13		6.5	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	420		400		214		325		397		375		379		380	

Notes

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J+ = concentration is an approximate value with a potential high bias
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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Sample Depth (ft bgs)	6 - 8		6 - 8		8 - 10		12 - 13		15 - 17		0 - 2		2 - 4		4 - 6	
		Qc Code	FD		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	8200	J+	7400	J+	7700		14000		2700		8600		5200		11000	
SW6010D	Antimony	mg/kg	0.62	J-	0.65	J-	0.5	J	1	J	17	U	0.72	J	18	U	1.1	J
SW6010D	Arsenic	mg/kg	3.5		3.6		2.4		3.7		1.4	J	17		6.3		16	
SW6010D	Barium	mg/kg	26		26		25		60		15		54		16		47	
SW6010D	Beryllium	mg/kg	0.38		0.4		0.38		0.48		0.14	J	0.43		0.24		0.34	
SW6010D	Cadmium	mg/kg	0.21	U	0.22	U	0.23	U	0.23	U	0.22	U	0.035	J	0.16	J	0.036	J
SW6010D	Calcium	mg/kg	2700		2400		3300		4400		950		7900		2400		2300	
SW6010D	Chromium	mg/kg	84	J-	83	J-	72		170		100		26		40		40	
SW6010D	Chromium, Hexavalent	mg/kg	2.9		3.4		4.2		5.5		5.5		4.9		0.7		0.76	
SW6010D	Cobalt	mg/kg	3.7		3.2		3.8		6.2		1.2		5.8		2.8		7.4	
SW6010D	Copper	mg/kg	11		11		9.6		13		3.9		11		5.2		15	
SW6010D	Iron	mg/kg	10000		9500		7800		16000		4500		11000		5700		16000	
SW6010D	Lead	mg/kg	5.4		5.5		4.3		9.2		1.7		7.5		4.4		7.2	
SW6010D	Magnesium	mg/kg	2900		2500		2500		4900		960		3200		1700		7300	
SW6010D	Manganese	mg/kg	180	J+	160	J+	120		170		36		170		77		190	
SW6010D	Mercury	mg/kg	0.021	U	0.022	U	0.021	U	0.02	J	0.011	J	0.016	J	0.012	J	0.022	U
SW6010D	Nickel	mg/kg	10		8.9		9.8		19		3.2	J	18		9.5		33	
SW6010D	Potassium	mg/kg	1700		1400		1300		2600		710		1700		780		2800	
SW6010D	Selenium	mg/kg	4.2	U	4.4	U	4.5	U	4.5	U	4.5	U	4.2	U	4.7	U	4.6	U
SW6010D	Silver	mg/kg	0.63	U	0.66	U	0.68	U	0.68	U	0.67	U	0.63	U	0.71	U	0.7	U
SW6010D	Sodium	mg/kg	310		240		370		470		110	J	200		63	J	160	
SW6010D	Thallium	mg/kg	6.3	U	6.6	U	6.8	U	6.8	U	6.7	U	6.3	U	7.1	U	7	U
SW6010D	Tin	mg/kg	0.57	J	0.57	J	0.5	J	0.85	J	2.2	U	0.65	J	2.4	U	0.59	J
SW7199	Vanadium	mg/kg	19	J	17	J	15		32		8.6		18		9.9		28	
SW7471A	Zinc	mg/kg	23		21		15		40		7.8		22		17		35	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.16	U	0.15	U	0.14	U	0.19	U	0.18	U	0.2	U	0.21	U	0.18	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2100	UJ	1300	J	1500	J	2300	UJ	2100	UJ	2200	UJ	2400	UJ	2200	UJ
SW8315A MOD	Hydrazine	ng/g	2.6	J	2.7	J	1.7	J	6.3	U	5.4	U	6.4		5.9	U	5.5	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.4	U	5.3	U	5.5	U	6.3	U	5.4	U	6.2	UJ	5.9	UJ	5.5	UJ
SW8315A MOD	UDMH	ng/g	5.4	U	5.3	U	5.5	U	6.3	U	5.4	U	6.2	U	5.9	U	5.5	U
Inorganics																		
E300	Chloride	mg/kg	5.6	J	4.1	J	9.9	J	11	U	11	U	11	UJ	12	UJ	11	UJ
E300	Sulfate	mg/kg	150		130	J	190		53		46		430	J	590	J	190	J
E350.1	Ammonia	mg/kg	5.5	J-	5.6	J-	7.5		17		18		7.3	U	18		6.6	U
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	361		362		402		351		340		85.5		257		280	

Notes

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J+ = concentration is an approximate value with a potential high bias
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Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		16 - 18		28 - 30		33 - 34		22 - 24		0 - 2		2 - 4	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	7300		12000		9500		2300		4800		8800		8400		5200	
SW6010D	Antimony	mg/kg	16	U	0.57	J	0.77	J	17	U	16	U	0.91	J	19	U	18	U
SW6010D	Arsenic	mg/kg	2.9		3.2		3.8		0.75	J	1.2	J	2.3		7.6		5.6	
SW6010D	Barium	mg/kg	23		45		15	J+	15		23		58		49	J	13	J
SW6010D	Beryllium	mg/kg	0.34		0.52		0.36		0.085	J	0.16	J	0.27		0.3		0.18	J
SW6010D	Cadmium	mg/kg	0.2	J	0.14	J	0.21	U	0.23	U	0.22	U	0.22	U	0.13	J	0.6	J
SW6010D	Calcium	mg/kg	3700		2900		1200	J+	910		1500		2300		11000		4600	
SW6010D	Chromium	mg/kg	18		31		150	J-	140		400		270		63		29	
SW6010D	Chromium, Hexavalent	mg/kg	0.72		0.8		2.6		7.9		6		11.4		2.2		1.2	
SW6010D	Cobalt	mg/kg	2.9		6.6		5.6		0.87		2.4		4		3.7		2.6	
SW6010D	Copper	mg/kg	10		17		15	J-	2		9.3		9		7.7		4.8	
SW6010D	Iron	mg/kg	6900		12000		14000		9200		7200		15000		10000		5900	
SW6010D	Lead	mg/kg	4.5		6.2		3		2		2.3		5.4		8.2		5	
SW6010D	Magnesium	mg/kg	2100		3800		5200	J-	1000		2500		4100		3100		1400	
SW6010D	Manganese	mg/kg	110		140		100	J-	42		90		140		150		53	
SW6010D	Mercury	mg/kg	0.019	U	0.019	U	0.022	U	0.021	U	0.012	J	0.021	U	0.022	J	0.042	
SW6010D	Nickel	mg/kg	9		19		17		2.8	J	8.6		12		10		7.4	
SW6010D	Potassium	mg/kg	1100		2400		1000	J+	1700		1400		3000		1000		540	
SW6010D	Selenium	mg/kg	4.4	U	4.1	U	1.3	J	4.6	U	4.3	U	0.61	J	5	U	4.7	U
SW6010D	Silver	mg/kg	0.66	U	0.61	U	0.63	U	0.69	U	0.65	U	0.65	U	0.75	U	0.7	U
SW6010D	Sodium	mg/kg	86	J	470		81	J	230		380		300		170	U	160	U
SW6010D	Thallium	mg/kg	6.6	U	6.1	U	6.3	U	6.9	U	6.5	U	6.5	U	7.5	U	7	U
SW6010D	Tin	mg/kg	0.52	J	0.96	J	2.1	U	2.3	U	2.2	U	0.68	J	2.5	U	0.5	J
SW7199	Vanadium	mg/kg	17		36		31	J-	9.1		16		33		16		10	
SW7471A	Zinc	mg/kg	23		37		23		7.2		15		26		21		18	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.21	U	0.21	U	0.19	U	0.23	U	0.19	U	0.22	U	0.2	U	0.21	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2100	UJ	2100	UJ	2100	UJ	2300	UJ	1900	J	2200	UJ	2400	U	2100	J
SW8315A MOD	Hydrazine	ng/g	5.5	U	5.3	UJ	5.6	UJ	1.5	J	5.9	UJ	2.4	J	6.1	U	5.8	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.5	UJ	5.3	UJ	5.6	UJ	6	UJ	5.9	UJ	5.7	UJ	6.1	UJ	5.8	UJ
SW8315A MOD	UDMH	ng/g	5.5	U	5.3	U	5.6	U	6	U	5.9	U	5.7	U	6.1	U	5.8	U
Inorganics																		
E300	Chloride	mg/kg	10	UJ	10	UJ	11	UJ	70	J	210	J	7.2	J	12	U	11	U
E300	Sulfate	mg/kg	1800	J	57	J	35	J	460	J	1200	J	100	J	1300		12000	
E350.1	Ammonia	mg/kg	15		9.9	U	8.5		62		150		17		4.1	J	7.6	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	306		298		307		323		318		313		415		413	

Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
		Sample Depth (ft bgs)	4 - 6		6 - 8		8 - 10		8 - 10		16 - 17		32 - 33		2 - 4		4 - 6	
		Qc Code	FS		FS		FD		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	7500		5000		8300		10000		9700		12000		7300		5800	
SW6010D	Antimony	mg/kg	17	U	18	U	16	U	18	U	16	U	17	U	19	U	0.56	J
SW6010D	Arsenic	mg/kg	6		3.8		4.8		7		4.2		0.97	J	10		9.2	
SW6010D	Barium	mg/kg	21	J	12	J	46	J-	49	J-	81	J	53	J	43		24	
SW6010D	Beryllium	mg/kg	0.25	J	0.22	J	0.36	J	0.52		0.28	J	2.2	U	0.32		0.21	J
SW6010D	Cadmium	mg/kg	0.29	J	0.24	U	0.22	U	0.24	U	0.22	U	0.22	U	0.1	J	0.05	J
SW6010D	Calcium	mg/kg	4200		550		1500		2200		2800		8700		11000		2800	
SW6010D	Chromium	mg/kg	39		420		17		21		44		420		140		41	
SW6010D	Chromium, Hexavalent	mg/kg	1.7		8		0.7		0.74		3.9		6.7		2		1.2	
SW6010D	Cobalt	mg/kg	4.6		2.1		6.5		6.6		6.8		13		4.6		3.7	
SW6010D	Copper	mg/kg	11		5		9.2		11		9		29		14		7.5	
SW6010D	Iron	mg/kg	8100		5300		9900		13000		15000		21000		9900		8700	
SW6010D	Lead	mg/kg	6.2		5.7		5.7		7.1		4.7		5.7		7.4		4.4	
SW6010D	Magnesium	mg/kg	2600		1300		3000	J-	3300	J-	4500		10000		3000		3000	
SW6010D	Manganese	mg/kg	100		45		120	J-	130	J-	200		270		170		130	
SW6010D	Mercury	mg/kg	0.041		0.014	J	0.021	U	0.024	U	0.022	U	0.021	U	0.021	J	0.01	J
SW6010D	Nickel	mg/kg	14		7.1		14		13		14		60		14		14	
SW6010D	Potassium	mg/kg	1000		580		1800		1600		3500		2700		1700		1200	
SW6010D	Selenium	mg/kg	4.5	U	4.9	U	4.4	U	4.9	U	4.3	U	4.4	U	5.2	U	4.7	U
SW6010D	Silver	mg/kg	0.67	U	0.73	U	0.66	U	0.73	U	0.65	U	0.67	U	0.78	U	0.7	U
SW6010D	Sodium	mg/kg	160	U	170	U	150	U	150	J	160		870		250		130	J
SW6010D	Thallium	mg/kg	6.7	U	7.3	U	6.6	U	7.3	U	6.5	U	6.7	U	7.8	U	7	U
SW6010D	Tin	mg/kg	0.62	J	2.4	U	0.5	J	0.77	J	0.47	J	0.57	J	0.74	J	0.51	J
SW7199	Vanadium	mg/kg	16		8.2		18		23		28		53		18		13	
SW7471A	Zinc	mg/kg	20		17		24	J-	28	J-	35		39		28		19	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.2	U	0.19	U	0.18	U	0.18	U	0.18	U	0.2	U	0.23	U	0.21	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2900	J	2400	UJ	2300	UJ	2300	UJ	3300	J	2300	J	2000	J	4000	J
SW8315A MOD	Hydrazine	ng/g	6.9	U	5.7	U	5.6	UJ	5.7	UJ	4.9	J	5.4	U	5.7	UJ	1.8	J
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	6.9	UJ	5.7	UJ	5.6	UJ	5.7	UJ	5.6	UJ	5.4	UJ	5.7	UJ	5.8	UJ
SW8315A MOD	UDMH	ng/g	6.9	U	5.7	U	5.6	U	5.7	U	5.6	U	5.4	U	5.7	U	5.8	U
Inorganics																		
E300	Chloride	mg/kg	12	U	17		11	U	12	U	11	U	11	U	19	J	6.9	J
E300	Sulfate	mg/kg	63		150		140		110		890		320		3900	J	6400	J
E350.1	Ammonia	mg/kg	15		3.5	J	14	J	6.7	J	8.6		150		15		12	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	266		313		427		391		421		394		371		253	

Notes

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ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
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U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Sample Depth (ft bgs)	6 - 8		8 - 10		23 - 24		36 - 37		0 - 2		4 - 6		2 - 4		6 - 8	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	2100		6500		3900		12000		8200		4000		8100	J	3100	
SW6010D	Antimony	mg/kg	17	U	17	U	19	U	1.2	J	0.64	J	17	U	0.45	J-	17	U
SW6010D	Arsenic	mg/kg	2.1	J	2	J	8.9		8.4		8.1		3.9		12		0.91	J
SW6010D	Barium	mg/kg	14		14		26		46		73		18		32		6.6	
SW6010D	Beryllium	mg/kg	0.08	J	0.27		0.17	J	0.35		0.34		0.16	J	0.36		0.11	J
SW6010D	Cadmium	mg/kg	0.04	J	1.9		0.25	U	0.21	U	0.34		9.3		2.5		0.79	
SW6010D	Calcium	mg/kg	1100		950		1500		6400		30000		1200		4100	J-	1000	
SW6010D	Chromium	mg/kg	10		12		310		740		95		28		63	J+	5.9	
SW6010D	Chromium, Hexavalent	mg/kg	0.79		0.61		8.5		7.3		5.1		0.49		0.74		0.18	J
SW6010D	Cobalt	mg/kg	0.79		3.2		2.1		15		3.9		1.5		5.4		0.92	
SW6010D	Copper	mg/kg	3.8		8.6		7		25		8.6		4.3		12		2.8	
SW6010D	Iron	mg/kg	3200		5300		11000		26000		9300		5300		11000		2800	
SW6010D	Lead	mg/kg	1.9		4.8		4.9		5.6		8.1		5.7		13		1.7	
SW6010D	Magnesium	mg/kg	840		1900		1400		11000		3400		940		2800		860	
SW6010D	Manganese	mg/kg	47		69		72		290		160		45		140	J+	42	
SW6010D	Mercury	mg/kg	0.022	U	0.02	U	0.025	U	0.0093	J	0.035		0.029		0.19		0.024	U
SW6010D	Nickel	mg/kg	2.5	J	10		7.1		39		9.2		6.4		16		4.6	J
SW6010D	Potassium	mg/kg	650		810		1900		2300		1200		460		1500		440	
SW6010D	Selenium	mg/kg	4.5	U	0.57	J	5.1	U	0.58	J	1.1	J	0.5	J	0.58	J	4.5	U
SW6010D	Silver	mg/kg	0.67	U	0.67	U	0.76	U	0.62	U	0.76	U	0.7	U	0.65	U	0.68	U
SW6010D	Sodium	mg/kg	81	J	110	J	380		1300		140	J	87	J	180	J	81	J
SW6010D	Thallium	mg/kg	6.7	U	6.7	U	7.6	U	6.2	U	7.6	U	7	U	6.5	U	6.8	U
SW6010D	Tin	mg/kg	2.2	U	2.2	U	0.55	J	0.75	J	0.76	J	2.3	U	0.86	J	2.3	U
SW7199	Vanadium	mg/kg	5.2		9.9		16		60		16		7.4		19		5.2	
SW7471A	Zinc	mg/kg	6.4		21		12		46		25		63		78	J+	8.8	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.2	U	0.22	U	0.23	U	0.2	U	0.2	U	0.17	U	0.19	U	0.17	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	11000	J	2200	UJ	2500	UJ	3700	J	2500	UJ	2900	J	1500	J	2300	UJ
SW8315A MOD	Hydrazine	ng/g	1.6	J	1.8	J	1.7	J	1.9	J	1.9	J	13		5.7		5.9	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.8	UJ	5.4	UJ	6.3	UJ	5.4	UJ	5.9	U	5.6	U	5.5	U	5.9	U
SW8315A MOD	UDMH	ng/g	5.8	U	5.4	U	6.3	U	5.4	U	5.9	U	5.6	U	5.5	U	5.9	U
Inorganics																		
E300	Chloride	mg/kg	11	UJ	11	UJ	57	J	670	J	12	UJ	11	UJ	11	UJ	12	UJ
E300	Sulfate	mg/kg	170	J	71	J	1100	J	3700	J	1800	J	290	J	2400	J	12	J
E350.1	Ammonia	mg/kg	18		14		52		58		14		42		8.8		58	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	228		298		363		387		311		323		333		362	

Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
		Sample Depth (ft bgs)	8 - 10		35 - 36		18 - 19		0 - 2		2 - 4		4 - 6		6 - 8		8 - 10	
		Qc Code	FS		FS		FS		FS		FS		FS		FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals																		
SW6010D	Aluminum	mg/kg	3000		13000		6900		8100		10000		8400		10000		4500	
SW6010D	Antimony	mg/kg	20	U	0.52	J	16	U	18	U	16	U	16	U	0.86	J	0.53	J
SW6010D	Arsenic	mg/kg	1.5	J	1.6	J	2.8		7.7		8.9		7.5		13		5.5	
SW6010D	Barium	mg/kg	11		110		21		61		43		34		41		15	
SW6010D	Beryllium	mg/kg	0.12	J	0.29		0.38		0.36		0.54		0.37		0.5		0.16	J
SW6010D	Cadmium	mg/kg	0.054	J	0.21	U	0.21	U	0.16	J	0.062	J	0.067	J	0.098	J	0.22	U
SW6010D	Calcium	mg/kg	1300		3000		1400		22000		4100		15000		3300		1500	
SW6010D	Chromium	mg/kg	5.3		260		250		78		35		38		38		130	
SW6010D	Chromium, Hexavalent	mg/kg	0.37	J	10.1		5.7		5.5		0.71		0.56		1.4		2.8	
SW6010D	Cobalt	mg/kg	1		8.4		3.3		4.2		5.8		3.7		7.1		2.5	
SW6010D	Copper	mg/kg	3.6		28		14		11		11		11		23		4.8	
SW6010D	Iron	mg/kg	2700		16000		7900		9800		11000		8900		13000		7700	
SW6010D	Lead	mg/kg	1.7		2.5		4		12		6.3		20		19		2.8	
SW6010D	Magnesium	mg/kg	900		11000		2100		3300		3800		2200		4000		2600	
SW6010D	Manganese	mg/kg	45		270		110		160		190		130		210		120	
SW6010D	Mercury	mg/kg	0.025	U	0.022	U	0.021	U	0.048		0.021	U	0.069		0.087		0.021	U
SW6010D	Nickel	mg/kg	4.5	J	17		9.8		10		24		9.3		21		11	
SW6010D	Potassium	mg/kg	620		7100		970		1500		2100		1500		1800		1200	
SW6010D	Selenium	mg/kg	0.7	J	4.1	U	0.46	J	4.8	U	0.55	J	4.3	U	4.4	U	4.4	U
SW6010D	Silver	mg/kg	0.81	U	0.62	U	0.64	U	0.73	U	0.65	U	0.65	U	0.66	U	0.66	U
SW6010D	Sodium	mg/kg	95	J	350		82	J	170		200		170		220		110	J
SW6010D	Thallium	mg/kg	8.1	U	6.2	U	6.4	U	7.3	U	6.5	U	6.5	U	6.6	U	6.6	U
SW6010D	Tin	mg/kg	2.7	U	0.76	J	2.1	U	0.69	J	0.84	J	0.72	J	1.6	J	2.2	U
SW7199	Vanadium	mg/kg	5.4		38		12		19		22		17		25		12	
SW7471A	Zinc	mg/kg	9.2		37		21		25		24		24		41		15	
DMF																		
SW8033M	Dimethylformamide	mg/kg	0.16	U	0.13	U	0.16	U	0.19	U	0.19	U	0.18	U	0.21	U	0.22	U
Hydrazine/Aldehydes																		
SW8315A	Formaldehyde	ug/kg	2600	UJ	4700	J	2200	UJ	2400	UJ	2100	J	2000	J	2600	J	2200	UJ
SW8315A MOD	Hydrazine	ng/g	6	U	5.5	U	5.3	U	3.8	J	7.7		5.5	U	5.6	U	5.6	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	6	U	5.5	U	5.3	U	5.8	U	5.5	U	5.5	U	5.6	U	5.6	U
SW8315A MOD	UDMH	ng/g	6	U	5.5	U	5.3	U	5.8	U	5.5	U	5.5	U	5.6	U	5.6	U
Inorganics																		
E300	Chloride	mg/kg	7.2	J	42	J	11	UJ	12	UJ	6.8	J	11	UJ	12	J	6.7	J
E300	Sulfate	mg/kg	43	J	500	J	13	J	4000	J	520	J	12000	J	1500	J	180	J
E350.1	Ammonia	mg/kg	50		42		9.2		4.4	J	3.6	J	18		11		9.9	
Field Parameters																		
D1498	Oxidation Reduction Potential	mV	381		394		397		318		321		341		345		411	

Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

Table 3 - Metals/DMF/Hydrazine/Aldehydes/Inorganics
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-712		SB-712	
		Sample Date	11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Sample Depth (ft bgs)	37 - 38		23 - 24	
		Qc Code	FS		FS	
Method	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier
Total Metals						
SW6010D	Aluminum	mg/kg	10000		2500	
SW6010D	Antimony	mg/kg	1.5	J	16	U
SW6010D	Arsenic	mg/kg	4.1		4.5	
SW6010D	Barium	mg/kg	71		18	
SW6010D	Beryllium	mg/kg	0.27		0.097	J
SW6010D	Cadmium	mg/kg	0.22	U	0.21	U
SW6010D	Calcium	mg/kg	12000		850	
SW6010D	Chromium	mg/kg	250		32	
SW6010D	Chromium, Hexavalent	mg/kg	16.8		1	
SW6010D	Cobalt	mg/kg	18		1.4	
SW6010D	Copper	mg/kg	64		2.2	
SW6010D	Iron	mg/kg	28000		5000	
SW6010D	Lead	mg/kg	2.8		2	
SW6010D	Magnesium	mg/kg	5700		1300	
SW6010D	Manganese	mg/kg	310		58	
SW6010D	Mercury	mg/kg	0.02	U	0.021	U
SW6010D	Nickel	mg/kg	15		4.7	J
SW6010D	Potassium	mg/kg	3300		940	
SW6010D	Selenium	mg/kg	0.58	J	4.2	U
SW6010D	Silver	mg/kg	0.65	U	0.63	U
SW6010D	Sodium	mg/kg	1500		92	J
SW6010D	Thallium	mg/kg	6.5	U	6.3	U
SW6010D	Tin	mg/kg	0.87	J	2.1	U
SW7199	Vanadium	mg/kg	110		7.9	
SW7471A	Zinc	mg/kg	48		7.4	
DMF						
SW8033M	Dimethylformamide	mg/kg	0.15	U	0.78	
Hydrazine/Aldehydes						
SW8315A	Formaldehyde	ug/kg	6100	J	2200	UJ
SW8315A MOD	Hydrazine	ng/g	5.4	U	5.5	U
SW8315A MOD	Monomethylhydrazine (MMH)	ng/g	5.4	U	5.5	U
SW8315A MOD	UDMH	ng/g	5.4	U	5.5	U
Inorganics						
E300	Chloride	mg/kg	250	J	11	UJ
E300	Sulfate	mg/kg	3700	J	43	J
E350.1	Ammonia	mg/kg	140		5.9	
Field Parameters						
D1498	Oxidation Reduction Potential	mV	337		300	

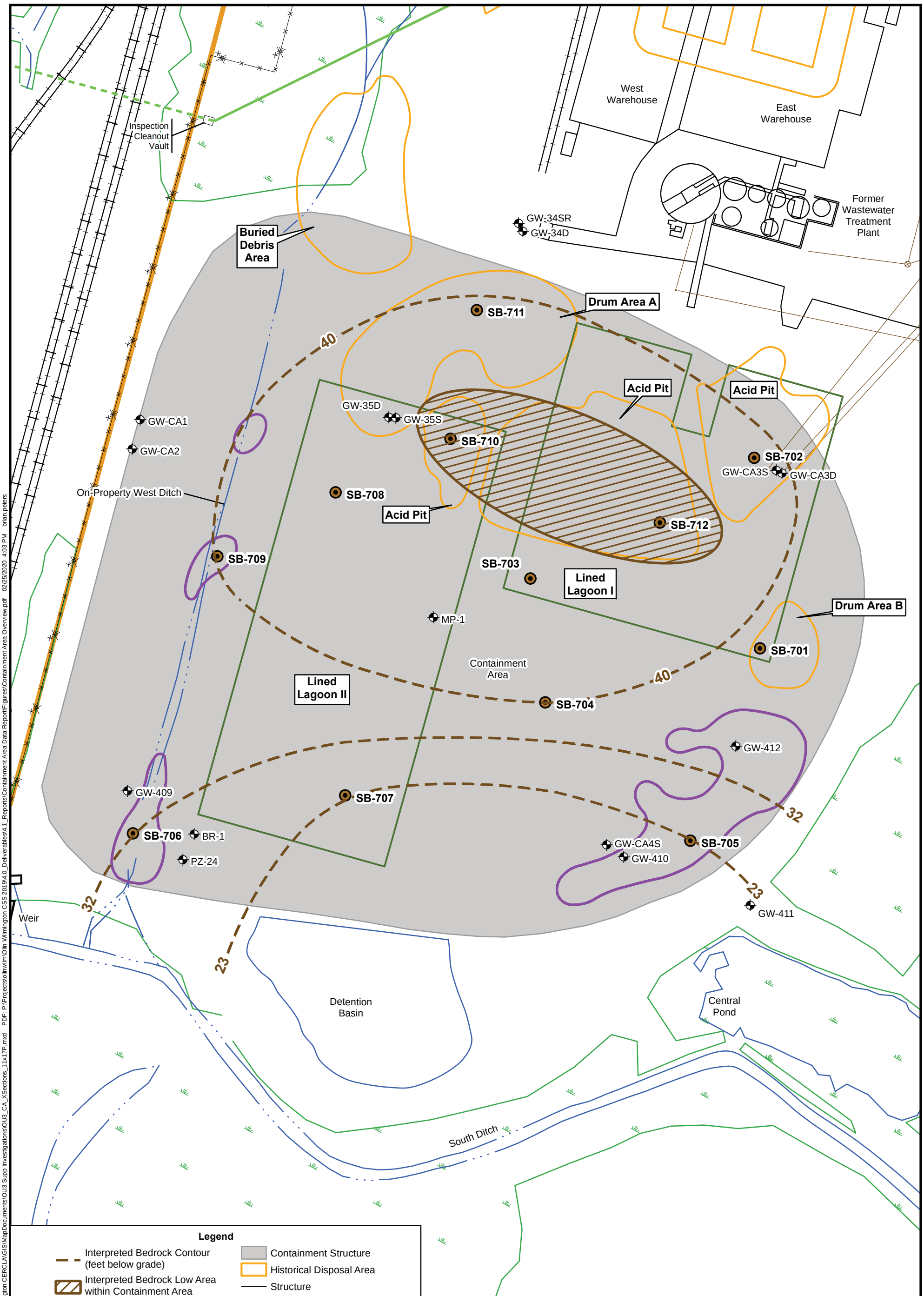
Notes

Units:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
ng/g = nanogram per gram
mV = millivolts

Qualifiers:
J = concentration is an approximate value
U = not detected
UJ = not detected and value is approximate
J+ = concentration is an approximate value with a potential high bias
J- = concentration is an approximate value with a potential low bias

Created by: KMS 3/19/2020
Checked by: LLK 03/19/2020

FIGURES



Legend

- Interpreted Bedrock Contour (feet below grade)
- Interpreted Bedrock Low Area within Containment Area
- Boring Location
- Monitoring Well
- Chromium > 500 mg/kg
- 51 Eames St. Property Boundary
- Aboveground Conveyance Piping
- Underground Conveyance Piping
- Containment Structure
- Historical Disposal Area
- Structure
- Paved Road
- Unpaved Road
- Railroad
- Fence
- Drain/Sewer Line
- Surface Water
- Wetland Boundary

wood.

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Chelmsford, MA 01824

N

0 30 60 120 Feet

Figure 1
Soil Boring Locations
2019 Containment Area Investigation

Olin Chemical Superfund Site
Wilmington, Massachusetts

Prepared/Date: BRP 02/25/20 | Checked/Date: BH 02/25/20

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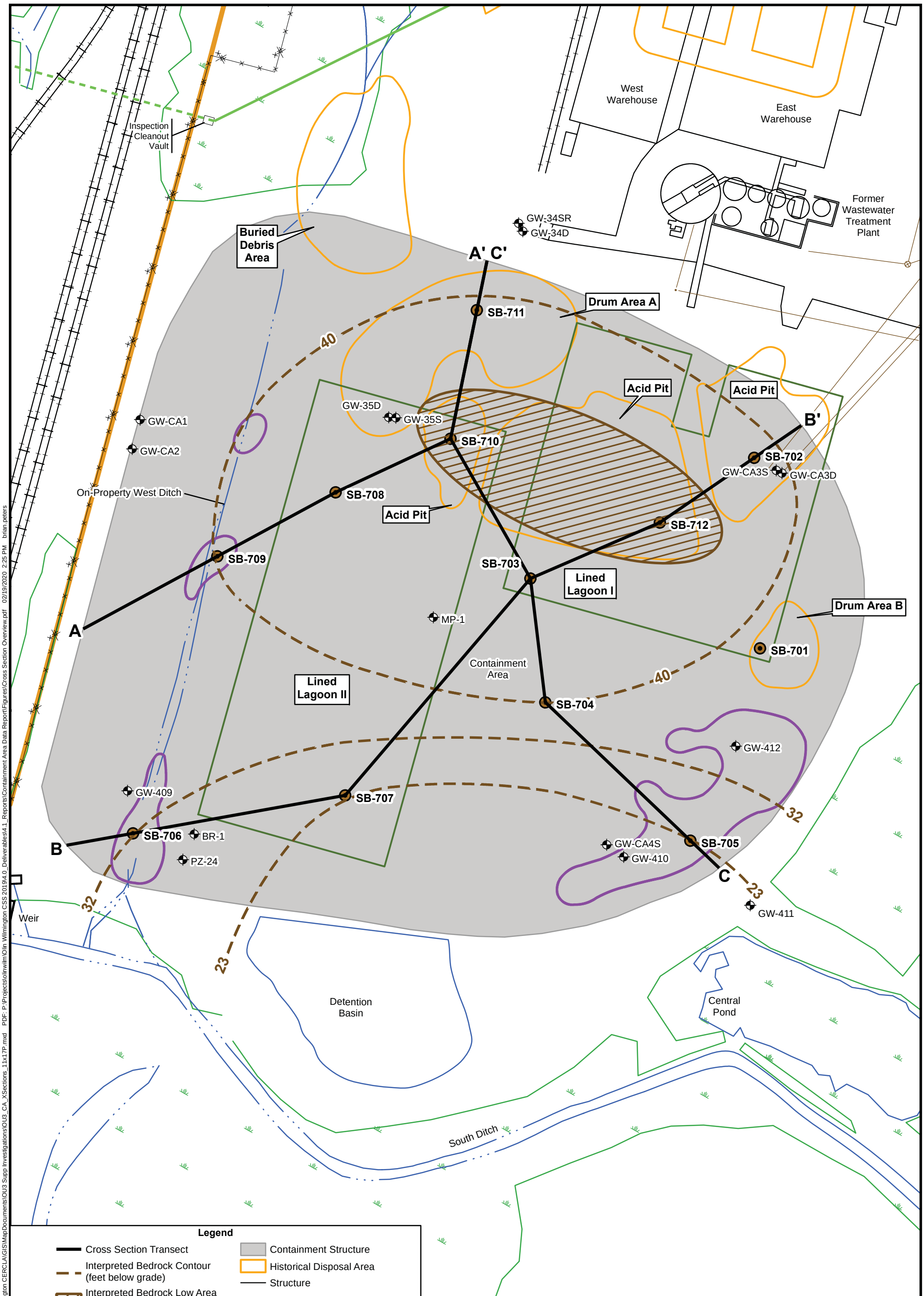

Legend

- Cross Section Transect
- Interpreted Bedrock Contour (feet below grade)
- Interpreted Bedrock Low Area within Containment Area
- Boring Location
- Monitoring Well
- Chromium > 500 mg/kg
- 51 Eames St. Property Boundary
- Aboveground Conveyance Piping
- Underground Conveyance Piping
- Containment Structure
- Historical Disposal Area
- Structure
- Paved Road
- Unpaved Road
- Railroad
- Fence
- Drain/Sewer Line
- Surface Water
- Wetland Boundary

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N

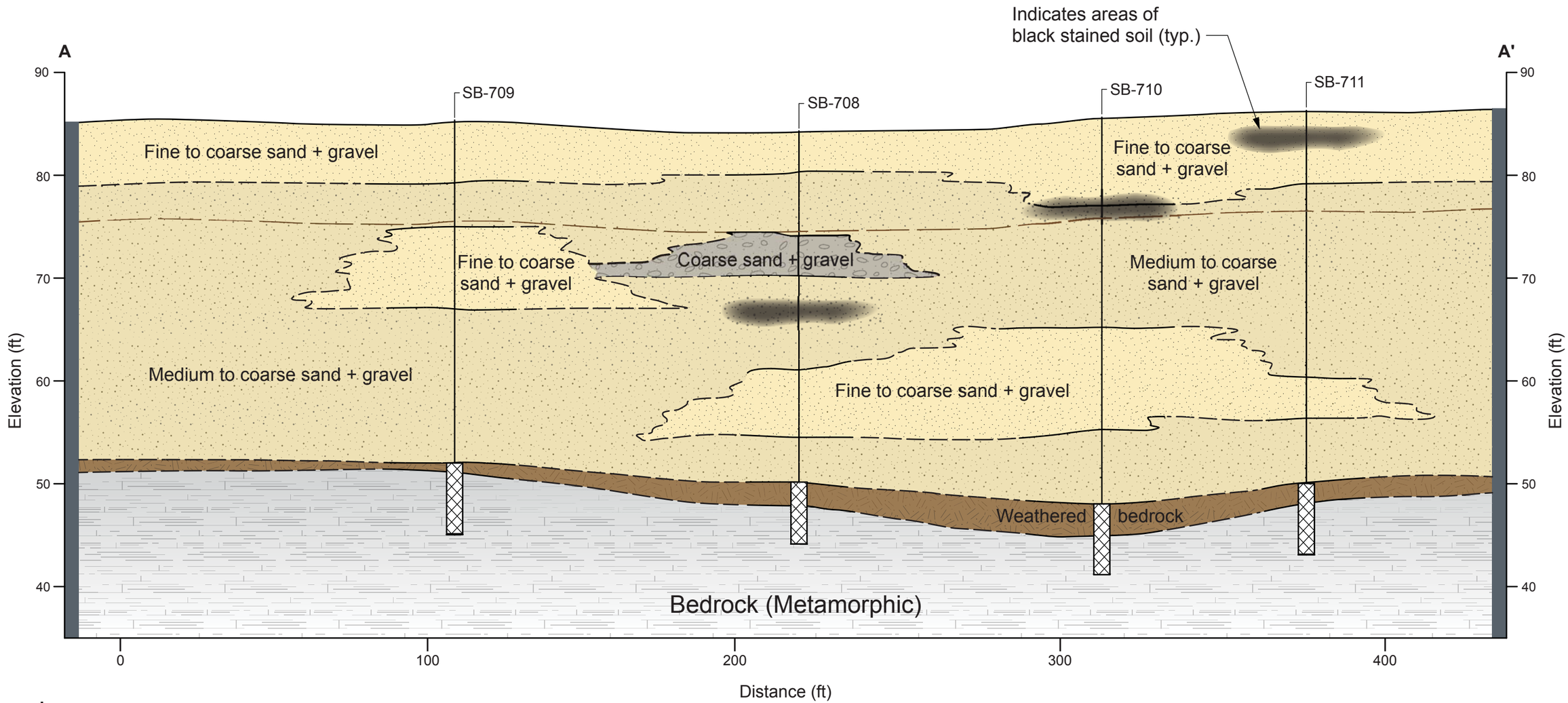
0 30 60 120 Feet

Figure 2
Cross Section Overview
2019 Containment Area Investigation

Olin Chemical Superfund Site
Wilmington, Massachusetts

Prepared/Date: BRP 02/19/20 | Checked/Date: BH 02/19/20

Document: P:\Projects\olinwilm\Olin Wilmington CERCLA\GIS\MapDocuments\OU3 Supp Investigations\OU3_CA_XSections_11x17P.mxd PDF: P:\Projects\olinwilm\Olin Wilmington CSS 2019\4.0_Deliverables\4.1_Reports\Containment Area Data Report\Figures\Cross Section Overview.pdf 02/19/2020 2:25 PM brian.peters



Legend

- Fine to coarse sand + gravel
- Medium to coarse sand + gravel
- Coarse sand + gravel
- Weathered bedrock
- Amphibolitic Gneiss
- Soil Boring
- Indicates areas of black stained soil
- Approximate location of subgrades
- Depth of previous excavation
- Bedrock Coring
- Slurry Wall

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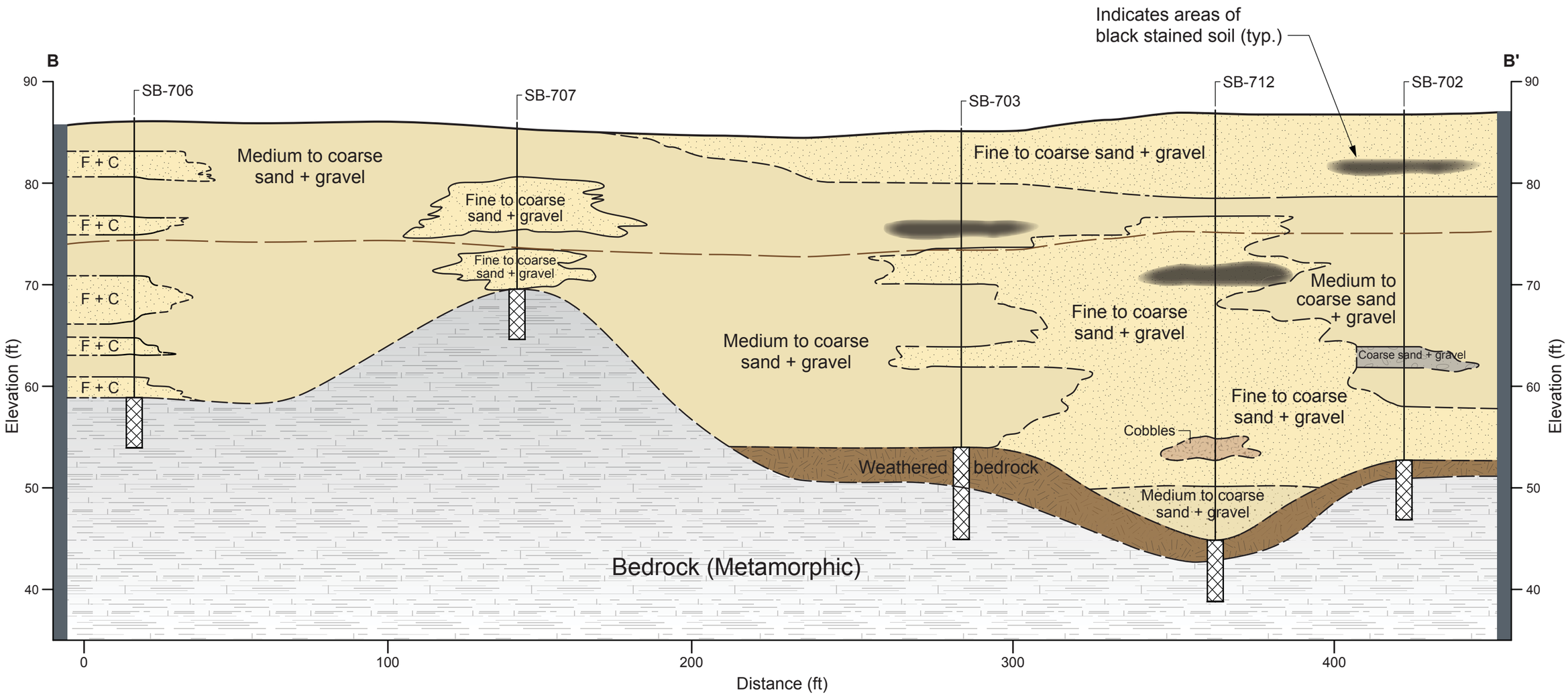
Figure 3
Cross Section A-A'
2019 Containment Area Investigation

Olin Chemical Superfund Site
Wilmington, Massachusetts

Prepared/Date: JPH 02/18/20 | Checked/Date: BH 02/18/20

PORT2019016_A-A



Legend

- Fine to coarse sand + gravel
- Medium to coarse sand + gravel
- Coarse sand + gravel
- Weathered bedrock
- Amphibolitic Gneiss
- Soil Boring
- Indicates areas of black stained soil
- Approximate location of subgrades
- Depth of previous excavation
- Bedrock Coring
- Cobbles
- Slurry Wall

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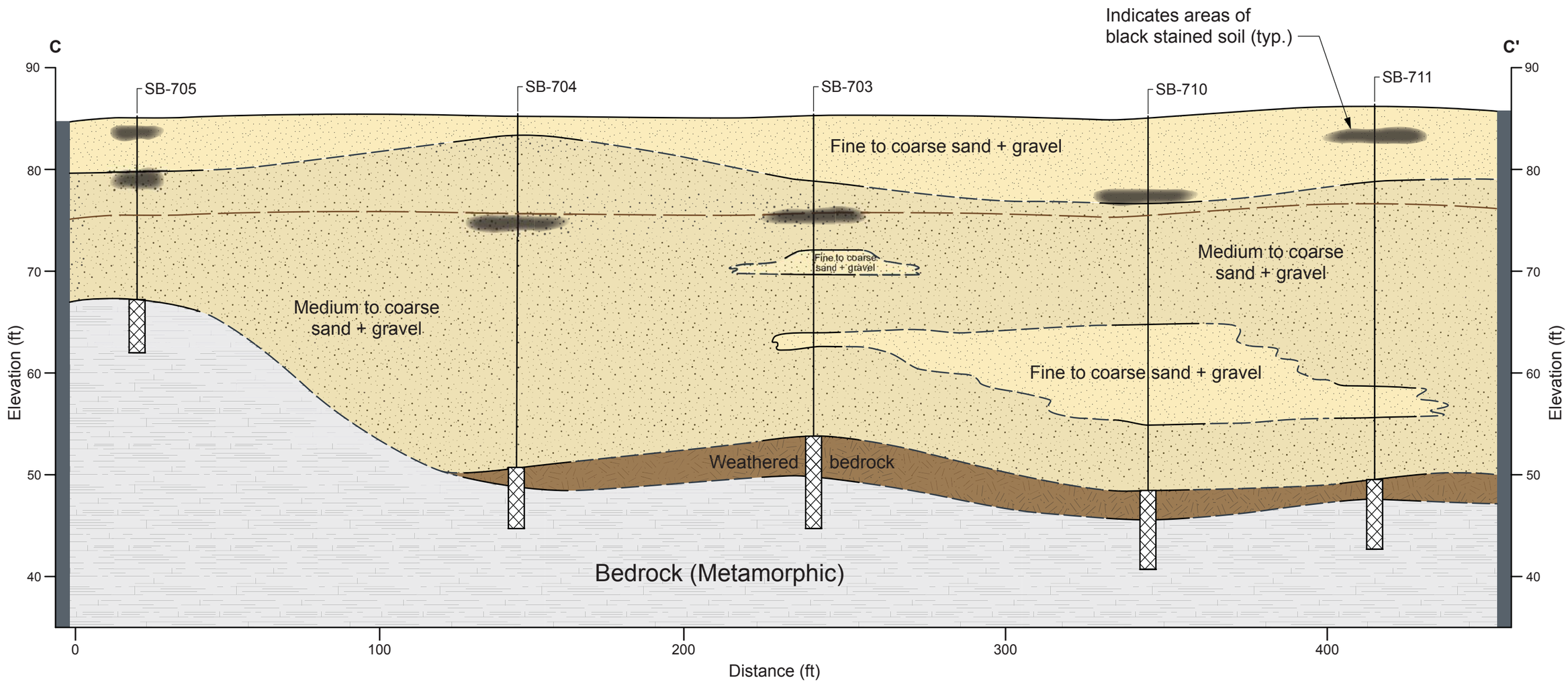
Figure 4
Cross Section B-B'
2019 Containment Area Investigation

Olin Chemical Superfund Site
Wilmington, Massachusetts

Prepared/Date: JPH 02/18/20 | Checked/Date: BH 02/18/20

PORT2019016_B-B



Legend

- Fine to coarse sand + gravel
- Medium to coarse sand + gravel
- Coarse sand + gravel
- Weathered bedrock
- Amphibolitic Gneiss
- Soil Boring
- Indicates areas of black stained soil
- Approximate location of subgrades
- Depth of previous excavation
- Bedrock Coring
- Slurry Wall

wood.

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Figure 5
Cross Section C-C'
2019 Containment Area Investigation

Olin Chemical Superfund Site
Wilmington, Massachusetts

Prepared/Date: JPH 02/18/20 | Checked/Date: BH 02/18/20

PORT2019016_C-C

ATTACHMENT 1 – BORING LOGS

BORING NO.: **SB-701**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/11/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 39 ft. BGS	**DATE FINISHED:** 11/11/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 (0'-10')	0.0-1.0	N/A	9.8/10.0	Light Brown to brown fine to coarse **SAND** and gravel with a trace of silt.	N/A	1.4	OC-SB-701-0.0/2.0-XXX OC-SB-701-0.0/2.0-DUP OC-SB-701-0.0/2.0-MS OC-SB-701-0.0/2.0-MSD
	1.0-2.5			Dark brown fine to coarse **SAND** and gravel with some small cobbles and a trace of silt.		1.4	
	2.5-6.0			Dark brown to very dark brown to black fine to coarse **SAND** and gravel with organics and some small cobbles and a trace of silt. (4.5-5.0 large amount of organic debris pieces of wood)		7.1 24.3	OC-SB-701-2.0/4.0-XXX OC-SB-701-4.0/6.0-XXX
	6.0-8.5			Brown to dark brown medium **SAND** with some coarse sand. Cobbles and trace of gravel near bottom.		4.3	OC-SB-701-6.8/8.0-XXX
	8.5-9.0			Olive to olive brown medium to coarse **SAND** with a little fine sand and silt.		2.2	OC-SB-701-8.0/10-XXX
	9.0-10.0			Olive brown fine to coarse **SAND** and gravel with a trace of silt and cobbles.			OC-SB-701-0.0/10-XXX (TCLP)
S2 (10'-15')	10.0-10.5	N/A	4.7/5.0	Olive brown fine to coarse **SAND** and gravel with a trace of silt and cobbles	N/A	1.4	
	10.5-11.0			Brown to dark reddish brown, fine to coarse **SAND** and gravel with some silt and small cobbles.			
	11.0-12.0			Brown to reddish brown fine to coarse **SAND** and gravel with a little small cobbles and a trace of silt.		1.6	
	12.0-14.5			Reddish brown to strong reddish brown (iron stained) fine to coarse **SAND** with traces of gravel and silt. Stratified with some coarse layers and some fine grained layers.		3.4	
	14.5-15.0			Reddish brown to olive brown fine to coarse **SAND** and gravel with a little cobbles and traces of silt.		NR	
S3 (15'-23')	15.0-17.5	N/A	8.0/8.0	Olive brown to reddish brown medium to coarse **SAND** and a little gravel and traces of fine sand.	N/A	2.1	
	17.5-20.0			Reddish brown medium to coarse **SAND** and gravel with traces of fine sand and small cobbles.		2.6	
	20.0-23.0			Strong reddish brown (iron stain colored) (20-21') to reddish brown medium to coarse **SAND** and gravel. Trace of fine sand. Stratified appearance.		1.6 3.7	OC-SB-701-20/21-XXX
S4 (23'-33')	23.0-24.0	N/A	10.0/10.0	Brown to reddish brown medium to coarse **SAND** with some gravel and traces of fine sand.	N/A	NR	
	24.0-25.0			Olive to yellow brown to reddish brown mottled fine to coarse **SAND** and gravel with a little cobbles and silt.		1.0	
	25.0-30.0			Olive brown fine to coarse **SAND** and gravel with cobbles and a little silt.		0.9	OC-SB-701-31/32-XXX
	30.0-32.0			Olive to olive brown to reddish brown fine to coarse **SAND** and gravel with traces of cobbles and some silt. (Till-like).		5 7	
	32.0-33.0			Light gray to olive **WEATHERED BEDROCK**. Cobbles at 32'.		21.0	
S5 (34'-39')	34.0-39.0	N/A	4.0/5.0	Fine to medium grained green to pink (**QUARTZITE/AMPHIBOLIC GNIESS**) quite altered and foliated disturbed. Lower 2' is darker colored with better developed foliations ~ 45° and some high angle nearly vertical fractures.	N/A	NR	
				Bottom of boring, grouted borehole to surface.		NR	

Created by: BKH Checked by: JKR

BORING NO.: **SB-702**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/08/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 41 ft. BGS	**DATE FINISHED:** 11/08/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-5'	0.0-1.0	N/A	5.0/5.0	Olive fine to coarse **SAND** and gravel with cobles and some silt. (Wet)	N/A	0.5	OC-SB-702-0.0/2.0-XXX
	1.0-3.0			Brown to olive brown fine to coarse **SAND** and gravel with a little silt, trace small cobbles.			
	3.0-3.5			Brown to dark brown fine to coarse **SAND** and gravel with a little silt.		5.4	OC-SB-702-2.0/4.0-XXX
	3.5-4.0			Brown fine to coarse **SAND** and gravel with a little silt.		NR	
	4.0-5.0			Brown to olive colored similar to above.		8.9	OC-SB-702-4.0/6.0-XXX
S2 5'-15'	5.0-6.0	N/A	8.0/10.0	Olive to brown fine to coarse **SAND** and gravel with a little silt.	N/A	0.5	
	6.0-6.5			Brown to dark brown fine to coarse **SAND** and gravel with some silt and organics.		1.8	OC-SB-702-6.0/8.0-XXX
	6.5-8.5			Brown to yellow brown fine to coarse **SAND** and gravel with traces of small cobbles and silt.			
	8.5-9.0			Brown medium to coarse **SAND** and gravel trace of fine sand.		NR	OC-SB-702-8.0/10-XXX
	9.0-15.0			Light brown to light yellow brown medium to coarse **SAND** and gravel with some areas with cobbles.		9.7	OC-SB-702-0.0/10-XXX (TCLP)
S3 15'-25'	15.0-18.0	N/A	10.0/10.0	Brown to yellow brown coarse to medium **SAND** with a little gravel.	N/A	0.5	
	18.0-23.0			Light brown to light yellow brown medium to coarse **SAND** with some to a little gravel.		1.1 1.5	
	23.0-25.0			Light brown to yellow brown coarse **SAND** and gravel with some medium sand and traces of small cobbles. (24-24.5 **GRAVEL** layer with coarse sand).		1.1 1.5	
S4 25'-35'	25.0-26.0	N/A	10.0/10.0	Light brown to reddish brown coarse to medium **SAND** with a little gravel.	N/A	0.5	
	26.0-26.5			Brown to light brown medium **SAND** with little coarse and fine sand.		0.5	
	26.5-27.5			Brown to light reddish brown medium to coarse **SAND**.		0.6	
	27.5-29.0			Brown to light reddish brown medium to coarse **SAND** and gravel with some small cobbles and trace of fine sand.		0.6	OC-SB-702-28/29-XXX
	29.0-33.0			Brown to olive brown fine to coarse **SAND** and gravel with some cobbles and a little silt.		1.6	
	33.0-34.0			Olive to olive gray fine to coarse **SAND** cobbles and gravel with a little silt.		2.8	
	34.0-35.0			Olive to gray fine coarse **SAND** and gravel with some silt.		0.8	OC-SB-702-34/35-XXX
S5 36'-41'	35.0-36.0	N/A	4.0/5.0	Top of **WEATHERED BEDROCK**.	N/A	NR	
	36.0-41.0			Encountered hard **QUARTZITE** at 36'. Fracture at 37.0'-37.5'. Recovered nice sections of sonic cored rocks. Medium to fine grained. **QUARTZITE/AMPHIBOLE GNIESS**, very hard rock as reported by driller. Bottom of boring. Grouted borehole to surface.			

Created by: BKH Checked by: JKR

BORING NO.: **SB-703**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/05/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 40 ft. BGS	**DATE FINISHED:** 11/05/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-1.5	N/A	10.0/10.0	Brown to dark brown fine to coarse **SAND** and silt with some gravel and roots/organic debris.	N/A	1.3	OC-SB-703-0.0/2.0-XXX
	1.5-3.0			Very dark brown to black fine to medium **SAND** and organics.			OC-SB-703-2.0/4.0-XXX OC-SB-703-2.0/4.0-DUP
	3.0-6.0			Light brown to light olive brown (some iron stained spots) fine to medium **SAND** with traces of coarser material.		1.6 3.8	OC-SB-703-2.0/4.0-MS OC-SB-703-2.0/4.0-MSD
	6.0-7.5			Brown medium to coarse **SAND** with traces fine sand and gravel.		1.7	OC-SB-703-4.0/6.0-XXX OC-SB-703-6.0/8.0-XXX
	7.5-8.5			Strong reddish brown (iron stained) medium to coarse **SAND** and gravel with traces of fine sand.		1.6	OC-SB-703-8.0/10.0-XXX
	8.5-10.0			Brown medium to coarse **SAND** and gravel with cobbles. Wet.			OC-SB-703-0.0/10.0-XXX (TCLP)
S2 10'-20'	10.0-13.0	N/A	7.5/10.0	Brown medium to coarse **SAND** and gravel with a trace of fine sand and cobbles.	N/A	6.5	
	13.0-14.0			Yellowish brown fine to coarse **SAND** and gravel with some small cobbles.		1.6	
	14.0-15.5			Light brown medium to coarse **SAND** and gravel with traces of fine sand. Gravel layer from 15.0'-15.5'.		3.4	
	15.5-17.5			Light brown to light grayish brown medium to coarse **SAND** and gravel with small cobbles.		4.0	OC-SB-703-17/18-XXX
S3 20'-30'	20.0-21.0	N/A	5.0/10.0	Light brown to light grayish brown medium to coarse **SAND** and gravel.	N/A	4.6	
	21.0-21.5			Yellowish brown fine to coarse **SAND** and gravel with traces silt and cobbles.		1.8	
	21.5-22.5			Yellow brown fine to coarse **SAND** and gravel.		1.4	
	22.5-24.0			Brown medium **SAND** with traces of fine to coarse sand.		1.7	
	24.0-25.0			Brown to yellow brown fine to coarse **SAND** and gravel with traces of cobbles. Some bright orange iron staining.		0.5	
S4 30'-35'	30.0-31.7	N/A	4.6/5.0	Brown to yellow brown fine to coarse **SAND** and gravel with cobbles and silt.	N/A	0.8	OC-SB-703-30/32-XXX
	31.7-35.0			Gray pulverized **WEATHERED** BED**ROCK**. 33' bgs estimated top of weathered rock.		4.2	
S5 35'-40'	35.0-40.0	N/A	2.0/5.0	Estimated top of competent bedrock 35' bgs	N/A	3.3	
				Drilled to 40' refusal.		1.4	
				Bottom of boring. Grouted borehole to surface.			

Created by: BKH Checked by: JKR

BORING NO.: **SB-704**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/07/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 40 ft. BGS	**DATE FINISHED:** 11/07/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-1.5	N/A	10.0/10.0	Brown to dark brown fine to coarse **SAND** and gravel with some silt. Very moist layers of white material at bottom of interval.	N/A	7.7	OC-SB-704-0.0/2.0-XXX
	1.5-2.5			Very dark brown **SANDY ORGANIC MATERIAL** with roots (peat).			
	2.5-3.5			Dark brown to very dark brown fine to medium **SAND** with some darker organic rich layers. Saturated.		13	OC-SB-704-2.0/4.0-XXX
	3.5-5.5			Dark brown to brown fine to coarse **SAND** and gravel with some cobbles and a little silt.			OC-SB-704-4.0/6.0-XXX
	5.5-8.0			Brown to olive brown fine to coarse **SAND** and gravel with some to a little silt and some cobbles.		3.5	OC-SB-704-6.0/8.0-XXX
	8.0-9.5			Olive brown to brown fine to coarse **SAND** and gravel with a little silt and little to traces of cobbles. Has a slightly mottled appearance.		2.3	OC-SB-704-8.0/10-XXX
	9.5-10.0			Light olive brown to olive brown fine to coarse **SAND** and gravel with a little silt and cobbles.		7.6	OC-SB-704-0.0/10-XXX (TCLP)
S2 10'-15'	10.0-11.5	N/A	5.0/5.0	Olive brown to dark olive brown fine to coarse **SAND** and gravel with cobbles and a trace of silt.	N/A	1.7	
	11.5-13.5			Very dark brown coarse **SAND** and gravel with a little fine to medium sand.		1.7	OC-SB-704-12/13-XXX
	13.5-15.0			Yellow brown coarse **SAND** and gravel with some cobbles and medium sand and a trace of fine sand.		1.4 1.9	
S3 15'-25'	15.0-18.0	N/A	10.0/10.0	Strong yellow brown coarse **SAND** and gravel with some medium sand and traces of fine sand and cobbles.	N/A	3.6	
	18.0-19.0			Strong yellow brown coarse **SAND** with some medium sand and a little gravel.		6.8	OC-SB-704-18/19-XXX
	19.0-19.7			Reddish brown (iron stained) medium to coarse **SAND** with a little gravel and fine sand.		2.0	
	19.7-21.0			Strong yellowish olive brown to olive gray fine to coarse **SAND** and gravel with a little silt and cobbles.		2.0	
	21.0-24.0			Olive gray to gray fine to coarse **SAND** and silt with gravel and cobbles. (23.0-24.0) Possible pulverized cobble.		1.5	
	24.0-25.0			Olive brown to brown fine to coarse **SAND** and silt with gravel and some cobbles.		NR	
S4 25'-35'	25.0-27.5	N/A	9.5/10.0	Yellowish olive brown to olive gray fine to coarse **SAND** and silt with gravel and some cobbles.	N/A	NR	
	27.5-30.0			Yellowish dark brown to brown medium to coarse **SAND** and gravel with a little fine sand and traces of silt and cobbles.		0.6	
	30.0-31.0			**COBBLE**.		0.5	
	31.0-32.0			Strong reddish brown medium to coarse **SAND** and gravel with a little fine sand and some cobbles.		NR	
	32.0-34.5			Light olive brown to olive gray fine to coarse **SAND** and gravel with a little silt and some cobbles (Sandy Till)		0.9	OC-SB-704-33/34-XXX
	34.5-35.0			Gray **WEATHERED BEDROCK** pulverized by sonic.		0.4	
S5 35'-40'	35.0-40.0	N/A	3.0/5.0	Very poor recovery mostly sand sized cuttings. Rock reported drilled fairly easy/soft with intermittent hard spots.	N/A	0.3	
				Bottom of boring. Grouted borehole to surface.			

Created by: BKH Checked by: JKR

BORING NO.: **SB-705**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/08/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 23 ft. BGS	**DATE FINISHED:** 11/08/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-8'	0.0-1.5	N/A	8.0/8.0	Light yellow brown fine to medium **SAND** with a little coarse sand and gravel. Moist	N/A	0.5	OC-SB-705-0.0/2.0-XXX
	1.5-2.0			Dark brown to black fine to medium **SAND** with a little coarse sand and gravel (organics).			
	2.0-2.7			Brown to yellow brown medium **SAND** with a little fine and coarse sand, trace gravel.		1.6	OC-SB-705-2.0/4.0-XXX
	2.7-5.0			Brown to dark brown medium **SAND** with some coarse sand and gravel and a little fine sand.			OC-SB-705-4.0/6.0-XXX OC-SB-705-4.0/6.0-DUP OC-SB-705-4.0/6.0-MS OC-SB-705-4.0/6.0-MSD
	5.0-6.5			Very dark brown to black medium to coarse **SAND** with some fine sand and a little gravel trace cobbles and organics some white layers at bottom.		0.5	
	6.5-7.0			Brown medium to coarse **SAND** trace fine sand and gravel.		0.4	OC-SB-7045-6.0/8.0-XXX
	7.0-8.0			Brown to olive brown medium to coarse **SAND** and gravel with cobbles and some fine sand. Cobble in shoe at 8' bgs.			
S2 8'-18'	8.0-11.0	N/A	9.0/10.0	Brown to olive brown to reddish brown medium to coarse **SAND** and gravel with some cobbles and a little fine sand. Very moist to wet.	N/A	3.1	OC-SB-705-8.0/10-XXX OC-SB-708-0.0/10-XXX (TCLP)
	11.0-12.5			Olive brown fine to coarse **SAND** and gravel with a little silt and small cobbles.		1.9	
	12.5-14.5			Olive to olive brown fine to coarse **SAND** and gravel with traces of silt and small cobbles.		0.8	
	14.5-18.0			Brown to olive brown fine to coarse **SAND** and gravel with some cobbles. Trace of silt.		1.4	OC-SB-7045-17/18-XXX
S3 18'-23'	18.0-23.0	N/A	4.0/5.0	Encountered something hard at 18' bgs Top of **BEDROCK** 18' bgs Top of recovery is gray to dark gray fine grained with some steep fracture lines with green alteration or staining becomes much lighter colored (**QUARTZITE**) near bottom with some green alteration a long high angle fracture line. Driller reported very hard drilling for entire 5' run. 23' Bottom of boring. Grouted borehole to surface.	N/A	NR	

Created by: BKH Checked by: JKR

BORING NO.: **SB-706**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/06/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 32 ft. BGS	**DATE FINISHED:** 11/06/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-1.0	N/A	7.0/10.0	Brown to yellow brown medium to coarse **SAND** and gravel with some small cobbles and a trace of fine sand. Moist.	N/A	1.7	OC-SB-706-0.0/2.0-XXX
	1.0-3.0			Dark brown fine to coarse **SAND** and gravel with some small cobbles. Moist.			OC-SB-706-2.0/4.0-XXX
	3.0-4.0			Dark brown fine to coarse **SAND** and gravel and cobbles.		3.2	
	4.0-5.0			Brown to olive brown fine to coarse **SAND** and gravel with cobbles and a little trace of silt.			OC-SB-706-4.0/6.0-XXXX
	5.0-7.0			Brown to yellow olive brown fine to coarse **SAND** and gravel with a couple cobbles.		8.2	OC-SB-706-6.0/8.0-XXX (6-7')
S2 10'-15'	10.0-11.5	N/A	5.0/5.0	Very dark brown fine to coarse **SAND** and gravel with a little silt and organics. Some type of fiber. Has a sheen like appearance, wet.	N/A	3.9	OC-SB-706-0.0/10-XXX TCLP (0-7')
	11.5-13.0			Dark brown to dark olive brown medium to coarse **SAND** and gravel with cobbles and traces of fine sand and silt.			OC-SB-706-10/12-XXX
	13.0-14.0			Brown medium to coarse **SAND** and gravel with some small cobbles and a little fine sand.		5.2	
	14.0-15.0			Brown to yellow brown medium to coarse **SAND** with some gravel and traces of fine sand.		3.7	
S3 15'-25'	15.0-20.0	N/A	10.0/10.0	Brown to olive brown fine to coarse **SAND** and gravel with cobbles and a trace of silt. Very moist to wet.	N/A	10	
	20.0-21.5			Yellow brown to reddish yellow brown (iron stained) medium to coarse **SAND** and gravel with a little fine sand.		11 2	OC-SB-706-20/22-XXX
	21.5-23.0			Brown to olive brown fine to coarse **SAND** and gravel with cobbles and a trace of silt.		10	
	23.0-25.0			Brown to yellow brown medium to coarse **SAND** and gravel with some cobbles and a little fine sand.		9.0	
S4 25'-27'	25.0-26.0	N/A	NR	Brown to olive brown medium to coarse **SAND** and gravel with cobbles with trace fine sand and silt.	N/A	2.8	
	26.0-27.0			Yellow olive brown fine to coarse **SAND** and gravel with cobles and a little to trace of silt.		2.9	OC-SB-706-26/27-XXX
S5 27'-32'	27.0-32.0	N/A	1.0/5.0	Dark gray fine grained (**QUARTZITE**) some thin quartz veins. Sonic cored through hard dense rock from 27'-30'.	N/A	NR	
				Bottom of boring 32' bgs. Grouted borehole to surface.			

Created by: BKH Checked by: JKR

BORING NO.: **SB-707**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/07/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 23 ft. BGS	**DATE FINISHED:** 11/07/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-0.8	N/A	10.0/10.0	Brown to dark brown medium to coarse **SAND** and gravel with small cobbles some fine sand and a trace silt, wet.	N/A	0.3	OC-SB-707-0.0/2.0-XXX
	0.8-2.5			Olive to very dark brown fine to coarse **SAND** and gravel with some small cobbles and organics (roots, wood, peaty material).			OC-SB-707-2.0/4.0-XXX
	2.5-3.5			Brown fine to medium **SAND** with a little silt and trace medium to coarse sand and gravel.		0.5	OC-SB-707-4.0/6.0-XXX
	3.5-5.0			Brown to olive brown medium to coarse **SAND** and gravel with a little fine sand trace silt. Moist.			OC-SB-707-6.0/8.0-XXX OC-SB-707-6.0/8.0-DUP OC-SB-707-6.0/8.0-MS OC-SB-707-6.0/8.0-MSD
	5.0-6.0			Olive to light olive brown fine to coarse **SAND** and gravel with a little silt.		4.1	
	6.0-10.0			Light olive brown to yellow brown fine to coarse **SAND** and gravel with some cobbles.		7.0	OC-SB-707-8.0/10-XXX
S2 10'-17'	10.0-11.0	N/A	7.0/7.0	Brown to dark olive brown medium to coarse **SAND** and gravel with some fine sand and cobbles.	N/A	5.5	OC-SB-707-0.0/10-XXX (TCLP)
	11.0-13.0			Light olive brown fine to coarse **SAND** and gravel with a little silt and cobbles. Wet.		2.4	
	13.0-15.0			Brown to light olive yellow brown medium to coarse **SAND** and gravel with some cobbles traces fine sand and silt.		2.8	OC-SB-707-12/13-XXX
	15.0-16.5			Yellowish brown gravel with medium to coarse **SAND** and a little fine sand. Wet.		1.7 1.4	OC-SB-707-15/17-XXX (15-16.5')
S3 17'-23'	18.0-23.0	N/A	5.0/5.0	Encountered bedrock at ~16.5' bgs. 6" casing set to 18' bgs. Very hard bedrock (as per driller) Dark gray fine grained **QUARTZITE**. Dark black gray to gray fine grained with some near vertical fractures lines with greenish staining. Bottom of boring. Grouted borehole to surface.	N/A	NR	

Created by: BKH Checked by: JKR

BORING NO.: **SB-708**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/04/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 40.5 ft. BGS	**DATE FINISHED:** 11/04/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-3.0	N/A	10.0/10.0	Light brown to very dark brown fine to coarse **SAND** and gravel. Slight layered appearance but difficult to tell due to drilling disturbance. Some very dark colored peaty organic layers.	N/A	NR	OC-SB-708-0.0/2.0-XXX
	3.0-4.0			Brown silty fine **SAND** layer.		4	OC-SB-708-2.0/4.0-XXX
	4.0-6.5			Brown to olive brown medium to coarse **SAND** and gravel with a little fine sand and silt. Very moist. Soils have a slight odor.		31	OC-SB-708-4.0/6.0-XXX
	6.5-7.0			Silty fine **SAND** with traces of coarser material.			
	7.0-8.0			Olive to olive brown medium to coarse **SAND** and gravel. Very moist to wet.		18.0	OC-SB-708-6.0/8.0-XXX
	8.0-10.0			Brown to olive brown coarse **SAND** and gravel with some fine to medium sand and traces of silt. Wet. Soils have a slight odor.		10.0	OC-SB-708-8.0/10-XXX
S2 10'-20'	10.0-14.5	N/A	9.4/10.0	Brown medium to coarse **SAND** and gravel with a little fine sand. Becomes olive brown at bottom.	N/A	3.5	OC-SB-708-0.0/10-XXX
	14.5-15.5			Layered and stained medium to coarse **SAND** with some to a little fine sand and gravel. Yellow brown staining. Wet		15.5	
	15.5-16.5			Olive medium to coarse **SAND** and gravel with traces of fine sand and silt. Wet. Dark stained layer 16'-17'.		15.0	OC-SB-708-16/18-XXX
	16.5-20.0			Brown to yellow brown medium to coarse **SAND** and gravel with trace of fine sand. Very moist to wet.		21.0	
						7.5	
S3 20'-30'	20.0-23.0	N/A	8.0/10.0	Light brown medium to coarse **SAND** and gravel with a trace of fine sand.	N/A	NR	OC-SB-708-22/24-XXX
	23.0-25.0			Light yellowish green to olive fine to coarse **SAND** and gravel with a trace to a little silt. Wet.		15.0	
	25.0-28.0			Light yellow brown with a greenish tint fine to coarse **SAND** and gravel.		3.4	
	28.0-30.0			Bright yellow brown to olive fine **SAND** with traces of medium to coarse sand.		0.7	OC-SB-708-28/30-XXX
S4 30'-34'	30.0-33.0	N/A	4.0/4.0	Light yellowish brown with faint green tint. Medium to coarse **SAND** and gravel with a little fine sand.	N/A	6.5	
	33.0-34.0			Olive gray to gray fine to coarse **SAND** and gravel. Preliminary refusal at 34' bgs.		13.0	OC-SB-708-33/34-XXX
S5 34'-36'	34.0-36.0	N/A	2.0/2.0	**BEDROCK** well foliated amphibole gneiss appearance(Diorite) Medium grained foliated ~ 45° some pinkish clasts. Refusal at 36' bgs 34' Top of bedrock (11/4/19) (weathered bedrock) Competent bedrock at 35' bgs 36' bottom of boring (11/13/19 - cored boring deeper at request of USEPA)	N/A	NR	
S6 36'-40.5'	36.0-40.5	N/A	2.0/4.5	Dark gray fine grained foliated metamorphic rock (**GNEISS**) with general foliations at 35°-45°. Bottom of boring 40.5' bgs (11/13/19). Grouted borehole to surface.	N/A	NR	

Created by: BKH Checked by: JKR

BORING NO.: **SB-709**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/06/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 40 ft. BGS	**DATE FINISHED:** 11/06/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-10'	0.0-1.0	N/A	10.0/10.0	Brown to dark brown fine to coarse **SAND** and gravel with a trace of silt.	N/A	0.5	OC-SB-709-0.0/2.0-XXX
	1.0-6.5			Dark brown to very dark brown to olive gray fine to coarse **SAND** and gravel with a little silt some cobbles. Some organic material, roots, twigs, and pieces of geofabric.		3.8	OC-SB-709-2.0/4.0-XXX OC-SB-709-4.0/6.0-XXX
	6.5-7.5			Reddish brown (iron stained) medium to coarse **SAND** and gravel with a little fine sand trace silt, small cobbles.		4.6	OC-SB-709-6.0/8.0-XXX
	7.5-10			Brown to olive brown slight green tint fine to coarse **SAND** and gravel with a trace of silt.		2.5	OC-SB-709-8.0/10-XXX OC-SB-709-8.0/10-DUP OC-SB-709-8.0/10-MS OC-SB-709-8.0/10-MSD
S2 10'-20'	10.0-13.0	N/A	10.0/10.0	Brown to dark brown fine to coarse **SAND** and gravel with cobbles.	N/A	4.0	OC-SB-709-0.0/10-XXX (TCLP)
	13.0-17.0			Light olive brown fine to coarse **SAND** and gravel with cobbles and a trace of silt.		6.0	
	17.0-19.0			Olive brown to light olive brown fine to coarse **SAND** and gravel.		12.0	OC-SB-709-16/17-XXX
	19.0-20.0			Yellow brown to brown medium to coarse **SAND** and gravel.		17.0	
S3 20'-30'	20.0-21.0	N/A	6.0/10.0	Yellow brown to brown coarse to medium **SAND** and gravel. Wet.	N/A	2.9	
	21.0-22.0			Yellowish olive brown medium to coarse **SAND** and gravel (to small cobbles)			
	22.0-25.0			Yellow brown to yellowish olive brown medium to coarse **SAND** with some gravel traces of fine sand. Wet.		10.7	
	25.0-26.0			Brown to yellow brown medium to coarse **SAND** and gravel. Wet.		6.9	
S4 30'-34'	30.0-33.0	N/A	4.0/4.0	Brown to yellow brown medium to coarse **SAND** with some gravel. Trace fine sand.	N/A	6.0 6.2	
	33.0-34.0			Gray to greenish olive gray weathered and somewhat pulverized **BEDROCK**.		4.2 4.7	OC-SB-709-32/33-XXX
S5 34'-40'	34.0-40.0	N/A	2.5/6.0	Drilled **GNEISS**, fairly competent. Possible fracture (36.0-37.0'). Some iron stained fracture faces. Bottom of boring. Grouted borehole to surface.	N/A	NR	

Created by: BKH Checked by: JKR

BORING NO.: **SB-710**

wood.

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/06/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 45 ft. BGS	**DATE FINISHED:** 11/06/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 0'-4'	0.0-2.0	N/A	2.0/4.0	Not enough recovery for 0'-2' sample	N/A		
	2.0-4.0			Brown to dark brown fine to coarse **SAND** and gravel with a little fine sand. Cobbles. Cobble in toe of shoe (~8" cobble).		6.5	OC-SB-710-2.0/4.0-XXX
S2 4'-10'	4.0-6.0	N/A	6.0/6.0	Brown to olive brown fine to coarse **SAND** and gravel with a trace of silt. Very moist to wet.	N/A	8.1	OC-SB-710-4.0/6.0-XXX
	6.0-8.0			Dark gray to very dark gray to black fine to medium **SAND** with some coarse sand. Very moist to wet. Cobble.		20	OC-SB-710-6.0/8.0-XXX
	8.0-10.0			Dark brown to brown medium to coarse **SAND** and gravel with a little fine sand. Gravel and cobbles are rounded.		14.0	OC-SB-710-8.0/10.0-XXX OC-SB-710-0.0/10-XXX (TCLP)
S3 10'-20'	10.0-15.0	N/A	8.5/10	Brown to olive brown medium to coarse **SAND** and gravel with sand cobbles and traces of fine sand. Finer at top of sample.	N/A	13.5 11.8	
	15.0-18.0			Brown medium to coarse **SAND** and gravel with cobbles. Layered appearance (Alluvial).		11 4.8	
	18.0-19.0			Brown to olive brown medium to coarse **SAND** and gravel.			
	19.0-20.0			Brown to light brown medium to coarse **SAND** and gravel with some small cobbles to large gravel. Trace fine sand. Alluvial.		7.6	
S4 20'-30'	20.0-23.0	N/A	4.0/10.0	Light brown to brown fine to coarse **SAND** and gravel with some small cobbles. Wet.	N/A	3.3 1.4	OC-SB-710-23/24-XXX
				Light brown to light yellow brown fine to medium **SAND** with traces of silt and coarse sand, fine grained sands are well stratified.		3.2	
	23.0-24.0			Lost bottom of sample and bit. Offset and redrilled to 30' and resumed sampling.		NR	
S5 30'-39'	30.0-33.5	N/A	8.0/10.0	Brown to light brown medium to coarse **SAND** with trace gravel and fine sand.	N/A	2.1 3.2	
	33.5-35.5			Brown to dark brown medium to coarse **SAND** and gravel with traces of fine sand. Some small cobbles.		4.9	
	35.5-37.5			Dark yellow brown to dark olive brown silty fine to coarse **SAND** and gravel with some small cobbles. Possible basal till. Very moist to wet.		3.9	OC-SB-710-36/37-XXX
	37.5-39.0			Gray to olive with slight greenish tint. Appears to be **WEATHERED BEDROCK**. Very moist to dry.		3.9	
				Top of **BEDROCK** 38', becomes more competent by 39'.			
S6 39'-45'	39.0-45.0	N/A	3.0/6.0	Top 1' of recovery is broken up **SCHIST** to gneissic rock with numerous iron stained fracture lines. Some green stained faces.	N/A	NR	
				Bottom 2' of recovery is darker greenish gray much more competent but still very broken up. Foliation/fracture trend is high angle (60°) fine grained.			
	45			Bottom of boring. Grouted borehole to surface.			

Created by: BKH Checked by: JKR

BORING NO.: **SB-711**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/12/19	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 43' ft. BGS	**DATE FINISHED:** 11/12/19	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 (0'-8')	0.0-2.0	N/A	8.0/8.0	Brown medium to coarse **SAND** and gravel with some fine sand and a trace of silt.	N/A	51	OC-SB-711-0.0/2.0-XXX
	2.0-3.5			Dark brown to dark olive brown slightly mottled fine to coarse **SAND** and gravel, trace cobble and silt.		89.0	
	3.5-6.5			Very dark brown to black fine to coarse **SAND** with some gravel and gravelly areas, trace cobble and silt. Moist, petroleum like odor.		280	OC-SB-711-2.0/4.0-XXX OC-SB-711-4.0/6.0-XXX
	6.5-8.0			Brown medium to coarse **SAND** with some gravel and a little fine sand.		55.0	OC-SB-711-6.0/8.0-XXX
S2 (8'-18')	8.0-9.5	N/A	10.0/10.0	Brown to light brown medium **SAND** with some fine sand and traces of coarse sand and gravel.	N/A	5.1	OC-SB-711-8.0/10-XXX
	9.5-9.7			Gravel Layer.			
	9.7 - 10.5			Olive brown fine **SAND** with some medium sand and a little coarse sand and gravel and a trace of silt.		8.6	OC-SB-711-0.0/10-XXX
	10.5-13.0			Dark brown to brown medium to coarse **SAND** with a little gravel and traces of cobbles.			
	13.0-18.0			Light brown to olive brown to olive. Gravel with medium to coarse **SAND** and a little to traces of fine sand and silt. Trace small cobbles.		9.8	
				Light brown to olive brown to olive gravel with medium to coarse **SAND** and a little to traces of fine sand and silt. Trace of small cobbles. Wet.		6.4	
				Becomes more brown less fine near bottom of recovery (17'-18')		5.6	OC-SB-711-18/19-XXX (actual closer to 17-18')
S3 (18'-26')	18.0-20.0	N/A	8.0/8.0	Brown medium to coarse **SAND** and gravel with a little cobbles and traces of fine sand.	N/A	8.6	
	20.0-21.5			Light brown medium to coarse **SAND** and gravel with a little cobbles.		5.1	
	21.5-25.0			Light brown medium to coarse **SAND** with a little gravel and traces of fine sand.		3.5	
	25.0-26.0			Light brown to light reddish brown medium **SAND** with some coarse sand and a little gravel trace fine sand.		3.2	
S4 (26'-36')	26.0-27.0	N/A	9.0/10	Light reddish brown medium **SAND** similar to above.	N/A	6.3	
	27.0-28.0			Olive to yellowish olive fine to coarse **SAND** and gravel with a little cobbles and silt. Mottled appearance.		4.2	
	28.0-33.0			Olive brown to brown fine to coarse **SAND** and gravel with some cobbles and little to traces of silt. Wet.		1.8	
	33.0-36.0			Gray to olive gray fine to coarse **SAND** and gravel with cobbles and some silt (Till).		5.6	OC-SB-711-35/36-XXX
				Top of **WEATHERED ROCK** = 36' BGS			
S5 (38'-43')	38	N/A	2.0/5.0	Set 6" casing into weathered bedrock (**SCHIST**) to 38' - top of competent rock. Cored with Sonic 38'-43' BGS	N/A	NR	
	40			Recovered ~2' of **GRAVEL** and cobble sized bedrock fragments.			
	42			Dark gray fine to medium grained **SCHIST** with some foliation at ~45°.			
	43			Bottom of boring. Grouted borehole upon completion.			

Created by: SRC Checked by: JKR

BORING NO.: **SB-712**

PROJECT NAME: Olin - Wilmington, MA	**DRILLING CO.:** Glacier Drilling	**SHEET:** 1 OF 1
PROJECT NUMBER: 6107190016	**DRILLER:** Mike Aldo	**DRILLING METHOD:** Rotary Sonic
LOCATION: Containment Area	**DATE STARTED:** 11/11/2019	**DRILL RIG MODEL:** Geoprobe 8140LS
BOREHOLE DEPTH: 48 ft. BGS	**DATE FINISHED:** 11/12/2019	**SAMPLER SIZE & TYPE:** Dual Tube 4"
BOREHOLE DIAMETER: 4-in. x 6-in.	**GEOLOGIST:** Jerry Rawcliffe	**HAMMER WEIGHT:** N/A
REMARKS: Soils Analytes: VOCs, SVOCs, Metals, Hydrazine, Ammonia, Monomethylhydrazine, 1,1-dimethylhydrazine, Cr+6, Formaldehyde, Anions, N-Nitrosodimethylamine, Dimethylformamide, and phthalic anhydride. TCLP Analytes: Metals, Corrosivity, Ignitability, Reactivity, Cyanide, and Sulfide		**HAMMER DROP:** N/A
		HAMMER TYPE: N/A

Sample #	Sample Depth	Blow Counts	Rec. (ft./ft.)	Description	Well Diagram	Headspace (ppmv)	Lab Sample
S1 (0'-5')	1.0-1.4	N/A	5.0/5.0	Brown fine to coarse **SAND** with some gravel traces silt and small cobble. Moist.	N/A	6.0	OC-SB-712-0.0/2.0-XXX
	1.4-2.5			Dark brown fine to coarse **SAND** and gravel with a little silt. Some white material in thin layers.			
	2.5-3.0			Very dark brown to black fine to coarse **SAND** with some gravel and organics. Moist.		1.5	OC-SB-712-2.0/4.0-XXX
	3.0-4.5			Dark brown fine to coarse **SAND** and gravel with a little small cobbles and silt. Moist.			
	4.0-5.0			Brown to olive fine to coarse **SAND** with some gravel and a little silt. Slight mottled appearance.		2.9	OC-SB-712-4.0/6.0-XXX
S2 (5'-17')	5.0-6.0	N/A	11.0/12.0	Brown to olive brown - similar to above, mottled.	N/A	10.3	OC-SB-712-6.0/8.0-XXX
	6.0-7.0			Very dark brown fine to coarse **SAND** and gravel with a trace of silt and some organics. Slightly mottled.			
	7.0-8.0			Brown to yellow brown to olive fine to coarse **SAND** with a little gravel and traces of silt.		6.0	
	8.0-9.0			Brown medium to coarse **SAND** with a little gravel and fine sand.			OC-SB-712-8.0/10-XXX
	9.0-10.0			Brown to yellow brown medium to fine **SAND** with a trace gravel/small cobble.		2.4	OC-SB-712-0/10-XXX OC SB-712-0/10-DUP (TCLP)
	10.0-10.5			Olive fine to coarse **SAND** and gravel with a little small cobbles and a trace of silt.			
	10.0-11.5			Brown to reddish brown medium to coarse **SAND** with a little gravel and a trace of fine sand.			
	11.5-13.5			Strong reddish brown coarse to medium **SAND** with a little gravel.		0.8	
	13.5-15.0			Brown to yellow brown medium to coarse **SAND** and gravel with a little small cobbles and traces of fine sand.			
	15.0-17.0			Brown to reddish brown medium to coarse **SAND** and gravel with a trace of fine sand.		1.2	
S3 (17'-22')	17.0-22.0	N/A	2.5/5.0	Brown to reddish brown medium to coarse **SAND** and gravel.	N/A	2.1 0.8 1.2	
S4 (22'-32')	22.0-24.0	N/A	10.0/10.0	Brown to yellow brown medium to coarse **SAND** and gravel with a trace of fine sand and cobbles.	N/A	4.1	OC-SB-712-23/24-XXX
	24.0-24.8			Reddish brown medium to coarse **SAND** and gravel with a trace of fine sand.		1.6	
	24.8-29.0			Light brown to brown coarse to medium **SAND** and gravel.		0.6	
	29.0-29.5			Brown to light brown medium **SAND** with traces of fine sand and coarse sand.		0.7	
	29.5-32.0			Yellow brown to brown medium to coarse **SAND** and gravel with some cobbles and a little to traces of fine sand. Very bottom is gray material and a **COBBLE**. Cobble from 32-34.5'		0.9	
S5 (32'-40')	34.5-35.5	N/A	6.0/8.0	Olive to olive brown gravel with fine to coarse **SAND** and a trace of silt. Wet.	N/A	2.2	
	35.5-36.0			Olive gray gravel with fine to coarse **SAND** trace of silt and cobble. Reddish stained layer at 36' (0.1' thick).		0.6	
	36.0-37.0			Dark gray to very dark brown fine to coarse **SAND** and gravel with a trace of silt and cobble.			
	37.0-38.0			Dark olive brown gravel with medium to coarse **SAND** and a little fine sand. Estimate top of **WEATHERED BEDROCK** = 42' BGS		0.7	OC-SB-712-37/38-XXX
S6 (43'-48')	46	N/A		Recovered ~2.5' of **COBBLES** and gravel sized rock fragments. Dark grey fine to medium grained (**GNEISS**). General foliation of fracture lines at ~45°, with green staining on some visible faces.	N/A	NR	
	50			Bottom of boring. Grouted borehole upon completion.			

Created by: SRC Checked by: JKR

ATTACHMENT 2 – LABORATORY ANALYTICAL REPORTS

(ALL LAB REPORTS WILL BE SUBMITTED ELECTRONICALLY)

ATTACHMENT 3 – DATA VALIDATION REPORT

DATA VALIDATION REPORT - REMEDIAL INVESTIGATION

NOVEMBER 2019 CONTAINMENT AREA

SOIL SAMPLING EVENT

DATA VALIDATION REPORT
REMEDIAL INVESTIGATION

NOVEMBER 2019 CONTAINMENT AREA SOIL SAMPLING EVENT

OLIN CHEMICAL SUPERFUND SITE
51 EAMES STREET
WILMINGTON, MASSACHUSETTS

Prepared for:

Olin Corporation
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Cleveland, Tennessee 37312

Prepared by:

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March 9, 2020

Project No. 6107200016.05.****

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Table 3.3 Data Validation Action Summary – Metals
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Table 4 Final Results Summary - Tentatively Identified Compounds

LIST OF ACRONYMS AND ABBREVIATIONS

CCV	Continuing Calibration Verification
DMF	Dimethylformamide
DUP	Duplicate
EDD	Electronic Data Deliverable
FD	Field Duplicate
ICV	initial calibration verification
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LCSM	Laboratory Control Sample/ Laboratory Control Sample Duplicate Missing
LCSSRMs/LCDSRMs	Laboratory control sample standard reference materials
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MDL	Method Detection Limit
MMH	Monomethylhydrazine
MS/MSD	Matrix Spikes/Matrix Spike Duplicate
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
ORP	Oxidation Reduction Potential
QAPP	Quality Assurance Project Plan
QC	Quality Control
RI/FS	Remedial Investigation/Feasibility Study
RPD	Relative Percent Difference
RRF	Relative Response Factor
SDG	Sample Delivery Group
SVOC	Semivolatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure

USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
Wood	Wood Environment & Infrastructure Solutions, Inc.

1.0 INTRODUCTION

Soil samples were collected by Wood Environment & Infrastructure Solutions, Inc. (Wood) at the Olin Chemical Superfund Site in November 2019 as part of a comprehensive containment area soil sampling program in accordance with the Remedial Investigation/Feasibility Study (RI/FS) Work Plan (Wood, 2019). Samples were analyzed by one or more of the following: United States Environmental Protection Agency (USEPA) SW-846 (USEPA, 1996), USEPA wastewater (USEPA, 1993), and Massachusetts Department of Environmental Protection ([MassDEP], 2010) compendium methods:

Laboratory	Parameter	Analytical Method	Validation Level
Eurofins TestAmerica – Buffalo, NY	Volatile Organic Compounds (VOCs)	SW-846 8260C	10% Stage 4/ 90% Stage 2A
Eurofins TestAmerica – Pittsburgh, PA	Semivolatile Organic Compounds (SVOCs)	SW-846 8270D	10% Stage 4/ 90% Stage 2A
Eurofins TestAmerica – Buffalo, NY	Project Analyte List Metals	SW-846 6010D/7471A	10% Stage 4/ 90% Stage 2A
Eurofins TestAmerica – Buffalo, NY	Metals Toxicity Characteristic Leaching Procedure (TCLP)	1311/SW-846 6010C/7470A	10% Stage 4/ 90% Stage 2A
Eurofins – Lancaster, PA	Hexavalent Chromium	SW-846 3060A/7199	10% Stage 4/ 90% Stage 2A
Eurofins – Lancaster, PA	pH/Temperature*	SW9045	Olin Level 1
Eurofins – Lancaster, PA	Oxidation Reduction Potential* (ORP)	D1498	Olin Level 1
Eurofins TestAmerica – Buffalo, NY	Ammonia	USEPA 350.1	Olin Level 1
Eurofins TestAmerica – Pittsburgh, PA	Anions Chloride and Sulfate	USEPA 300.0	Olin Level 1
Eurofins TestAmerica – Edison, NJ	Ignitability	SW1030	Olin Level 1
Eurofins TestAmerica – Buffalo, NY	Reactive Cyanide/Sulfate	SW9012/SW9034	Olin Level 1

Laboratory	Parameter	Analytical Method	Validation Level
Eurofins TestAmerica – Buffalo, NY	Corrosivity (pH)	SW9045	Olin Level 1
Eurofins TestAmerica – Buffalo, NY & Katahdin Analytical Services – Scarborough, ME	Percent Moisture/Percent Solids	E160.3/SW3540C	Olin Level 1
Eurofins TestAmerica – Canton, OH	Formaldehyde	SW-846 8315A	Chemist Review
Eurofins – Lancaster, PA	Hydrazine/ Monomethylhydrazine / Unsymmetrical Dimethylhydrazine	Modified 8315A LC/MS/MS	Chemist Review
Katahdin Analytical Services – Scarborough, ME	Dimethylformamide (DMF)	SW3540C	Chemist Review

* pH, temperature and ORP analysis completed as required during Alkaline Digestion Method 3060A

The containment area soil samples were collected from November 4, 2019 through November 12, 2019. 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 RI/FS Work Plan Quality Assurance Project Plan (QAPP) [Wood, 2019]. VOCs, SVOCs, and metals data were validated using staged data validation (USEPA, 2009) identified in Region I EPA-New England Environmental Data Review Program Guidance (USEPA, 2018b), the USEPA National Functional Guidelines (USEPA, 2017a; USEPA 2017b), 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, 2010). USEPA National Guideline data validation procedures were modified for SW-846 Methods 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 guidelines or the MCP Compendium, method performance criteria were developed for this project as indicated in the QAPP. Validation levels for each method reviewed (Stage 4, Stage 2A, Olin Level 1, chemist review) are summarized above.

Final validated sample results are presented in a series of tables (**Table 2s**) associated with **Sections 2 through 12** of this document. **Tables 2.1 through 2.9** present the final data for the various analytical methods that are addressed in **Sections 2 through 12**. Results for pH, temperature, and ORP are presented with the hexavalent chromium results on **Table 2.5**. All general chemistry results (anions,

ammonia, percent solids, percent moisture, reactive cyanide and sulfide, and ignitability) were combined in **Table 2.6**.

Documentation of data validation actions is presented in a series of tables (**Table 3s**) associated with **Sections 2 through 12** of this document. **Tables 3.1 through 3.8** present final results that have been qualified (data validation has resulted in revisions to the laboratory result) for the various analytical methods that are addressed in **Sections 2 through 12** as well as the associated validation reason codes. All general chemistry data validation actions (anions, ammonia, percent solids, percent moisture, reactive cyanide and sulfide, and ignitability) were combined in **Table 3.6**. An index of the qualification reason codes is presented on the last page of **Table 3**. If no qualifiers were added during the review of the data for a specific method then no **Table 3** is presented (e.g., DMF).

2.0 VOLATILE ORGANIC COMPOUNDS

Samples were analyzed for VOCs by Method 8260C. Data were evaluated based on the following parameters:

* Data Completeness
* Holding Times and Preservation
  Blanks
* Instrument Calibration
  Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
  Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
  FDs
* Surrogate Recovery
* Internal Standard Response and Retention Time
* Detection Limits
* Sample Result Verification/Electronic Evaluation Verification (EDD)
* 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 2.1**. A summary of data validation actions is presented on **Table 3.1**.

2.1 Blanks

Four equipment rinsate blanks were included with the soil samples. Detections of acetone (8.4 micrograms per liter [µg/l] to 46 µg/l) and 2-butanone (1.6 µg/l to 9.2 µg/l) were reported in all four equipment rinsate blanks. Low level detections of methylene chloride (0.69 µg/l) and tetrahydrofuran (4.4 µg/l) were reported in two of the equipment rinsate blanks. Soil sample results were not qualified due to equipment rinsate blank detections. A summary of blank qualification actions is presented in **Table 3.1** for VOCs with results being assigned a validation qualifier reason code of BL1 for method blanks and BL2 for field blanks.

SDG 480-162140-1

Chloroform was detected at 0.922 J micrograms per kilogram (µg/kg) in the method blank (MB 480-503169/3-A) analyzed on November 8, 2019. Chloroform was reported at similar concentrations below

the reporting limit in associated samples OC-SB-708-0.0/2.0-XXX at 0.51 J µg/kg, OC-SB-708-6.0/8.0-XXX at 0.24 J µg/kg, and OC-SB-708-8.0/10-XXX at 0.29 J µg/kg and was qualified not detected (U) at the reporting limits.

SDG 480-162199-1

Chloroform was detected at 0.922 J µg/kg in the method blank (MB 480-503169/3-A) analyzed on November 8, 2019. Chloroform was reported at similar concentrations below the reporting limit in associated samples OC-SB-708-22/24-XXX at 0.23 J µg/kg, OC-SB-708-33/34-XXX at 0.55 J µg/kg, OC-SB-710-2.0/4.0-XXX at 0.34 J µg/kg, OC-SB-710-4.0/6.0-XXX at 0.23 J µg/kg, OC-SB-710-6.0/8.0-XXX at 0.25 J µg/kg, OC-SB-710-22/24-XXX at 0.25 J µg/kg, and OC-SB-710-33/34-XXX at 0.55 J µg/kg and was qualified not detected (U) at the reporting limits.

SDG 480-162315-1

For a subset of samples, chloroform was detected at 0.944 J µg/kg and methylene chloride was detected at 2.43 J µg/kg in the method blank (MB 480-503689/3-A) analyzed on November 11, 2019. Associated sample result for methylene chloride were not detected; no action required. Chloroform was reported at similar concentrations below the reporting limit in associated samples OC-SB-703-0.0/2.0-XXX at 0.35 J µg/kg, OC-SB-709-4.0/6.0-XXX at 0.30 J µg/kg, and OC-SB-709-32/33-XXX at 0.33 J µg/kg and was qualified not detected (U) at the reporting limits.

For a subset of samples, chloroform was detected at 0.692 J µg/kg, methylene chloride was detected at 5.26 µg/kg, and naphthalene was detected at 0.926 J µg/kg in the method blank (MB 480-504069/3-A) analyzed on November 12, 2019. Associated sample result for methylene chloride were not detected; no action required. Chloroform was reported in associated sample OC-SB-703-30/32-XXX at 1.4 J µg/kg and was qualified not detected at the reporting limit. Naphthalene was reported in associated samples OC-SB-703-2.0/4.0-XXX at 1.0 J µg/kg and OC-SB-703-30/32-XXX at 0.42 J µg/kg and were qualified not detected (U) at the reporting limits.

SDG 480-162353-1

Acetone was detected at 16 µg/kg in the trip blank associated with all samples. All reported detections of acetone were less than the reporting limits adjusted for dilution and were qualified not detected (U) at the reporting limits.

For a subset of samples, chloroform was detected at 0.692 J µg/kg, methylene chloride was detected at 5.26 µg/kg, and naphthalene was detected at 0.926 J µg/kg in the method blank (MB 480-504069/3-A) analyzed on November 12, 2019. Associated sample results for chloroform and methylene chloride were not detected; no action required. Naphthalene was reported in associated sample OC-SB-706-10/12-XXX at 0.95 J µg/kg and was qualified not detected (U) at the reporting limit.

SDG 480-162426-1

Methylene chloride was detected at 8.8 µg/kg in the trip blank associated with all samples. All reported detections of methylene chloride were qualified not detected (U).

For a subset of samples, chloroform was detected at 0.552 J µg/kg and methylene chloride was detected at 24.3 µg/kg in the method blank (MB 480-504300/3-A) analyzed on November 13, 2019. Chloroform was reported in associated samples OC-SB-702-0.0/2.0-XXX at 0.37 J µg/kg and OC-SB-704-33/34-XXX at 0.34 J µg/kg and were qualified not detected (U) at the reporting limits. All reported detections of methylene chloride were qualified not detected (U).

For a subset of samples, chloroform was detected at 0.593 J µg/kg and methylene chloride was detected at 7.31 µg/kg in the method blank (MB 480-504474/24-A) analyzed on November 14, 2019. Chloroform was not detected in associated samples; no action required. All reported detections of methylene chloride were qualified not detected (U).

SDG 480-162513-1

Methylene chloride was detected at 3.0 µg/kg in the trip blank associated with all samples. All reported detections of methylene chloride were qualified not detected (U).

For a subset of samples, chloroform was detected at 0.593 J µg/kg and methylene chloride was detected at 7.31 µg/kg in the method blank (MB 480-504474/24-A) analyzed on November 14, 2019. Chloroform was not detected in associated samples; no action required. All reported detections of methylene chloride were qualified not detected (U).

For a subset of samples, chloroform was detected at 0.498 J µg/kg and methylene chloride was detected at 30.2 µg/kg in the method blank (MB 480-504727/24-A) analyzed on November 15, 2019. Chloroform was not detected in associated samples; no action required. Methylene chloride was reported in associated sample OC-SB-701-0.0/2.0-XXX at 19 µg/kg and was qualified not detected (U).

SDG 480-162572-1

Styrene (0.45 J µg/kg), toluene (4.1 J µg/kg), acetone (18 J µg/kg), and methylene chloride (21 µg/kg) were detected in the trip blank associated with all samples. Styrene was not detected in associated samples.; no action required. Toluene was reported in associated samples OC-SB-712-4.0/6.0-XXX at 0.42 J µg/kg, OC-SB-712-23/24-XXX at 0.75 J µg/kg, and OC-SB-712-37/38-XXX at 0.35 J µg/kg and were qualified not detected (U) at the reporting limits. Acetone was reported in samples OC-SB-711-0.0/2.0-XXX at 14 J µg/kg, OC-SB-711-6.0/8.0-XXX at 23 J µg/kg, OC-SB-711-18/19-XXX at 7.3 J µg/kg, OC-SB-711-35/36-XXX at 16 J µg/kg, OC-SB-712-0.0/2.0-XXX at 21 J µg/kg, OC-SB-712-2.0/4.0-XXX at 42 J µg/kg, OC-SB-712-4.0/6.0-XXX at 27 J µg/kg, OC-SB-712-6.0/8.0-XXX at 57 J µg/kg, OC-SB-712-8.0/10-XXX at 14 J µg/kg, OC-SB-712-23/24-XXX at 16 J µg/kg, and OC-SB-712-37/38-XXX at 14 J µg/kg and were qualified not detected (U) at the reporting limits. Methylene chloride was reported in samples OC-SB-711-0.0/2.0-XXX at 26 µg/kg, OC-SB-711-6.0/8.0-XXX at 10 µg/kg, OC-SB-711-18/19-

XXX at 30 µg/kg, OC-SB-711-35/36-XXX at 17 µg/kg, OC-SB-712-0.0/2.0-XXX at 27 µg/kg, OC-SB-712-2.0/4.0-XXX at 20 µg/kg, OC-SB-712-4.0/6.0-XXX at 22 µg/kg, OC-SB-712-6.0/8.0-XXX at 21 µg/kg, OC-SB-712-8.0/10-XXX at 24 µg/kg, OC-SB-712-23/24-XXX at 23 µg/kg, and OC-SB-712-37/38-XXX at 20 µg/kg and were qualified not detected (U).

For a subset of samples, chloroform was detected at 0.473 J µg/kg and methylene chloride was detected at 33 µg/kg in the method blank (MB 480-504747/4-A) analyzed on November 15, 2019. Chloroform was not detected in associated samples; no action required. All reported detections of methylene chloride were qualified not detected (U).

2.2 Laboratory Control Sample

A summary of LCS/LCSD qualification actions is presented in **Table 3.1** for VOC results being assigned a validation qualifier reason code of LCS-H for percent recoveries greater than the upper Quality Control (QC) limit of 130, LCS-L for percent recoveries less than the lower QC limit of 70, and LCS-Relative Percent Difference (RPD) for LCS/LCSD relative percent difference greater than the QC limit of 30.

SDG 480-162140-1

The LCS/LCSD associated with samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (184/196), indicating a high bias. 2-Butanone was detected in sample OC-SB-708-2.0/4.0-XXX and was qualified estimated (J+).

SDG 480-162199-1

The LCS/LCSD associated with samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (184/196), indicating a high bias. 2-Butanone was detected in samples OC-SB-708-16/18-XXX, OC-SB-708-33/34-XXX, OC-SB-710-4.0/6.0-XXX, and OC-SB-710-6.0/8.0-XXX and was qualified estimated (J+).

SDG 480-162315-1

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (179/197), indicating a high bias. 2-Butanone was detected in sample OC-SB-709-4.0/6.0-XXX and was qualified estimated (J+).

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (162/171), indicating a high bias. 2-Butanone was detected in sample OC-SB-703-2.0/6.0-XXX and was qualified estimated (J+).

SDG 480-162353-1

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (162/171), indicating a high bias. 2-Butanone was

detected in samples OC-SB-706-2.0/6.0-XXX, OC-SB-706-10/12-XXX, and OC-SB-707-2.0/6.0-XXX and was qualified estimated (J+).

SDG 480-162426-1

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (189/164), indicating a high bias. 2-Butanone was detected in samples OC-SB-702-2.0/4.0-XXX, OC-SB-702-4.0/6.0-XXX, OC-SB-702-6.0/8.0-XXX, OC-SB-704-2.0/4.0-XXX, OC-SB-704-4.0/6.0-XXX, OC-SB-704-6.0/8.0-XXX, OC-SB-704-8.0/10-XXX, OC-SB-705-2.0/4.0-XXX, OC-SB-705-4.0/6.0-XXX and was qualified estimated (J+).

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (169/166), indicating a high bias. 2-Butanone was detected in samples OC-SB-705-4.0/6.0-Duplicate (DUP) and OC-SB-705-6.0/8.0-XXX and was qualified estimated (J+).

SDG 480-162513-1

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (169/166), indicating a high bias. 2-Butanone was detected in samples OC-SB-701-2.0/4.0-XXX and OC-SB-701-4.0/6.0-XXX and was qualified estimated (J+).

SDG 480-1625726-1

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (183/167) and methylene chloride (147/149), indicating a high bias. Methylene was non-detect in associated samples; no action required. 2-Butanone was detected in associated sample OC-SB-712-2.0/4.0-XXX and was qualified estimated (J+).

The LCS/LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (216/194) indicating a high bias, and LCS/LCSD RPD for acetone (21), and dichlorodifluoromethane (27) that exceeded the QC limit of 20. 2-Butanone was detected in associated sample OC-SB-711-6.0/8.0-XXX was qualified estimated (J+). The result for Acetone and dichlorodifluoromethane was not detected in associated sample OC-SB-711-6.0/8.0-XXX and the reporting limits were qualified estimated (UJ).

The LCS and/or LCSD associated with a subset of samples had percent recoveries greater than the upper project recovery limit of 130 for 2-butanone (174/167) indicating a high bias, and less than the lower QC limit of 70 for bromomethane (64) and chloroethane (60/54) indicating a low bias. 2-Butanone was not detected in associated samples; no action required. Bromomethane and chloroethane in samples OC-SB-711-2.0/4.0-XXX, OC-SB-711-4.0/6.0-XXX, and OC-SB-711-8.0/10-XXX were not detected and reporting limits were qualified estimated (UJ).

2.3 MS/MSD

A summary of MS/MSD qualification actions is presented in **Table 3.2** for VOCs with results being assigned a validation qualifier reason code of MS-L.

SDG 480-162315-1

The MS/MSD associated with samples OC-SB-703-2.0/4.0-XXX and its field duplicate (FD) OC-SB-703-2.0/4.0-DUP had percent recoveries less than the lower QC limit of 70 for 47 percent of the spiked analytes. MS and/or MSD percent recoveries ranged from 29 to 69, indicating low bias. Based on professional judgment, results and reporting limits for all analytes in samples OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP were qualified estimated (J-/UJ).

The MS and/or MSD associated with samples OC-SB-709-8.0/10-XXX and its FD OC-SB-709-8.0/10-DUP had percent recoveries less than the lower QC limit of 70 for 1,1,2,2-tetrachloroethane (67/66), 1,2,3-trichloropropane (61/60), 1,2-dibromo-3-chloropropane (61/60), 1,3-dichloropropane (69), 1,4-dioxane (63/62), 2-hexanone (58/58), 4-methyl-2-pentanone (60/60), acetone (46/48), 1,2-dibromoethane (67/68), acetic acid-methyl ester (62/60), naphthalene (64/65), and tetrahydrofuran (62/58), indicating low bias. Acetone results in samples OC-SB-709-8.0/10-XXX and its FD OC-SB-709-8.0/10-DUP were qualified estimated (J-). Results for 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,3-dichloropropane, 1,4-dioxane, 2-hexanone, 4-methyl-2-pentanone, 1,2-dibromoethane, acetic acid-methyl ester, naphthalene, and tetrahydrofuran in samples OC-SB-709-8.0/10-XXX and its FD OC-SB-709-8.0/10-DUP were not detected and the reporting limits were qualified estimated (UJ).

SDG 480-162353-1

The MS and/or MSD associated with samples OC-SB-707-6.0/8.0-XXX and its FD OC- SB-707-6.0/8.0-DUP had percent recoveries less than the lower QC limit of 70 for 1,1,2,2-tetrachloroethane (64/68), 1,2,3-trichlorobenzene (69), 1,2,3-trichloropropane (60/64), 1,2-dibromo-3-chloropropane (57/62), 1,3-dichloropropane (68), 1,4-dioxane (62/65), 2-hexanone (59/61), 4-methyl-2-pentanone (60/63), acetone (55/65), 1,2-dibromoethane (66), acetic acid-methyl ester (62/64), naphthalene (65/65), and tetrahydrofuran (59/66), indicating low bias. Results for 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,3-dichloropropane, 1,4-dioxane, 2-hexanone, 4-methyl-2-pentanone, acetone, 1,2-dibromoethane, acetic acid-methyl ester, naphthalene, and tetrahydrofuran in samples OC-SB-707-6.0/8.0-XXX and its FD OC-SB-707-6.0/8.0-DUP were not detected and the reporting limits were qualified estimated (UJ).

SDG 480-162426-1

The MS and/or MSD associated with samples OC-SB-705-4.0/6.0-XXX and its FD OC-SB-705-4.0/6.0-DUP had percent recoveries less than the lower QC limit of 70 for 1,1,2,2-tetrachloroethane (67), 1,2,3-trichlorobenzene (32/36), 1,2,3-trichloropropane (66), 1,2,4-trichlorobenzene (37/41), 1,2-dibromo-3-

chloropropane (63/57), 1,2-dichlorobenzene (60/61), 1,3-dichlorobenzene (61/61), 1,4-dichlorobenzene (60/60), 2,2,4-trimethyl-1-pentene (52), 2,4,4-trimethyl-2-pentene (60), 2-hexanone (63), 4-isopropyltoluene (63/66), acetone (41/45), hexachlorobutadiene (31/34), methylcyclohexane (62/63), naphthalene (40/43), n-butylbenzene (53/52), n-propylbenzene (69), sec-butylbenzene (63/61), styrene (67), tert-butylbenzene (68), and tetrahydrofuran (66) indicating low bias. The MS percent recovery for acetic acid, methyl ester (137) was greater than the upper QC limit of 130, indicating high bias. The MS/MSD RPD for 2,2,4-trimethyl-1-pentene (48) and acetone (41) exceeded the project QC limit of 30. The result for acetic acid, methyl ester in FD sample OC-SB-705-4.0/6.0-DUP was qualified estimated (J+). Detected results for acetone, 2,4,4-trimethyl-1-pentene, and 2,4,4-trimethyl-2-pentene were qualified estimated (J-). Results for 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-hexanone, 4-isopropyltoluene, hexachlorobutadiene, methylcyclohexane, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, styrene, tert-butylbenzene, and tetrahydrofuran in samples OC-SB-705-4.0/6.0-XXX and its FD OC-SB-705-4.0/6.0-DUP were not detected and the reporting limits were qualified estimated (UJ).

SDG 480-162513-1

The MS and/or MSD associated with samples OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP had percent recoveries less than the lower QC limit of 70 for 1,1,2,2-tetrachloroethane (64/63), 1,1,2-trichloroethane (69), 1,2,3-trichlorobenzene (32/36), 1,2,3-trichloropropane (58/59), 1,2,4-trichlorobenzene (57/56), 1,2-dibromo-3-chloropropane (57/53), 1,2-dichlorobenzene (69/69), 1,3-dichloropropane (68), 1,4-dichlorobenzene (69/68), 1,4-dioxane (60/54), 2,2,4-trimethyl-1-pentene (60/59), 2,4,4-trimethyl-2-pentene (64/60), 2-hexanone (59/55), 4-isopropyltoluene (66/66), acetone (60/52), bromoform (67/67), 1,2-dibromoethane (67/65), hexachlorobutadiene (39/40), acetic acid, methyl ester (62/62), methylcyclohexane (62/65), naphthalene (53/503), n-butylbenzene (61/61), sec-butylbenzene (66/65), tert-butylbenzene (69), and tetrahydrofuran (56/576) indicating low bias. The MS/MSD RPD for 1,4-dioxane (33) and acetone (33) exceeded the project QC limit of 30. The result for acetone in samples OC-SB-701-0.0/2.0-XXX and OC-SB-701-0.0/2.0-DUP were qualified estimated (J-). Results for 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2-dichlorobenzene, 1,3-dichloropropane, 1,4-dichlorobenzene, 1,4-dioxane, 2,2,4-trimethyl-1-pentene, 2,4,4-trimethyl-2-pentene, 2-hexanone, 4-isopropyltoluene, bromoform, 1,2-dibromoethane, hexachlorobutadiene, acetic acid, methyl ester, methylcyclohexane, naphthalene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, and tetrahydrofuran in samples OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP were not detected and the reporting limits were qualified estimated (UJ).

2.4 Field Duplicate

Four soil FDs were collected. A summary of FD qualification actions is presented in **Table 3.2** for VOCs with results being assigned a validation qualifier reason code of FD. Good agreement was observed for the majority of target analytes. Qualified results are discussed in the following sections.

SDG 480-162426-1

A FD sample was collected with field sample OC-SB-705-4.0/6.0-XXX. Acetic acid, methyl ester was detected in the FD and reported as not detected in the original sample. The result for acetic acid, methyl ester in sample OC-SB-705-4.0/6.0-DUP was qualified estimated (J). The reporting limit for acetic acid, methyl ester in sample OC-SB-705-4.0/6.0-XXX was qualified estimated (UJ).

SDG 480-162513-1

A FD sample was collected with field sample OC-SB-701-0.0/2.0-XXX. The RPD for acetone (62) exceeded the project QC limit of 50. The result for acetone in samples OC-SB-701-0.0/2.0-XXX and OC-SB-701-0.0/2.0-DUP were qualified estimated (J).

2.5 Detection Limits

SDG 480-162572-1

The case narrative states samples OC-SB-711-2.0/4.0-XXX and OC-SB-711-8.0/10-XXX were analyzed using the medium level soil analysis (methanol extraction) and diluted due to foaming at the time of purging during the original analysis. Sample OC-SB-711-4.0/6.0-XXX was analyzed using the medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range. Reporting limits were elevated accordingly. Reporting limits are listed on **Table 2**.

3.0 SEMIVOLATILES

Samples were analyzed for SVOCs by Method 8270D.

Data Completeness

* Holding Times and Preservation
* Blanks
* Instrument Tunes
* Initial Calibration Standards

Continuing Calibration Standards

LCS/LCSD

MS/MSD

FDs

Surrogate Recovery

* Internal Standards

Detection Limits

* Sample Result Verification/Electronic Evaluation Verification (EDD)

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**.

1,2,4-Trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, and naphthalene are reported as target compounds in both the VOC and SVOC methods. In accordance with the QAPP, results from the VOC analysis are used when samples are analyzed by both methods. Results for these compounds reported from the SVOC analysis are marked not used in the project database and are not included in the final validated results tables.

3.1 Data Completeness

Target analyte, 3&4 methylphenol was missing from the laboratory reports and EDDs for all soil samples. The laboratory was contacted regarding the missing analyte and results for 4-methylphenol were included in revised laboratory reports for all soil samples. Because 3-methylphenol and 4-methylphenol coelute when analyzed by Method 8270, the 4-methylphenol results reported by the

laboratory are equivalent to 3&4 methylphenol identified in the project QAPP. Results are reported as 3&4 methylphenol in the final dataset.

Results for N-nitrosodiphenylamine were reported for all soil and water samples (QC blanks). Additional results for diphenylamine were reported only for water QC samples. These compounds are reported as N-nitrosodiphenylamine by the laboratory in the soil data and are not distinguishable from each other in the Method 8270 analysis.

3.2 Blanks

Four equipment rinsate blanks were included with the soil samples. Detections of 2-methylphenol (0.15 µg/l), acetophenone (0.78 µg/l to 2.0 µg/l), benzaldehyde (0.23 µg/l to 0.64 µg/l), benzyl alcohol (4.9 µg/l to 5.3 µg/l), bis(2-ethylhexyl)phthalate (0.67 µg/l to 0.84 µg/l), butylbenzylphthalate (1.1 µg/l to 1.6 µg/l), caprolactam (1.1 µg/l), diethylphthalate (0.15 µg/l to 25 µg/l), dimethylphthalate (0.66 µg/l to 1.8 µg/l), di-n-butylphthalate (1.2 µg/l), isophorone (0.20 µg/l to 0.5 µg/l), phenanthrene (0.075) µg/l), and phenol (0.33 µg/l to 0.39 µg/l) were reported above the method detection limits in one or more equipment rinsate blanks. Soil sample results were not qualified due to equipment rinsate blank detections.

3.3 Continuing Calibration Standards

A summary of continuing calibration qualification actions is presented in **Table 3.2** for SVOCs with results being assigned a validation qualifier reason code of Continuing Calibration Verification (CCV)%D.

SDG 480-162199-1

Continuing calibration standard 180-298440/4 in SDG 480-162199-1 had a relative response factor (RRF) percent difference outside the QC limit of 20 for 2-nitroaniline (20.1) and 4-nitrophenol (48). 2-Nitroaniline and 4-nitrophenol were not detected in associated samples OC-SB-708-16/18-XXX, OC-SB-708-22/24-XXX, OC-SB-708-33/34-XXX, OC-SB-710-2.0/4.0-XXX, OC-SB-710-4.0/6.0-XXX, OC-SB-710-6.0/8.0-XXX, OC-SB-710-23/24-XXX, and OC-SB-710-36/37-XXX, and reporting limits were qualified estimated (UJ).

Continuing calibration standard 180-298557/4 in SDG 480-162199-1 had an RRF percent difference outside the QC limit of 20 for 4-nitrophenol (40). 4-Nitrophenol was not detected in associated samples OC-SB-708-28/30-XXX and OC-SB-710-8.0/10-XXX, and reporting limits were qualified estimated (UJ).

3.4 Laboratory Control Sample

A summary of LCS/LCSD qualification actions is presented in **Table 3.2** for SVOC results being assigned a validation qualifier reason code of LCSL for percent recoveries lower than the lower QC limits of 40 for base neutral target compounds and 30 for acid target compounds.

An LCS was not extracted with the preparation batches in all SDGs for phthalic anhydride. A review of surrogate, internal standard, and calibration data determined that all parameters were within criteria.

Phthalic anhydride was not detected in samples, and based on professional judgement and acceptable surrogate, internal standard, and calibration data, results were reported estimated (J). All phthalic anhydride results were assigned a validation qualifier reason code of Laboratory Control Sample/ Laboratory Control Sample Duplicate Missing (LCSM) as presented in **Table 3.2**.

SDG 480-162140-1

The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compounds for benzaldehyde (4/4), indicating a low bias. Benzaldehyde was not detected in associated samples OC-SB-708-0.0/2.0-XXX, OC-SB-708-2.0/4.0-XXX, OC-SB-708-4.0/6.0-XXX, OC-SB-708-6.0/8.0-XXX, and OC-SB-708-8.0/10.0-XXX and was qualified rejected (R).

SDG 480-162199-1

The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compounds for benzaldehyde (4/4), indicating a low bias. Benzaldehyde was not detected in associated samples OC-SB-708-16/18-XXX, OC-SB-708-22/24-XXX, OC-SB-708-28/30-XXX, OC-SB-708-33/34-XXX, OC-SB-710-2.0/4.0-XXX, OC-SB-710-23/24-XXX, OC-SB-710-36/37-XXX, OC-SB-710-4.0/6.0-XXX, OC-SB-710-6.0/8.0-XXX, and OC-SB-710-8.0/10.0-XXX and was qualified rejected (R).

SDG 480-162315-1

The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compound benzaldehyde (4/5), indicating a low bias. Benzaldehyde was not detected in associated samples OC-SB-709-0.0/2.0-XXX, OC-SB-709-2.0/4.0-XXX, OC-SB-709-4.0/6.0-XXX, OC-SB-709-6.0/8.0-XXX, OC-SB-709-8.0/10.0-XXX, OC-SB-709-8.0/10.0-DUP, OC-SB-709-16/17-XXX, and OC-SB-709-32/33-XXX and was qualified rejected (R).

SDG 480-162353-1

The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compound benzaldehyde (4/5), indicating a low bias. The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compound benzaldehyde (5/5), indicating a low bias. Benzaldehyde was not detected in associated samples OC-SB-706-0.0/2.0-XXX, OC-SB-706-2.0/4.0-XXX, OC-SB-706-4.0/6.0-XXX, OC-SB-706-6.0/8.0-XXX, OC-SB-706-10/12-XXX, OC-SB-706-20/22-XXX, OC-SB-706-26/27-XXX, OC-SB-707-0.0/2.0-XXX, OC-SB-707-2.0/4.0-XXX, OC-SB-707-4.0/6.0-XXX, OC-SB-707-6.0/8.0-XXX, OC-SB-707-6.0/8.0-DUP, OC-SB-707-8.0/10.0-XXX, OC-SB-707-12/13-XXX, and OC-SB-707-15/17-XXX and was qualified rejected (R).

SDG 480-162315-1

The LCS/LCSD associated with a subset of samples had percent recoveries below the lower project recovery limit of 40 for base neutral compound benzaldehyde (7/6), indicating a low bias. Benzaldehyde was not detected in associated samples OC-SB-704-33/34-XXX, OC-SB-702-6.0/8.0-XXX, OC-SB-705-0.0/2.0-XXX, OC-SB-704-8.0/10-XXX, OC-SB-704-6.0/8.0-XXX, OC-SB-704-4.0/6.0-XXX, OC-SB-704-19/20-XXX, OC-SB-704-12/13-XXX, OC-SB-702-4.0/6.0-XXX, OC-SB-702-2.0/4.0-XXX, OC-SB-702-0.0/2.0-XXX, and OC-SB-704-0.0/2.0-XXX and was qualified rejected (R). Benzaldehyde was detected in associated samples OC-SB-705-2.0/4.0-XXX and OC-SB-704-2.0/4.0-XXX and was qualified estimated with low bias (J-).

3.5 MS/MSD

A summary of MS/MSD qualification actions is presented in **Table 3.2** for SVOCs with results being assigned a validation qualifier reason code of MSL.

SDG 480-162315-1

The MS and/or MSD associated with sample OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP had percent recoveries less than the lower QC limit of 40 for base neutral target compounds benzaldehyde (4/4) and hexachlorocyclopentadiene (27/25) and the lower QC limit of 30 for acid target compounds pentachlorophenol (11/4), benzoic acid (0/0), 2,4-dinitrophenol (8/0), and 4,6-dinitro-2-methylphenol (27), indicating low bias. Detected results for benzaldehyde and benzoic acid in FD OC-SB-703-2.0/4.0-DUP were qualified estimated (J-). Benzaldehyde and benzoic acid were not detected in OC-SB-703-2.0/4.0-XXX and reporting limits were qualified rejected (R). Pentachlorophenol was not detected in sample OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP, and reporting limits were qualified estimated (UJ). 2,4-Dinitrophenol and hexachlorocyclopentadiene were not detected in sample OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP and the reporting limits were qualified estimated (UJ). 4.6-Dinitro-2-methylphenol was not detected in sample OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP and reporting limits were qualified rejected (R).

The MS and/or MSD associated with sample OC-SB-709-8.0/10-XXX and its FD OC-SB-709-8.0/10-DUP had percent recoveries less than the lower QC limit of 40 for base neutral target compound benzaldehyde (17) and the lower QC limit of 30 for acid target compound benzoic acid (0/0). Benzaldehyde and benzoic acid were not detected in sample OC-SB-709-8.0/10-XXX and its FD OC-SB-709-8.0/10-DUP and reporting limits were qualified rejected (R).

The MS and/or MSD associated with sample OC-SB-703-8.0/10-XXX had percent recoveries less than the lower QC limit of 40 for base neutral target compounds benzaldehyde (3/3), aniline (33/28), hexachlorocyclopentadiene (33/38), 1,2,4,5-tetrachlorobenzene (37), (34/35), bis(2/chloroethyl)ether (36/37), acetophenone (38/36), N-nitrosodimethylamine (27/27), 4-chloroaniline (38) and hexachloroethane (31/32) and the lower QC limit of 30 for acid target compounds benzoic acid (0/0) and 2,4-dinitrophenol (17/15). Benzaldehyde and benzoic acid were not detected in sample OC-SB-

703-8.0/10-XXX and reporting limits were qualified rejected (R). Hexachlorobutadiene, aniline, hexachlorocyclopentadiene, 1,2,4,5-tetrachlorobenzene, nitrobenzene, bis(2-chloroethyl)ether, acetophenone, N-nitrosodimethylamine, hexachloroethane, 2.4-dinitrophenol, and 4-chloroaniline were not detected in sample OC-SB-703-8.0/10-XXX and the reporting limits were qualified estimated (UJ).

SDG 480-162353-1

The MS and/or MSD associated with sample OC-SB-707-6.0/8.0-XXX and its FD OC- SB-707-6.0/8.0-DUP had percent recoveries less than the lower QC limit of 40 for base neutral target compound benzaldehyde (8/10) and the lower QC limit of 30 for acid target compound benzoic acid (0/0). Benzaldehyde and benzoic acid in sample OC-SB-707-6.0/8.0-XXX and its FD OC- SB-707-6.0/8.0-DUP were not detected and were qualified rejected (R).

SDG 480-162426-1

The MS and/or MSD associated with sample OC-SB-704-0.0/2.0-XXX had percent recoveries less than the lower QC limit of 40 for base neutral target compound benzaldehyde (15/25) and the lower QC limit of 30 for acid target compounds pentachlorophenol (25/14), 4,6-dinitro-2-methylphenol (21), benzoic acid (0/0), 2,3,4,6-tetrachlorophenol (20), 2,4,6-trichlorophenol (27), and 4-nitrophenol (27). The RPD between the MS and MSD associated with sample OC-SB-704-0.0/2.0-XXX exceeded the respective laboratory limits for benzaldehyde (47), pentachlorophenol (58), 4,6-dinitro-2-methylphenol (37), 2,3,4,6-tetrachlorophenol (66), 2,4,6-trichlorophenol (54), and 4-nitrophenol (20). Benzoic acid was not detected in sample OC-SB-704-0.0/2.0-XXX and the reporting limit was qualified rejected (R). Pentachlorophenol, 4,6-dinitro-2-methylphenol, 2,3,4,6-tetrachlorophenol, 2,4,6-trichlorophenol, and 4-nitrophenol were not detected in sample OC-SB-704-0.0/2.0-XXX and the reporting limits were qualified estimated (UJ). Benzaldehyde was not detected in sample OC-SB-704-0.0/2.0-XXX and was qualified rejected (R) based on low MS/MSD and LCS recoveries.

SDG 480-162513-1

The MS and/or MSD associated with sample OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP had percent recoveries less than the lower QC limit of 40 for base neutral target compounds benzaldehyde (29) and hexachlorocyclopentadiene (32/31) and the lower QC limit of 30 for acid target compound benzoic acid (27/29). Benzaldehyde, hexachlorocyclopentadiene, and benzoic acid were not detected in sample OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP and the reporting limits were qualified estimated (UJ).

SDG 480-162572-1

The MS and/or MSD associated with sample OC-SB-711-0.0/2.0-XXX had percent recoveries less than the lower QC limit of 40 for base neutral target compound benzaldehyde (5/4) and the lower QC limit

of 30 for acid target compounds pentachlorophenol (18/17), benzoic acid (0/0), and 2,4-dinitrophenol (14/14). 2,4-Dinitrophenol and pentachlorophenol were not detected in sample OC-SB-711-0.0/2.0-XXX and the reporting limits were qualified estimated (UJ). Benzoic acid and benzaldehyde were not detected in sample OC-SB-711-0.0/2.0-XXX and reporting limits were qualified rejected (R).

3.6 Field Duplicate

Four soil FDs were collected. A summary of FD qualification actions is presented in **Table 3.2** for SVOCs with results being assigned a validation qualifier reason code of FD. Good agreement was observed for the majority of target analytes. Qualified results are discussed in the following section.

3.7 SDG 480-162315-1

A FD sample was collected with field sample OC-SB-703-2.0/4.0-XXX. The RPDs for bis(2-ethylhexyl)phthalate (73) and n-nitrosodiphenylamine (92) exceeded the project QC limit of 50. The results for bis(2-ethylhexyl)phthalate and n-nitrosodiphenylamine in samples OC-SB-703-2.0/4.0-XXX and OC-SB-703-2.0/4.0-DUP were qualified estimated (J).

3.8 Surrogate Recovery

SDG 480-162426-1

The surrogate recoveries for surrogates 2,4,6-tribromophenol (4) and 2-fluorophenol (29) in sample OC-SB-704-33/34-XXX were below the lower QC limit of 30 for acid compound surrogates. Sample OC-SB-704-33/34-XXX was reextracted 11 days outside of the 14 day hold time with passing surrogate recoveries. Results for the associated target compounds in the original extraction matched the results of the reextracted sample. Based on professional judgement, results from the original extraction were reported and all acid fraction compounds were qualified estimated (J/UJ).

3.9 Detection Limits

The following samples were analyzed at dilutions due to matrix interference and/or high concentrations of target compounds and were reported with elevated reporting limits: OC-SB-701-2.0/4.0-XXX, OC-SB-702-6.0/8.0-XXX, OC-SB-704-0.0/2.0-XXX, OC-SB-705-2.0/4.0-XXX, OC-SB-705-4.0/6.0-DUP, OC-SB-705-4.0/6.0-XXX, OC-SB-706-0.0/2.0-XXX, OC-SB-706-10/12-XXX, OC-SB-706-2.0/4.0-XXX, OC-SB-706-6.0/8.0-XXX, OC-SB-707-0.0/2.0-XXX, OC-SB-709-2.0/4.0-XXX, OC-SB-711-2.0/4.0-XXX, OC-SB-711-4.0/6.0-XXX, OC-SB-711-6.0/8.0-XXX, OC-SB-712-0.0/2.0-XXX, and OC-SB-712-6.0/8.0-XXX.

3.10 Raw Data Verification

An initial calibration verification (ICV) sample was not analyzed for the calibrations for phthalic anhydride. Eurofins TestAmerica confirmed that there was no second source for phthalic anhydride to analyze an ICV and the standard was not analyzed for this target compound. Sample results for phthalic anhydride were qualified estimated (UJ).

4.0 PROJECT ANALYTE LIST METALS

Samples were analyzed for the following Target Analyte List metals by SW-846 Method 6010D and Method 7471A: aluminum, antimony, arsenic, barium, beryllium, chromium, cadmium, cobalt, copper, calcium, iron, lead, magnesium, manganese, nickel, potassium, silver, selenium, sodium, thallium, tin, vanadium, zinc, and mercury.

* Data Completeness
  Sample Preservation and Holding Times
  Blanks
* Initial and Continuing Calibration Standards
  LCS
  MS Analysis
  FDs
* Laboratory Duplicate Analysis
* Interference Check Standard
* Internal Standards (inductively coupled plasma-MS)
  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 2.3**. A summary of data validation actions is presented on **Table 3.3**.

4.1 Sample Preservation and Holding Times

The detection for mercury in sample OC-SB-701-0.0/2.0-XXX was qualified estimated (J) due to exceedance of the 28 day hold time by 1 day.

4.2 Blanks

Target compounds antimony, aluminum, barium, calcium, iron, sodium, potassium, manganese, selenium, and zinc were detected at low concentrations in method blanks. Sample results were qualified in accordance with the USEPA guidelines. A summary of method blank qualification actions is presented in **Table 3.3** for metals with results being assigned a validation qualifier reason code of BL1. 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.

Four equipment blanks were collected and analyzed with the samples. Low concentrations of zinc (0.012 J milligrams per liter [mg/L]), calcium (0.15 J mg/L), cobalt (0.0078 mg/L), copper (0.032 mg/L), manganese (0.0059 mg/L), and iron (0.069 mg/L) were detected in the initial equipment blank, OC-EBK-01-XXX, associated with all borings. Low concentrations of chromium (0.0033 J mg/L), zinc (0.0089 J mg/L), copper (0.038 mg/L) manganese (0.0029 J mg/L), and iron (0.33 mg/L) were detected in OC-EBK-02-XXX, associated with borings SB-703, SB-708, SB-709, and SB-710. Low concentrations of zinc (0.0063 J mg/L), calcium (0.17 J mg/L), and copper (0.0023 J mg/L) were detected in OC-EBK-03-XXX associated with borings SB-702, SB-704, SB-705, SB-706, and SB-707. Low level concentrations of zinc (0.0029 J mg/L), calcium (0.44 J mg/L), copper (0.0051 J mg/L), and potassium (0.10 J mg/L) in OC-EBK-04-XXX associated with borings SB-701, SB-711, and SB-712. No qualifications of soil samples were made based on equipment blank results.

SDG 480-162140-1

Zinc (0.981 J milligrams per kilogram [mg/kg]) and calcium (5.65 J mg/kg) were detected at concentrations less than the reporting limit in the method blank associated with samples in SDG 480-162140-1. The concentration reported in the blanks were compared to sample results. All sample results were above the reporting limit and no qualifications were necessary.

SDG 480-162199-1

Zinc (0.981 J mg/kg) and calcium (5.65 J mg/kg) were detected at concentrations less than the reporting limit in the method blank associated with samples in SDG 480-162199-1. The concentration reported in the blanks were compared to sample results. All sample results were above the reporting limit and no qualifications were necessary.

SDG 480-162315-1

Calcium (5.53 J mg/kg), potassium (22.4 J mg/kg), and manganese (0.0570 J mg/kg) were detected at concentrations less than the reporting limit in the method blank associated with the samples in SDG 480-162315-1. The concentration reported in the blanks were compared to sample results. All sample results were above the reporting limit and no qualifications were necessary.

Sodium (23.4 J mg/kg) was detected at a concentration less than the reporting limit in the method blank associated with the samples in SDG 480-162315-1. The blank concentration was multiplied by 5 and compared to associated sample results. Low concentrations of sodium below 5x the blank and below the reporting limit were qualified non detect (U) at the reporting limit and were assigned reason code BL1. Qualified results are summarized on **Table 3.3**.

SDG 480-162353-1

Calcium (5.04 J mg/kg) and manganese (0.101 J mg/kg) were detected at concentrations less than the reporting limit in the method blank associated with samples in SDG 480-162353-1. Sample concentrations were above the reporting limit and no qualifications were necessary.

SDG 480-162426-1

Barium (0.118 J mg/kg), calcium (5.53 J mg/kg, 4.40 J mg/kg), manganese (0.108 J mg/kg), iron (4.47 J mg/kg) were detected at concentrations less than the reporting limit in the method blanks associated with samples in SDG 480-162426-1. The sample concentrations were above the reporting limit and no qualifications were necessary.

Antimony (0.411 J mg/kg) was detected at a concentration less than the reporting limit in a method blank associated with samples in SDG 480-162426-1. Similar concentrations of antimony below the reporting limit in samples were qualified non detect (U) at the reporting limit and were assigned reason code BL1. Qualified results are summarized on **Table 3.3**.

Selenium (0.428 J mg/kg) was detected at a concentration less than the reporting limit in a method blank associated with samples in SDG 480-162426-1. The detection of selenium below the reporting limit in sample OC-SB-702-34/35-XXX was qualified non detect (U) at the reporting limit and was assigned reason code BL1.

SDG 480-162513-1

Selenium (0.428 J mg/kg) was detected at a concentration less than the reporting limit in a method blank associated with samples in SDG 480-162513-1. Similar concentrations of selenium in samples OC-SB-701-6.0/8.0-XXX and OC-SB-701-8.0/10-XXX were qualified non detect (U) at the reporting limit and were assigned reason code BL1.

SDG 480-162572-1

Calcium (3.47 J mg/kg) and manganese (0.0404 J mg/kg) were detected at concentrations less than the reporting limit in the method blanks associated with samples in SDG 480-162572-1. All results were above the reporting limit and no qualifications were necessary.

4.3 Detection Limits

The project quantitation limit specified in the QAPP for antimony by USEPA Method 6010C is 0.5 mg/kg. The laboratory reported non-detects for antimony at a reporting limit of 15 mg/kg. Estimated values were reported down to the QAPP method detection limit of 0.4 mg/kg.

4.4 Laboratory Control Sample

Laboratory control sample standard reference materials (LCSSRMs/LCDSRMs) were analyzed for method 6010D. Laboratory provided SRM limits were used to evaluate LCSSRMs.

The relative percent differences for barium and cadmium in the LCS/LCSD pair associated with samples in SDG 480-162315-1 exceeded the laboratory precision goal of 20%. All detections of barium and cadmium in the associated samples were qualified estimated (J) and assigned reason code LCS RPD.

4.5 Matrix Spike

SDG 480-162199-1

The MS/MSD performed on sample OC-SB-708-16/18-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Barium (162)
- Chromium (43, 68)
- Calcium (206)
- Copper (74, 70)
- Magnesium (-26, -33)
- Manganese (74)
- Potassium (143)
- Vanadium (60)

Results for chromium, copper, magnesium, manganese, and vanadium in sample OC-SB-708-16/18-XXX were qualified estimated with potential low bias (J-) and assigned the reason code MSL. Results for barium and potassium in sample OC-SB-708-16/18-XXX were qualified estimated with potential high bias (J+) and assigned the reason code MSH.

The relative percent difference for calcium in the MS/MSD pair for sample OC-SB-708-16/18-XXX exceeded the QAPP precision goal of 35%. The result for calcium in sample OC-SB-708-16/18-XXX was qualified estimated with a potential high bias (J+) and assigned reason codes MSH and MSRPD.

SDG 480-162315-1

The MSD performed on sample OC-SB-709-8.0/10-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Barium (73)
- Magnesium (42)
- Manganese (62)
- Zinc (71)

Results for barium, magnesium, manganese, and zinc in sample OC-SB-709-8.0/10-XXX and FD OC-SB-709-8.0/10-DUP were qualified estimated with potential low bias (J-) and assigned the reason code MSL.

The MS/MSD performed on sample OC-SB-703-2.0/4.0-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Aluminum (192, 204)

- Barium (186)
- Chromium (140)
- Calcium (162, 644)
- Manganese (169, 170)
- Magnesium (127)
- Iron (162, 140)

Results for aluminum, chromium, and manganese in sample OC-SB-703-2.0/4.0-XXX and FD OC-SB-703-2.0/4.0-DUP were qualified estimated with potential high bias (J+) and assigned the reason code MSH.

The relative percent differences for calcium and barium in the MS/MSD pair for sample OC-SB-703-2.0/4.0-XXX exceeded the QAPP precision goal of 35%. The results for calcium and barium in sample OC-SB-703-2.0/4.0-XXX and FD OC-SB-703-2.0/4.0-DUP were qualified estimated with a potential high bias (J+) and assigned reason codes MSH and MSRPD.

SDG 480-162353-1

The MS/MSD performed on sample OC-SB-707-6.0/8.0-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Chromium (66)
- Antimony (71)
- Aluminum (171, 175)
- Manganese (136, 127)

Results for chromium and antimony in sample OC-SB-707-6.0/8.0-XXX and FD OC-SB-707-6.0/8.0-DUP were qualified estimated with potential low bias (J-) and assigned the reason code MSL. Results for aluminum and manganese in sample OC-SB-707-6.0/8.0-XXX and FD OC-SB-707-6.0/8.0-DUP were qualified estimated with potential high bias (J+) and assigned the reason code MSH.

SDG 480-162426-1

The MS/MSD performed on sample OC-SB-705-4.0/6.0-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Aluminum (232, 177)
- Chromium (273, 74)
- Calcium (142, 150)
- Manganese (262)
- Iron (231)

Results for aluminum, calcium, and iron in sample OC-SB-705-4.0/6.0-XXX and FD OC-SB-705-4.0/6.0-DUP were qualified estimated with potential high bias (J+) and assigned the reason code MSH.

The relative percent differences for chromium and manganese in the MS/MSD pair for sample OC-SB-705-4.0/6.0-XXX exceeded the QAPP precision goal of 35%. Results for manganese in sample OC-SB-705-4.0/6.0-XXX and FD OC-SB-705-4.0/6.0-DUP were qualified estimated with a potential high bias (J+) and assigned reason codes MSH and MSRPD. Results for chromium in sample OC-SB-705-4.0/6.0-XXX and FD OC-SB-705-4.0/6.0-DUP were qualified estimated (J) and assigned the reason codes MSL, MSH, and MSRPD.

SDG 480-162513-1

The MS/MSD performed on sample OC-SB-701-0.0/2.0-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Antimony (72)
- Barium (215, 163)
- Chromium (137)
- Magnesium (263, 141)
- Manganese (384, 168)
- Potassium (275, 150)
- Vanadium (151)
- Zinc (133)

Results for barium, chromium, zinc, magnesium, and vanadium in sample OC-SB-701-0.0/2.0 and FD OC-SB-701-0.0/2.0-DUP were qualified estimated with potential high bias (J+) and assigned the reason code MSH. Results for antimony in sample OC-SB-701-0.0/2.0-XXX and FD OC-SB-701-0.0/2.0-DUP were qualified estimated with potential low bias (J-) and qualified results were assigned the reason code MSL.

The relative percent difference for potassium in the MS/MSD pair for sample OC-SB-701-0.0/2.0-XXX exceeded the QAPP precision goal of 35%. The results for potassium in sample OC-SB-701-0.0/2.0-XXX and FD OC-SB-701-0.0/2.0-DUP were qualified estimated with a potential high bias (J+) and assigned reason codes MSH and MSRPD.

The result for manganese in the post digestion spike for sample OC-SB-701-0.0/2.0-XXX had a percent recovery below the lower project control limit. The results for manganese in sample OC-SB-701-0.0/2.0-XXX and FD OC-SB-701-0.0/2.0-DUP were qualified estimated (J) and assigned reason codes MSH and PDSL.

SDG 480-162572-1

The MS/MSD performed on sample OC-SB-711-2.0/4.0-XXX had percent recoveries out of project control limits of 75-125% for the following parameters.

- Antimony (72, 66)
- Aluminum (128, 190)

- Chromium (186, 127)
- Calcium (68)
- Manganese (140)
- Zinc (388, 128)

Results for calcium and antimony in sample OC-SB-711-2.0/4.0-XXX were qualified estimated with potential low bias (J-) and assigned the reason code MSL. Results for chromium and manganese in sample OC-SB-711-2.0/4.0-XXX were qualified estimated with potential high bias (J+) and assigned the reason code MSH.

The relative percent difference for zinc in the MS/MSD pair for sample OC-SB-711-2.0/4.0-XXX exceeded the QAPP precision goal of 35%. The result for zinc in sample OC-SB-711-2.0/4.0-XXX was qualified estimated with a potential high bias (J+) and assigned reason codes MSH and MSRPD.

The result for aluminum in the post digestion spike for sample OC-SB-711-2.0/4.0-XXX had a percent recovery below the lower project control limit. The result for aluminum in sample OC-SB-711-2.0/4.0-XXX was qualified estimated (J) and assigned reason codes MSH and PDSL.

4.6 Field Duplicates

The relative percent difference for copper between sample OC-SB-703-2.0/4.0-XXX and FD OC-SB-703-2.0/4.0-DUP exceeded the QAPP precision goal of 50%. The results for copper in sample OC-SB-703-2.0/4.0-XXX and FD OC-SB-703-2.0/4.0-DUP were qualified estimated (J) and assigned reason code FD.

The relative percent difference for chromium between sample OC-SB-705-4.0/6.0-XXX and FD OC-SB-705-4.0/6.0-DUP exceeded the QAPP precision goal of 50%. The results for chromium in sample OC-SB-705-4.0/6.0-XXX and FD OC-SB-705-4.0/6.0-DUP were qualified estimated (J) and assigned reason code FD.

The relative percent difference for chromium between sample OC-SB-701-0.0/2.0-XXX and FD OC-SB-701-0.0/2.0-DUP exceeded the QAPP precision goal of 50%. The results for chromium in sample OC-SB-701-0.0/2.0-XXX and FD OC-SB-701-0.0/2.0-DUP were qualified estimated with a potential high bias (J+) due to high recovery in the associated matrix spike (see Section 4.5 above) and assigned reason code FD.

4.7 Serial Dilutions

The percent difference (99) between the result for vanadium in the serial dilution (SD) for sample OC-SB-707-6.0/8.0-XXX and the result for vanadium in the original sample exceeded the QAPP control limit of 15%. The results for vanadium in sample OC-SB-707-6.0/8.0-XXX and FD OC-SB-707-6.0/8.0-DUP were qualified estimated (J) and assigned the reason code SD. The SD result for vanadium was approximately 10x less than the sample result, indicating a potential high bias in the results for OC-SB-707-6.0/8.0-XXX and FD OC-SB-707-6.0/8.0-DUP.

5.0 TCLP METALS

Samples were analyzed for the TCLP metals list by SW-846 Method 6010C and Method 7470A: arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury.

* Data Completeness
* Sample Preservation and Holding Times
  Blanks
* Initial and Continuing Calibration Standards
* Laboratory Control Sample
  Matrix Spike Analysis
  FDs
* Laboratory Duplicate Analysis
* Interference Check Standard
* 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 2.4**. A summary of data validation actions is presented on **Table 3.4**.

5.1 Blanks

Arsenic was detected at low concentrations in leachate blanks. Sample results were qualified in accordance with the USEPA guidelines. A summary of method blank qualification actions is presented in **Table 3.4** for TCLP metals with results being assigned a validation qualifier reason code of BL1. Detailed discussions of qualification actions for each SDG are presented in the following sections.

SDG 480-162315-1

Arsenic (0.00641 J mg/L) was detected at a concentration less than the reporting limit in the leachate blank associated with the TCLP extracts of samples OC-SB-709-0.0/10-XXX and OC-SB-703-0.0/10-XXX. The concentrations of arsenic in samples OC-SB-709-0.0/10-XXX (0.012 J mg/L) and OC-SB-703-0.0/10-XXX (0.0074 J mg/L) were below the reporting limit for arsenic and were qualified not detected (U) at the reporting limit.

SDG 480-162353-1

Arsenic (0.00641 J mg/L) was detected at a concentration less than the reporting limit in the leachate blank associated with the TCLP extracts of samples OC-SB-706-0.0/10-XXX and OC-SB-707-0.0/10-XXX. The concentration of arsenic in sample OC-SB-706-0.0/10-XXX (0.0088 J mg/L) was below the reporting limit for arsenic and was qualified not detected (U) at the reporting limit. The concentration of arsenic in sample OC-SB-707-0.0/10-XXX (0.035 mg/L) was qualified estimated with high bias (J+).

5.2 Matrix Spike

A summary of MS/MSD qualification actions is presented in **Table 3.4** for TCLP Metals with results being assigned a validation qualifier reason code of MSL.

SDG 480-162353-1

The MS/MSD that were analyzed on sample OC-SB-706-0.0/10-XXX had percent recoveries for mercury (59/60) below the lower QC limit of 75, indicating low bias. Mercury was not detected in sample OC-SB-706-0.0/10-XXX and the reporting limit was qualified estimated (UJ).

5.3 Field Duplicate

A summary of FD qualification actions is presented in **Table 3.4** for TCLP Metals with results being assigned a validation qualifier reason code of FD.

SDG 480-162572-1

A FD sample was collected with field sample OC-SB-712-0.0/10-XXX. The RPD for lead (91) exceeded the project QC limit of 30. The results for lead in samples OC-SB-712-0.0/10-XXX and OC-SB-712-0.0/10-DUP were qualified estimated (J).

6.0 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 Calibration Standards
* Continuing Calibration Standards
* LCS/LCSD
* MS/MSD
* Laboratory Duplicate Analysis
  FDs
* 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**.

In accordance with Alkaline Digestion Method 3060A, hexavalent chromium samples were analyzed for pH and/or temperature by method 9045D and Oxidation Reduction Potential (ORP) by method D1498. The pH, temperature, and ORP data are used to monitor chemical conditions of the sample prior to the digestion step and to monitor digestate chemistry during preparation. The initial measurement results are reported in the data summary **Table 3.5** along with the hexavalent chromium results.

6.1 Blanks

SDG 2073916

Hexavalent chromium (0.21 J mg/kg and 0.28 J mg/kg) was detected in the prep blanks associated with samples in SDG 2073916. The concentration reported in the blank was compared to sample results. Hexavalent chromium was reported as a detection at a concentration less than the reporting limit in samples OC-SB-705-0.0/2.0-XXX and OC-SB-702-8.0/10-XXX and qualified not detected (U) at the reporting limit. The result qualified due to blank detects was assigned a reason code of BL1.

6.2 Matrix Spike

SDG 2073662

The insoluble MS that was analyzed on sample OC-SB-707-6.0/8.0-XXX had a percent recovery for hexavalent chromium at 20 percent and was below the lower QC limit of 75, indicating a possible low bias. The MS and post digestion spike on sample OC-SB-707-6.0/8.0-XXX and recovered hexavalent chromium within acceptance limits at 95 and 103 percent. The plot of Eh and pH data generated by the laboratory indicates reducing conditions in the soil. No qualifications were applied due to the MS recovery.

SDG 2073916

The MS that was analyzed on sample OC-SB-705-4.0/6.0-XXX had a percent recovery for hexavalent chromium at 50 percent and was below the lower QC limit of 75, indicating a possible low bias. The laboratory performed an insoluble spike and a post digestion spike on sample OC-SB-705-4.0/6.0-XXX and recovered hexavalent chromium within acceptance limits at 88 and 115 percent. The plot of Eh and pH data generated by the laboratory indicates reducing conditions in the soil. No qualifications were applied due to the MS recovery.

6.3 Field Duplicates

SDG 2073905

A FD sample was collected with field sample OC-SB-703-2.0/4.0-XXX. The RPD was not calculated since the sample concentrations were less than 5X the reporting limit. The absolute difference of 1.6 mg/kg was calculated from the concentrations of hexavalent chromium: 0.7 mg/kg (OC-SB-703-2.0/4.0-XXX) and 2.3 mg/kg (OC-SB-703-2.0/4.0-DUP). The absolute difference is greater than 2X the reporting limit (1.02 mg/kg). Hexavalent chromium was qualified as estimated (J) in the field sample and FD.

SDG 2073916

A FD sample was collected with field sample OC-SB-705-4.0/6.0-XXX. The (RPD was calculated on the following concentrations of hexavalent chromium: 1.5 mg/kg (OC-SB-705-4.0/6.0-XXX) and 2.7 mg/kg (OC-SB-705-4.0/6.0-DUP). The RPD of 57% exceeded the RPD control limit of 30%. The RPD limit is 30 due to one result being >5X the reporting limit and the other result being <5X the reporting limit. Hexavalent chromium was qualified estimated (J) in the field sample and FD.

A summary of FD qualification actions is presented in **Table 3.5** for hexavalent chromium with results being assigned a validation qualifier reason code of FD.

7.0 ANIONS AND AMMONIA

General chemistry includes analysis for chloride and sulfate by USEPA Method 300 and ammonia by QuikChem: Lachat Method 10-107-06-1-B (Method 350.1). An Olin Level 1 validation was performed on the data. Data were reviewed for the following parameters:

* Data Completeness
  Holding Time
  Blanks
* Laboratory Control Sample
  Matrix Spike Analysis
* Laboratory Duplicate Analysis
  FDs
  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 2.6**. A summary of data validation actions is presented on **Table 3.6**.

7.1 Holding Time

Reporting limits and results for sulfate and chloride in 63 of the 90 total samples were qualified estimated (J/UJ) based on exceedance of the 28 day hold time.

7.2 Blanks

Ammonia was detected at low concentrations in method blanks. Sample results were qualified in accordance with the Olin Level I Data Quality Evaluation checklist. A summary of method blank qualification actions is presented in **Table 3.6** for ammonia results being assigned a validation qualifier reason code of BL1. 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 480-162140-1

Ammonia (2.08 J mg/kg) was detected in the method blanks associated with samples in SDG 480-162140-1. Action levels were established at five times the concentration reported in the blanks and compared to sample results. Ammonia was detected below the action level in samples OC-SB-708-0.0/2.0-XXX, OC-SB-708-4.0/6.0-XXX, and OC-SB-708-8.0/10-XXX was qualified as not detected (U) at the reported concentration. All other associated sample results were above the action limit and no additional qualifications were necessary.

7.3 Field Duplicates

SDG 480-162315-1

Sample OC-SB-709-8.0/10-DUP was submitted as a FD of sample OC-SB-709-8.0/10-XXX. The relative percent difference for ammonia (70) was outside of the project criterion of 30. The results for ammonia were qualified as estimated (J). The reason code FD was applied.

7.4 Matrix Spike

The laboratory qualified sample results associated with MS/MSD outside limits with a F1. After review of the MS/MSDs, the F1 qualifiers were removed. Validation qualifiers were applied after review of MS/MSD data.

SDG 480-162353-1

Ammonia recovered below the lower project recovery limit of 75 at 67% in the MS associated with sample OC-SB-707-6.0/8.0-XXX. Ammonia results in sample OC-SB-707-6.0/8.0-XXX and FD OC-SB-707-6.0/8.0-DUP were qualified estimated with low bias (J-) and assigned reason code MSL.

Sulfate recovered below the lower project recovery limit of 75 at 13% and 52% in the MS/MSD associated with sample OC-SB-706-0.0/2.0-XXX. The sulfate detection in sample OC-SB-706-0.0/2.0-XXX was qualified estimated with low bias (J-) and assigned reason code MSL.

SDG 480-162572-1

Chloride and sulfate recovered below the lower project recovery limit of 75 at 74% and 58% respectively in the MSD associated with sample OC-SB-712-8.0/10-XXX. The relative percent differences for chloride and sulfate in the MS/MSD pair exceeded the project criterion of 20. The chloride and sulfate results for sample OC-SB-712-8.0/10-XXX were qualified estimated (J). Reason codes MSL and MSRPD were applied.

7.5 Detection Limits

The laboratory reporting limit for chloride of 10 mg/kg exceeds the QAPP defined reporting limit of 5 mg/kg. Estimated values were reported by the lab down to a method detection limit less than the QAPP defined reporting limit.

8.0 REACTIVE SULFIDE AND REACTIVE CYANIDE

Composite samples from depth of 0-10 ft were analyzed for reactive cyanide and reactive sulfide. An Olin Level 1 validation was performed on the data. Data were reviewed for the following parameters:

* Data Completeness
  Holding Time
* Blanks
* Laboratory Control Sample
* Matrix Spike Analysis
* Laboratory Duplicate Analysis
* FDs
* 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 2.6**. A summary of data validation actions is presented on **Table 3.6**.

8.1 Holding Time

Reporting limits for reactive sulfide in 8 out of the 13 total samples were qualified estimated (UJ) based on exceedance of the 7 day hold time. Qualified results were assigned the reason code Holding Time (HT).

9.0 OTHER GENERAL CHEMISTRY

The composite samples from 0-10 ft depth were analyzed for ignitability (burn rate) by method SW1030. Percent moisture and percent solids were determined for all samples by methods 160.3, SW3540C, and calculations. An Olin Level 1 validation was performed on the data. Data were reviewed for the following parameters:

* Data Completeness
* Holding Time
* Blanks
* Laboratory Control Sample
* Matrix Spike Analysis
* Laboratory Duplicate Analysis
* FDs
* 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 2.6**. A summary of data validation actions is presented on **Table 3.6**.

9.1 Holding Time

Samples were analyzed for pH, temperature, and ORP as required in Alkaline Digestion Method 3060A. The results of these tests are reported with the hexavalent chromium results. Holding times were not evaluated for these parameters.

10.0 FORMALDEHYDE

* Data Completeness
* Holding Time
* Blanks

  Laboratory Control Sample

  Matrix Spike Analysis
* Laboratory Duplicate Analysis

  FDs

  Detection Limits
* Sample Result Verification/EDD

* = 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 2.7**. A summary of data validation actions is presented on **Table 3.7.**

10.1 Laboratory Control Sample

A summary of LCS/LCSD qualification actions is presented in **Table 3.7** for formaldehyde results being assigned a validation qualifier reason code of LCS-L.

SDG 480-162140-1

The LCS associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 63%, indicating a low bias. Formaldehyde was not detected in the associated samples (OC-SB-708-0.0/2.0-XXX, OC-SB-708-2.0/4.0-XXX, OC-SB-708-4.0/6.0-XXX, OC-SB-708-6.0/8.0-XXX, and OC-SB-708-8.0/10-XXX) and the reporting limits were qualified as estimated (UJ).

SDG 480-162199-1

The LCS associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 74%, indicating a low bias. Formaldehyde was not detected in the associated samples (OC-SB-708-16/18-XXX, OC-SB-710-8.0/10-XXX, OC-SB-708-22/24-XXX, OC-SB-708-28/30-XXX, and OC-SB-710-23/24-XXX) and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in the associated samples (OC-SB-710-6.0/8.0-XXX, OC-SB-708-33/34-XXX, OC-SB-710-2.0/4.0-XXX, OC-SB-710-36/37-XXX, and OC-SB-710-4.0/6.0-XXX) and the detected concentrations were qualified as estimated (J).

SDG 480-162315-1

The LCS associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 74%, indicating a low bias. Formaldehyde was not detected in samples OC-SB-709-6.0/8.0-XXX, OC-SB-709-8.0/10-DUP, and OC-SB-709-8.0/10-XXX and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in samples OC-SB-703-0.0/2.0-XXX, OC-SB-709-16/17-XXX, OC-SB-709-2.0/4.0-XXX, OC-SB-709-32/33-XXX, and OC-SB-709-4.0/6.0-XXX and the results were qualified as estimated (J).

SDG 480-162353-1

The LCS associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 66%, indicating a low bias. Formaldehyde was not detected in samples OC-SB-707-2.0/4.0-XXX, OC-SB-707-4.0/6.0-XXX, OC-SB-707-12/13-XXX, OC-SB-707-15/17-XXX, OC-SB-707-6.0/8.0-DUP, OC-SB-706-0.0/2.0-XXX, OC-SB-706-2.0/4.0-XXX, OC-SB-706-20/22-XXX, OC-SB-706-26/27-XXX, OC-SB-706-4.0/6.0-XXX, and OC-SB-706-6.0/8.0-XXX and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in samples OC-SB-707-6.0/8.0-XXX, OC-SB-707-8.0/10-XXX, OC-SB-706-10/12-XXX, and OC-SB-707-0.0/2.0-XXX and the results were qualified as estimated (J).

SDG 480-162426-1

The LCS's associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 66% and 76%, indicating a low bias. Formaldehyde was not detected in samples OC-SB-702-28/29-XXX, OC-SB-702-34/35-XXX, OC-SB-702-4.0/6.0-XXX, OC-SB-702-6.0/8.0-XXX, OC-SB-702-8.0/10-XXX, OC-SB-705-17/18-XXX, and OC-SB-705-8.0/10-XXX and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in samples OC-SB-705-4.0/6.0-DUP, OC-SB-705-4.0/6.0-XXX and OC-SB-705-6.0/8.0-XXX and the results were qualified as estimated (J).

SDG 480-162513-1

The LCS associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 63%, indicating a low bias. Formaldehyde was not detected in samples OC-SB-701-0.0/2.0-DUP, OC-SB-701-0.0/2.0-XXX, OC-SB-701-6.0/8.0-XXX, OC-SB-701-8.0/10-XXX, and OC-SB-701-20/21-XXX and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in samples OC-SB-701-2.0/4.0-XXX, OC-SB-701-31/32-XXX and OC-SB-701-4.0/6.0-XXX and the results were qualified as estimated (J).

SDG 480-162572-1

The LCS's associated with a subset of samples had a percent recovery below the project recovery limit of 80 for formaldehyde at 76% and 63%, indicating a low bias. Formaldehyde was not detected in samples OC-SB-711-0.0/2.0-XXX, OC-SB-711-18/19-XXX, OC-SB-711-6.0/8.0-XXX, OC-SB-711-8.0/10-XXX, OC-SB-712-0.0/2.0-XXX, OC-SB-712-23/24-XXX, and OC-SB-712-8.0/10-XXX and the reporting limits were qualified as estimated (UJ). Formaldehyde was detected in samples OC-SB-711-2.0/4.0-XXX, OC-SB-711-35/36-XXX, OC-SB-711-4.0/6.0-XXX, OC-SB-712-2.0/4.0-XXX, OC-SB-712-37/38-XXX, OC-SB-712-4.0/6.0-XXX, and OC-SB-712-6.0/8.0-XXX and the results were qualified as estimated (J).

10.2 Matrix Spike

A summary of MS/MSD qualification actions is presented in **Table 3.7** for formaldehyde results being assigned a validation qualifier reason code of MS-L.

SDG 480-162315-1

The MS and MSD associated with sample OC-SB-703-2.0/4.0-XXX and its FD OC-SB-703-2.0/4.0-DUP recovered below the lower project recovery limit of 75 at 44% (MS) and 58% (MSD), indicating a low bias. Formaldehyde was detected above the reporting limit in both samples and the detected concentrations were qualified as estimated (J).

SDG 480-162353-1

The MS and MSD associated with sample OC-SB-707-6.0/8.0-XXX and its FD OC-SB-707-6.0/8.0-DUP recovered below the lower project recovery limit of 75 at 35% (MS) and 51% (MSD), indicating a low bias. Formaldehyde was detected below the reporting limit in sample OC-SB-707-6.0/8.0-XXX and the detected concentration was qualified as estimated (J). Formaldehyde was not detected in sample OC-SB-707-6.0/8.0-DUP and the reporting limit was qualified as estimated (UJ).

SDG 480-162513-1

The MS and MSD associated with sample OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP recovered below the lower project recovery limit of 75 at 50% (MS) and 61% (MSD), indicating a low bias. Formaldehyde was not detected in sample OC-SB-701-0.0/2.0-XXX or OC-SB-701-0.0/2.0-DUP and the reporting limits were qualified as estimated (UJ).

10.3 Field Duplicates

SDG 480-162315-1

A FD sample was collected with field sample OC-SB-703-2.0/4.0-XXX. The RPD was calculated on the following concentrations of formaldehyde: 2900 µg/kg (OC-SB-703-2.0/4.0-XXX) and 4900µg/kg (OC-SB-703-2.0/4.0-DUP). The RPD was 51.3% and exceeded the RPD control limit of 50%. Formaldehyde was qualified estimated (J) in the field sample and FD.

A summary of FD qualification actions is presented in **Table 3.7** for formaldehyde with results being assigned a validation qualifier reason code of FD.

10.4 Detection Limits

All samples were submitted to the TA Canton laboratory for formaldehyde analysis. TA Nashville is listed in the QAPP as the laboratory analyzing formaldehyde. The formaldehyde RL and Method Detection Limit (MDL) from TA Canton (2100 µg/kg and 1300 µg/kg) is higher than the QAPP RL and MDL (100 µg/kg and 16 µg/kg).

11.0 HYDRAZINE, METHYLHYDRAZINE, 1,1'-DIMETHYLHYDRAZINE

Samples were analyzed for hydrazine, methylhydrazine (MMH), and 1,1'-dimethylhydrazine by a modified SW-846 Method 8315A LC/MS/MS. Data were reviewed for the following parameters:

* Data Completeness
* Holding Time and Sample Preservation
* Blanks
  Continuing Calibration
* LCS/LCSD
  MS/MSD
* FDs
* Detection Limits
* Sample Result Verification/EDD

* = 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 2.8**. A summary of data validation actions is presented on **Table 3.8**.

11.1 Continuing Calibration Standards

A summary of continuing calibration qualification actions is presented in **Table 3.8** for hydrazine and MMH with results being assigned a validation qualifier reason code of CCV.

SDG 2072711

The continuing calibrations associated with a subset of samples had percent differences outside the QC limits of 15%D for MMH (-17/ -16) and hydrazine (-22). MMH was reported as not detected in associated samples OC-SB-708-0.0/2.0-XXX, OC-SB-708-2.0/4.0-XXX, OC-SB-708-4.0/6.0-XXX, and OC-SB-708-6.0/8.0-XXX, and OC-SB-708-8.0/10-XXX and reporting limits were qualified estimated (UJ). Hydrazine was reported as not detected in associated sample OC-SB-708-8.0/10-XXX and the reporting limit was qualified estimated (UJ).

SDG 2072990

The continuing calibrations associated with a subset of samples had percent differences outside the QC limits of 15%D for MMH (-17/ -16) and hydrazine (-22). MMH and hydrazine were reported as not

detected in associated samples OC-SB-708-33/34-XXX, OC-SB-708-16/18-XXX, and OC-SB-710-2.0/4.0-XXX; MMH was reported as not detected in samples OC-SB-708-22/24-XXX, OC-SB-708-28/30-XXX, OC-SB-710-23/24-XXX, OC-SB-710-36/37-XXX, OC-SB-710-4.0/6.0-XXX, OC-SB-710-6.0/8.0-XXX, and OC-SB-710-8.0/10-XXX and reporting limits were qualified estimated (UJ). Hydrazine was detected in samples OC-SB-708-22/24-XXX, OC-SB-708-28/30-XXX, OC-SB-710-23/24-XXX, OC-SB-710-36/37-XXX, OC-SB-710-4.0/6.0-XXX, and OC-SB-710-6.0/8.0-XXX and the reported concentrations were qualified estimated (J).

SDG 2073905

The continuing calibration associated with a subset of samples had a percent difference outside the QC limits of 15%D for MMH (-16). MMH was reported as not detected in associated samples OC-SB-703-6.0/8.0-XXX, OC-SB-703-8.0/10-XXX, OC-SB-709-0.0/2.0-XXX, OC-SB-709-16/17-XXX, OC-SB-709-2.0/4.0-XXX, OC-SB-709-32/33-XXX, OC-SB-709-4.0/6.0-XXX, OC-SB-709-6.0/8.0-XXX, OC-SB-709-8.0/10-XXX, and OC-SB-709-8.0/10-DUP and the reported concentration were qualified estimated (J).

SDG 2073916

The continuing calibration associated with a subset of samples had a percent difference outside the QC limits of 15%D for MMH (-16). MMH was reported as not detected in associated samples OC-SB-704-0.0/2.0-XXX, OC-SB-704-12/13-XXX, OC-SB-704-19/20-XXX, and OC-SB-704-2.0/4.0-XXX and the reported concentration were qualified estimated (J).

11.2 MS/MSD

A summary of MS/MSD qualification actions is presented in **Table 3.8** for hydrazine and MMH with results being assigned a validation qualifier reason code of MS-L.

SDG 2073905

The MS/MSD associated with sample OC-SB-703-2.0/4.0-XXX had percent recoveries less than the lower QC limit of 40 for hydrazine (39/35) indicating low bias. Hydrazine was detected above the reporting limit in sample OC-SB-703-2.0/4.0-XXX and below the reporting limit in its FD sample OC-SB-703-2.0/4.0-DUP. The detected results were qualified as estimated.

The MS/MSD associated with sample OC-SB-709-8.0/10-XXX had percent recoveries less than the lower QC limit of 40 for hydrazine (33/35) indicating low bias. Hydrazine was not detected in sample OC-SB-709-8.0/10-XXX or its FD sample OC-SB-709-8.0/10-DUP. The reporting limits were qualified as estimated.

SDG 2073916

The MS/MSD associated with sample OC-SB-705-4.0/6.0-XXX had percent recoveries less than the lower QC limit of 40 for hydrazine (2/2) and methyl hydrazine (2/2) indicating low bias in the matrix. Hydrazine was detected below the reporting limit in sample OC-SB-705-4.0/6.0-XXX and ND in its FD OC-SB-705-4.0/6.0-DUP. The detected result was qualified as estimated in sample OC-SB-705-4.0/6.0-XXX and the reporting limit was qualified as estimated in sample OC-SB-705-4.0/6.0-DUP. Methylhydrazine was not detected in either sample OC-SB-705-4.0/6.0-XXX or its FD OC-SB-705-4.0/6.0-DUP. The reporting limits were qualified as estimated.

SDG 2074150

The MSD associated with sample OC-SB-701-0.0/2.0-XXX had a percent recovery less than the lower QC limit of 40 for hydrazine (37). Hydrazine was detected below the reporting limit in sample OC-SB-701-0.0/2.0-XXX and its FD OC-SB-701-0.0/2.0-DUP. The detected results were qualified as estimated in sample OC-SB-701-0.0/2.0-XXX and OC-SB-701-0.0/2.0-DUP.

12.0 DIMETHYLFORMAMIDE

Samples were analyzed for dimethylformamide by method SW8033M. Data were reviewed for the following parameters:

* Data Completeness
* Holding Time and Sample Preservation
* Blanks
* Continuing Calibration
* LCS/LCSD
* MS/MSD
* FDs
* Detection Limits
* Sample Result Verification/EDD

* = indicates that criteria were met for this parameter

Sample results are interpreted to be usable as reported by the laboratory. A summary of final results is presented on **Table 2.8.**

13.0 REFERENCES

MassDEP, 2010. "The Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the Massachusetts Contingency Plan (MCP)"; Bureau of Waste Site Cleanup; 1 Winter Street, Boston, Massachusetts 02108; WSC-CAM; July 2010.

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Data validation was completed by:

Liesel Krout

Madison Dinsmore

Elizabeth Penta

Wolfgang Calicchio

TABLES

Table 1 - Sample Summary
Data Validation Report
November 2019 Containment Area Soil Sampling Event
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							Analysis Method	SW8260C	SW8270D	SW6010D	SW7471A	SW7199	SW6010C	SW7470A	SW1030
							Fraction	N	N	T	T	N	C	C	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count	Count	Count	Count	Count	Count
480-162513-1	--	--	SB-701	OC-SB-701-0.0/10-XXX	11/11/2019	SOIL	FS						7	1	1
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-DUP	11/11/2019	SOIL	FD	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-2.0/4.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-20/21-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-31/32-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-4.0/6.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-6.0/8.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162513-1	2074150	--	SB-701	OC-SB-701-8.0/10-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	--	--	SB-702	OC-SB-702-0.0/10-XXX	11/8/2019	SOIL	FS						7	1	1
480-162426-1	2073916	--	SB-702	OC-SB-702-0.0/2.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-2.0/4.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-28/29-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-34/35-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-4.0/6.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-6.0/8.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-702	OC-SB-702-8.0/10-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	--	--	SB-703	OC-SB-703-0.0/10-XXX	11/5/2019	SOIL	FS						7	1	1
480-162315-1	2073905	--	SB-703	OC-SB-703-0.0/2.0-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-17/18-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-DUP	11/5/2019	SOIL	FD	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-30/32-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-4.0/6.0-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-6.0/8.0-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-703	OC-SB-703-8.0/10-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	--	--	SB-704	OC-SB-704-0.0/10-XXX	11/7/2019	SOIL	FS						7	1	1
480-162426-1	2073916	--	SB-704	OC-SB-704-0.0/2.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-12/13-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-19/20-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-2.0/4.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-33/34-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-4.0/6.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-6.0/8.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-704	OC-SB-704-8.0/10-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			

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							Analysis Method	SW8260C	SW8270D	SW6010D	SW7471A	SW7199	SW6010C	SW7470A	SW1030
							Fraction	N	N	T	T	N	C	C	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count	Count	Count	Count	Count	Count
480-162426-1	--	--	SB-705	OC-SB-705-0.0/10-XXX	11/8/2019	SOIL	FS						7	1	1
480-162426-1	2073916	--	SB-705	OC-SB-705-0.0/2.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-17/18-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-2.0/4.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-DUP	11/8/2019	SOIL	FD	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-6.0/8.0-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162426-1	2073916	--	SB-705	OC-SB-705-8.0/10-XXX	11/8/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	--	--	SB-706	OC-SB-706-0.0/10-XXX	11/6/2019	SOIL	FS						7	1	1
480-162353-1	2073662	--	SB-706	OC-SB-706-0.0/2.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-10/12-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-2.0/4.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-20/22-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-26/27-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-4.0/6.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-706	OC-SB-706-6.0/8.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	--	--	SB-707	OC-SB-707-0.0/10-XXX	11/7/2019	SOIL	FS						7	1	1
480-162353-1	2073662	--	SB-707	OC-SB-707-0.0/2.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-12/13-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-15/17-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-2.0/4.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-4.0/6.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-DUP	11/7/2019	SOIL	FD	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	--	SB-707	OC-SB-707-8.0/10-XXX	11/7/2019	SOIL	FS	78	77	23	1	1			
480-162140-1	--	--	SB-708	OC-SB-708-0.0/10-XXX	11/4/2019	SOIL	FS						7	1	1
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-0.0/2.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-708	OC-SB-708-16/18-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-2.0/4.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-708	OC-SB-708-22/24-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-708	OC-SB-708-28/30-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-708	OC-SB-708-33/34-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-4.0/6.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-6.0/8.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-8.0/10-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			

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							Analysis Method	SW8260C	SW8270D	SW6010D	SW7471A	SW7199	SW6010C	SW7470A	SW1030
							Fraction	N	N	T	T	N	C	C	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count	Count	Count	Count	Count	Count
480-162315-1	--	--	SB-709	OC-SB-709-0.0/10-XXX	11/6/2019	SOIL	FS						7	1	1
480-162315-1	2073905	--	SB-709	OC-SB-709-0.0/2.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-16/17-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-2.0/4.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-32/33-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-4.0/6.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-6.0/8.0-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-DUP	11/6/2019	SOIL	FD	78	77	23	1	1			
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-XXX	11/6/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	--	--	SB-710	OC-SB-710-0.0/10XXX	11/4/2019	SOIL	FS						7	1	1
480-162199-1	2072990	--	SB-710	OC-SB-710-2.0/4.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-710	OC-SB-710-23/24-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-710	OC-SB-710-36/37-XXX	11/5/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-710	OC-SB-710-4.0/6.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-710	OC-SB-710-6.0/8.0-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162199-1	2072990	--	SB-710	OC-SB-710-8.0/10-XXX	11/4/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	--	--	SB-711	OC-SB-711-0.0/10-XXX	11/12/2019	SOIL	FS						7	1	1
480-162572-1	2074385	--	SB-711	OC-SB-711-0.0/2.0-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-18/19-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-2.0/4.0-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-35/36-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-4.0/6.0-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-6.0/8.0-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-711	OC-SB-711-8.0/10-XXX	11/12/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-DUP	11/11/2019	SOIL	FD						7	1	1
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-XXX	11/11/2019	SOIL	FS						7	1	1
480-162572-1	2074385	--	SB-712	OC-SB-712-0.0/2.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-2.0/4.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-23/24-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-37/38-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-4.0/6.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-6.0/8.0-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162572-1	2074385	--	SB-712	OC-SB-712-8.0/10-XXX	11/11/2019	SOIL	FS	78	77	23	1	1			
480-162353-1	2073662	TM1916	QC	OC-EBK-01-XXX	11/7/2019	BW	EB	78	79	23		1		1	
480-162353-1	2073662	TM1916	QC	OC-EBK-02-XXX	11/7/2019	BW	EB	78	79	23		1		1	

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							Analysis Method	SW8260C	SW8270D	SW6010D	SW7471A	SW7199	SW6010C	SW7470A	SW1030
							Fraction	N	N	T	T	N	C	C	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count	Count	Count	Count	Count	Count
480-162515-1	2074032	TM2018	QC	OC-EBK-03-XXX	11/11/2019	BW	EB	78	79	23		1		1	
480-162572-1	2074262	TM2019	QC	OC-EBK-04-XXX	11/12/2019	BW	EB	78	79	23		1		1	
480-162353-1	--	--	QC	OC-TB-11072019	11/7/2019	BS	TB	78							
480-162426-1	--	--	QC	OC-TB-11082019	11/8/2019	BS	TB	78							
480-162513-1	--	--	QC	OC-TB-11112019	11/11/2019	BS	TB	78							
480-162572-1	--	--	QC	OC-TB-11122019	11/12/2019	BS	TB	78							

Notes:
BW = blank water
BS = blank soil
EB = equipment blank
FD = field duplicate
FS = field sample

C = TCLP fraction
N = normal sample
QC = quality control sample
T = total fraction
TB = trip blank

prepared by KS 1/10/20
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Table 1 - Sample Summary
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

							Method Class	Corrosivity	Reactive CN, S		IOCs-Sulfate-Chloride-Ammonia		Hydrazine/Aldehydes		DMF
							Analysis Method	SW9045D	SW9012	SW9034	E300	E350.1	SW8315A	SW8315A MOD	SW8033M
							Fraction	N	T	T	N	T	N	N	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	aram_Cour	Count	Param_Count	Count	Count	Count
480-162513-1	--	--	SB-701	OC-SB-701-0.0/10-XXX	11/11/2019	SOIL	FS	1	1	1					
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-DUP	11/11/2019	SOIL	FD				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-2.0/4.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-20/21-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-31/32-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-4.0/6.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-6.0/8.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162513-1	2074150	--	SB-701	OC-SB-701-8.0/10-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162426-1	--	--	SB-702	OC-SB-702-0.0/10-XXX	11/8/2019	SOIL	FS	1	1	1					
480-162426-1	2073916	--	SB-702	OC-SB-702-0.0/2.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-2.0/4.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-28/29-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-34/35-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-4.0/6.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-6.0/8.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-702	OC-SB-702-8.0/10-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162315-1	--	--	SB-703	OC-SB-703-0.0/10-XXX	11/5/2019	SOIL	FS	1	1	1					
480-162315-1	2073905	--	SB-703	OC-SB-703-0.0/2.0-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-17/18-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-DUP	11/5/2019	SOIL	FD				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-30/32-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-4.0/6.0-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-6.0/8.0-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-703	OC-SB-703-8.0/10-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162426-1	--	--	SB-704	OC-SB-704-0.0/10-XXX	11/7/2019	SOIL	FS	1	1	1					
480-162426-1	2073916	--	SB-704	OC-SB-704-0.0/2.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-12/13-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-19/20-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-2.0/4.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-33/34-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-4.0/6.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-6.0/8.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-704	OC-SB-704-8.0/10-XXX	11/7/2019	SOIL	FS				2	1	1	3	

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November 2019 Containment Area Soil Sampling Event
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							Method Class	Corrosivity	Reactive CN, S		IOCs-Sulfate-Chloride-Ammonia		Hydrazine/Aldehydes		DMF
							Analysis Method	SW9045D	SW9012	SW9034	E300	E350.1	SW8315A	SW8315A MOD	SW8033M
							Fraction	N	T	T	N	T	N	N	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	aram_Cour	Count	Param_Count	Count	Count	Count
480-162426-1	--	--	SB-705	OC-SB-705-0.0/10-XXX	11/8/2019	SOIL	FS	1	1	1					
480-162426-1	2073916	--	SB-705	OC-SB-705-0.0/2.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-17/18-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-2.0/4.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-DUP	11/8/2019	SOIL	FD				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-6.0/8.0-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162426-1	2073916	--	SB-705	OC-SB-705-8.0/10-XXX	11/8/2019	SOIL	FS				2	1	1	3	
480-162353-1	--	--	SB-706	OC-SB-706-0.0/10-XXX	11/6/2019	SOIL	FS	2	1	1					
480-162353-1	2073662	--	SB-706	OC-SB-706-0.0/2.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-10/12-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-2.0/4.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-20/22-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-26/27-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-4.0/6.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-706	OC-SB-706-6.0/8.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162353-1	--	--	SB-707	OC-SB-707-0.0/10-XXX	11/7/2019	SOIL	FS	1	1	1					
480-162353-1	2073662	--	SB-707	OC-SB-707-0.0/2.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-12/13-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-15/17-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-2.0/4.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-4.0/6.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-DUP	11/7/2019	SOIL	FD				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	--	SB-707	OC-SB-707-8.0/10-XXX	11/7/2019	SOIL	FS				2	1	1	3	
480-162140-1	--	--	SB-708	OC-SB-708-0.0/10-XXX	11/4/2019	SOIL	FS	1	1	1					
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-0.0/2.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	1
480-162199-1	2072990	--	SB-708	OC-SB-708-16/18-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-2.0/4.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	1
480-162199-1	2072990	--	SB-708	OC-SB-708-22/24-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-708	OC-SB-708-28/30-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-708	OC-SB-708-33/34-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-4.0/6.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	1
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-6.0/8.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	1
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-8.0/10-XXX	11/4/2019	SOIL	FS				2	1	1	3	1

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November 2019 Containment Area Soil Sampling Event
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							Method Class	Corrosivity	Reactive CN, S		IOCs-Sulfate-Chloride-Ammonia		Hydrazine/Aldehydes		DMF
							Analysis Method	SW9045D	SW9012	SW9034	E300	E350.1	SW8315A	SW8315A MOD	SW8033M
							Fraction	N	T	T	N	T	N	N	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	aram_Cour	Count	Param_Count	Count	Count	Count
480-162315-1	--	--	SB-709	OC-SB-709-0.0/10-XXX	11/6/2019	SOIL	FS	1	1	1					
480-162315-1	2073905	--	SB-709	OC-SB-709-0.0/2.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-16/17-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-2.0/4.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-32/33-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-4.0/6.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-6.0/8.0-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-DUP	11/6/2019	SOIL	FD				2	1	1	3	
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-XXX	11/6/2019	SOIL	FS				2	1	1	3	
480-162199-1	--	--	SB-710	OC-SB-710-0.0/10XXX	11/4/2019	SOIL	FS	1	1	1					
480-162199-1	2072990	--	SB-710	OC-SB-710-2.0/4.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-710	OC-SB-710-23/24-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-710	OC-SB-710-36/37-XXX	11/5/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-710	OC-SB-710-4.0/6.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-710	OC-SB-710-6.0/8.0-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162199-1	2072990	--	SB-710	OC-SB-710-8.0/10-XXX	11/4/2019	SOIL	FS				2	1	1	3	
480-162572-1	--	--	SB-711	OC-SB-711-0.0/10-XXX	11/12/2019	SOIL	FS	1	1	1					
480-162572-1	2074385	--	SB-711	OC-SB-711-0.0/2.0-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-18/19-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-2.0/4.0-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-35/36-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-4.0/6.0-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-6.0/8.0-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-711	OC-SB-711-8.0/10-XXX	11/12/2019	SOIL	FS				2	1	1	3	
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-DUP	11/11/2019	SOIL	FD	1	1	1					
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-XXX	11/11/2019	SOIL	FS	1	1	1					
480-162572-1	2074385	--	SB-712	OC-SB-712-0.0/2.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-2.0/4.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-23/24-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-37/38-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-4.0/6.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-6.0/8.0-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162572-1	2074385	--	SB-712	OC-SB-712-8.0/10-XXX	11/11/2019	SOIL	FS				2	1	1	3	
480-162353-1	2073662	TM1916	QC	OC-EBK-01-XXX	11/7/2019	BW	EB				2	1	1	3	1
480-162353-1	2073662	TM1916	QC	OC-EBK-02-XXX	11/7/2019	BW	EB				2	1	1	3	1

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							Method Class	Corrosivity	Reactive CN, S		IOCs-Sulfate-Chloride-Ammonia		Hydrazine/Aldehydes		DMF
							Analysis Method	SW9045D	SW9012	SW9034	E300	E350.1	SW8315A	SW8315A MOD	SW8033M
							Fraction	N	T	T	N	T	N	N	T
							Qc								
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	aram_Cour	Count	Param_Count	Count	Count	Count
480-162515-1	2074032	TM2018	QC	OC-EBK-03-XXX	11/11/2019	BW	EB				2	1	1	3	1
480-162572-1	2074262	TM2019	QC	OC-EBK-04-XXX	11/12/2019	BW	EB				2	1	1	3	1
480-162353-1	--	--	QC	OC-TB-11072019	11/7/2019	BS	TB								
480-162426-1	--	--	QC	OC-TB-11082019	11/8/2019	BS	TB								
480-162513-1	--	--	QC	OC-TB-11112019	11/11/2019	BS	TB								
480-162572-1	--	--	QC	OC-TB-11122019	11/12/2019	BS	TB								

Notes:
BW = blank water
BS = blank soil
EB = equipment blank
FD = field duplicate
FS = field sample

C = TCLP fraction
N = normal sample
QC = quality control sample
T = total fraction
TB = trip blank

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							Method Class	Moisture/Solids		
							Analysis Method	CALC	E160.3	SW3540C
							Fraction	N	T	T
							Qc			
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count
480-162513-1	--	--	SB-701	OC-SB-701-0.0/10-XXX	11/11/2019	SOIL	FS			
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-DUP	11/11/2019	SOIL	FD	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-0.0/2.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-2.0/4.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-20/21-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-31/32-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-4.0/6.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-6.0/8.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162513-1	2074150	--	SB-701	OC-SB-701-8.0/10-XXX	11/11/2019	SOIL	FS	1	2	
480-162426-1	--	--	SB-702	OC-SB-702-0.0/10-XXX	11/8/2019	SOIL	FS			
480-162426-1	2073916	--	SB-702	OC-SB-702-0.0/2.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-2.0/4.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-28/29-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-34/35-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-4.0/6.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-6.0/8.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-702	OC-SB-702-8.0/10-XXX	11/8/2019	SOIL	FS	1	2	
480-162315-1	--	--	SB-703	OC-SB-703-0.0/10-XXX	11/5/2019	SOIL	FS			
480-162315-1	2073905	--	SB-703	OC-SB-703-0.0/2.0-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-17/18-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-DUP	11/5/2019	SOIL	FD	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-2.0/4.0-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-30/32-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-4.0/6.0-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-6.0/8.0-XXX	11/5/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-703	OC-SB-703-8.0/10-XXX	11/5/2019	SOIL	FS	1	2	
480-162426-1	--	--	SB-704	OC-SB-704-0.0/10-XXX	11/7/2019	SOIL	FS			
480-162426-1	2073916	--	SB-704	OC-SB-704-0.0/2.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-12/13-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-19/20-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-2.0/4.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-33/34-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-4.0/6.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-6.0/8.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-704	OC-SB-704-8.0/10-XXX	11/7/2019	SOIL	FS	1	2	

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Table 1 - Sample Summary
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							Method Class	Moisture/Solids		
							Analysis Method	CALC	E160.3	SW3540C
							Fraction	N	T	T
							Qc			
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count
480-162426-1	--	--	SB-705	OC-SB-705-0.0/10-XXX	11/8/2019	SOIL	FS			
480-162426-1	2073916	--	SB-705	OC-SB-705-0.0/2.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-17/18-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-2.0/4.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-DUP	11/8/2019	SOIL	FD	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-4.0/6.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-6.0/8.0-XXX	11/8/2019	SOIL	FS	1	2	
480-162426-1	2073916	--	SB-705	OC-SB-705-8.0/10-XXX	11/8/2019	SOIL	FS	1	2	
480-162353-1	--	--	SB-706	OC-SB-706-0.0/10-XXX	11/6/2019	SOIL	FS			
480-162353-1	2073662	--	SB-706	OC-SB-706-0.0/2.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-10/12-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-2.0/4.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-20/22-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-26/27-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-4.0/6.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-706	OC-SB-706-6.0/8.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162353-1	--	--	SB-707	OC-SB-707-0.0/10-XXX	11/7/2019	SOIL	FS			
480-162353-1	2073662	--	SB-707	OC-SB-707-0.0/2.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-12/13-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-15/17-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-2.0/4.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-4.0/6.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-DUP	11/7/2019	SOIL	FD	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-6.0/8.0-XXX	11/7/2019	SOIL	FS	1	2	
480-162353-1	2073662	--	SB-707	OC-SB-707-8.0/10-XXX	11/7/2019	SOIL	FS	1	2	
480-162140-1	--	--	SB-708	OC-SB-708-0.0/10-XXX	11/4/2019	SOIL	FS			
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-0.0/2.0-XXX	11/4/2019	SOIL	FS	1	2	1
480-162199-1	2072990	--	SB-708	OC-SB-708-16/18-XXX	11/4/2019	SOIL	FS	1	2	
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-2.0/4.0-XXX	11/4/2019	SOIL	FS	1	2	1
480-162199-1	2072990	--	SB-708	OC-SB-708-22/24-XXX	11/4/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-708	OC-SB-708-28/30-XXX	11/4/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-708	OC-SB-708-33/34-XXX	11/4/2019	SOIL	FS	1	2	
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-4.0/6.0-XXX	11/4/2019	SOIL	FS	1	2	1
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-6.0/8.0-XXX	11/4/2019	SOIL	FS	1	2	1
480-162140-1	2072711	TM1675	SB-708	OC-SB-708-8.0/10-XXX	11/4/2019	SOIL	FS	1	2	1

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Table 1 - Sample Summary
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							Method Class	Moisture/Solids		
							Analysis Method	CALC	E160.3	SW3540C
							Fraction	N	T	T
							Qc			
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count
480-162315-1	--	--	SB-709	OC-SB-709-0.0/10-XXX	11/6/2019	SOIL	FS			
480-162315-1	2073905	--	SB-709	OC-SB-709-0.0/2.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-16/17-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-2.0/4.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-32/33-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-4.0/6.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-6.0/8.0-XXX	11/6/2019	SOIL	FS	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-DUP	11/6/2019	SOIL	FD	1	2	
480-162315-1	2073905	--	SB-709	OC-SB-709-8.0/10-XXX	11/6/2019	SOIL	FS	1	2	
480-162199-1	--	--	SB-710	OC-SB-710-0.0/10XXX	11/4/2019	SOIL	FS			
480-162199-1	2072990	--	SB-710	OC-SB-710-2.0/4.0-XXX	11/4/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-710	OC-SB-710-23/24-XXX	11/5/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-710	OC-SB-710-36/37-XXX	11/5/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-710	OC-SB-710-4.0/6.0-XXX	11/4/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-710	OC-SB-710-6.0/8.0-XXX	11/4/2019	SOIL	FS	1	2	
480-162199-1	2072990	--	SB-710	OC-SB-710-8.0/10-XXX	11/4/2019	SOIL	FS	1	2	
480-162572-1	--	--	SB-711	OC-SB-711-0.0/10-XXX	11/12/2019	SOIL	FS			
480-162572-1	2074385	--	SB-711	OC-SB-711-0.0/2.0-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-18/19-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-2.0/4.0-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-35/36-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-4.0/6.0-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-6.0/8.0-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-711	OC-SB-711-8.0/10-XXX	11/12/2019	SOIL	FS	1	2	
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-DUP	11/11/2019	SOIL	FD			
480-162572-1	--	--	SB-712	OC-SB-712-0.0/10-XXX	11/11/2019	SOIL	FS			
480-162572-1	2074385	--	SB-712	OC-SB-712-0.0/2.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-2.0/4.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-23/24-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-37/38-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-4.0/6.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-6.0/8.0-XXX	11/11/2019	SOIL	FS	1	2	
480-162572-1	2074385	--	SB-712	OC-SB-712-8.0/10-XXX	11/11/2019	SOIL	FS	1	2	
480-162353-1	2073662	TM1916	QC	OC-EBK-01-XXX	11/7/2019	BW	EB			
480-162353-1	2073662	TM1916	QC	OC-EBK-02-XXX	11/7/2019	BW	EB			

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November 2019 Containment Area Soil Sampling Event
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Wilmington, Massachusetts

							Method Class	Moisture/Solids		
							Analysis Method	CALC	E160.3	SW3540C
							Fraction	N	T	T
							Qc			
TestAmerica	**Lancaster**	**Katahdin**	**Location**	**Field Sample ID**	**Sample Date**	**Media**	**Code**	Count	Count	Count
480-162515-1	2074032	TM2018	QC	OC-EBK-03-XXX	11/11/2019	BW	EB			
480-162572-1	2074262	TM2019	QC	OC-EBK-04-XXX	11/12/2019	BW	EB			
480-162353-1	--	--	QC	OC-TB-11072019	11/7/2019	BS	TB			
480-162426-1	--	--	QC	OC-TB-11082019	11/8/2019	BS	TB			
480-162513-1	--	--	QC	OC-TB-11112019	11/11/2019	BS	TB			
480-162572-1	--	--	QC	OC-TB-11122019	11/12/2019	BS	TB			

Notes:
BW = blank water
BS = blank soil
EB = equipment blank
FD = field duplicate
FS = field sample

C = TCLP fraction
N = normal sample
QC = quality control sample
T = total fraction
TB = trip blank

prepared by KS 1/10/20
reviewed by LLT 1/10/20

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		QC		QC		QC		QC	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162426-1		480-162513-1		480-162515-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-TB-11072019		OC-TB-11082019		OC-TB-11112019		OC-EBK-03-XXX	
	Qc Code	EB		EB		TB		TB		TB		EB	
	Units	ug/l		ug/l		ug/kg		ug/kg		ug/kg		ug/l	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1,1-Trichloroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	0.5	U	0.5	U	5	U	5	U	5	U	0.5	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1,2-Trichloroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1-Dichloroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1-Dichloroethene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,1-Dichloropropene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2,3-Trichlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2,3-Trichloropropane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2,4-Trichlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2,4-Trimethylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	5	U	5	U	25	U	25	U	25	U	5	U
VOCs	1,2-Dibromoethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2-Dichlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2-Dichloroethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,2-Dichloropropane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,3,5-Trimethylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,3-Dichlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,3-Dichloropropane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,4-Dichlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	1,4-Dioxane	50	U	50	U	250	U	250	U	250	U	50	U
VOCs	2,2-Dichloropropane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	2,4,4-Trimethyl-1-pentene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	2,4,4-Trimethyl-2-pentene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	2-Butanone	2.9	J	3	J	25	U	25	U	25	U	9.2	J
VOCs	2-Chlorotoluene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	2-Hexanone	10	U	10	U	25	U	25	U	25	U	10	U
VOCs	4-Chlorotoluene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	4-iso-Propyltoluene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	4-Methyl-2-pentanone	10	U	10	U	25	U	25	U	25	U	10	U
VOCs	Acetic acid, methyl ester	20	U	20	U	50	U	50	U	50	U	20	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
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Wilmington, Massachusetts

	Location	QC		QC		QC		QC		QC		QC	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162426-1		480-162513-1		480-162515-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-TB-11072019		OC-TB-11082019		OC-TB-11112019		OC-EBK-03-XXX	
	Qc Code	EB		EB		TB		TB		TB		EB	
	Units	ug/l		ug/l		ug/kg		ug/kg		ug/kg		ug/l	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	17	J	17	J	16	J	250	U	250	U	46	J
VOCs	Benzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Bromobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Bromochloromethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Bromodichloromethane	0.5	U	0.5	U	5	U	5	U	5	U	0.5	U
VOCs	Bromoform	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Bromomethane	2	U	2	U	5	U	5	U	5	U	2	U
VOCs	Butane, 2-methoxy-2-methyl-	5	U	5	U	5	U	5	U	5	U	5	U
VOCs	Carbon disulfide	10	U	10	U	5	U	5	U	5	U	10	U
VOCs	Carbon tetrachloride	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Chlorobenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Chloroethane	2	U	2	U	5	U	5	U	5	U	2	U
VOCs	Chloroform	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Chloromethane	2	U	2	U	5	U	5	U	5	U	2	U
VOCs	cis-1,2-Dichloroethene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	cis-1,3-Dichloropropene	0.4	U	0.4	U	5	U	5	U	5	U	0.4	U
VOCs	Cyclohexane	1	U	1	U	25	U	25	U	25	U	1	U
VOCs	Dibromochloromethane	0.5	U	0.5	U	5	U	5	U	5	U	0.5	U
VOCs	Dibromomethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Dichlorodifluoromethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Diethyl ether	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Ethyl-t-Butyl Ether	5	U	5	U	5	U	5	U	5	U	5	U
VOCs	Ethylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Hexachlorobutadiene	0.4	U	0.4	U	5	U	5	U	5	U	0.4	U
VOCs	Isopropyl ether	10	U	10	U	5	U	5	U	5	U	10	U
VOCs	Isopropylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Methyl cyclohexane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Methyl Tertbutyl Ether	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Methylene chloride	1	U	1	U	5	U	8.8		3	J	1	U
VOCs	n-Butylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Naphthalene	5	U	5	U	25	U	25	U	25	U	5	U
VOCs	Propylbenzene	1	U	1	U	5	U	5	U	5	U	1	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		QC		QC		QC		QC	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162426-1		480-162513-1		480-162515-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-TB-11072019		OC-TB-11082019		OC-TB-11112019		OC-EBK-03-XXX	
	Qc Code	EB		EB		TB		TB		TB		EB	
	Units	ug/l		ug/l		ug/kg		ug/kg		ug/kg		ug/l	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Styrene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	tert-Butylbenzene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Tetrachloroethene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Tetrahydrofuran	10	U	10	U	50	U	50	U	50	U	4.4	J
VOCs	Toluene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	trans-1,2-Dichloroethene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	trans-1,3-Dichloropropene	0.4	U	0.4	U	5	U	5	U	5	U	0.4	U
VOCs	Trichloroethene	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Trichlorofluoromethane	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Vinyl chloride	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Xylene, o	1	U	1	U	5	U	5	U	5	U	1	U
VOCs	Xylenes (m&p)	2	U	2	U	5	U	5	U	5	U	2	U
VOCs	Xylenes, Total	2	U	2	U	5	U	5	U	5	U	2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

EB = equipment blank
TB = trip blank

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162572-1		480-162572-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-TB-11122019		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX	
	Qc Code	TB		EB		FD		FS		FS		FS	
	Units	ug/kg		ug/l		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,1,1-Trichloroethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,1,2,2-Tetrachloroethane	13000	U	0.5	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,1,2-Trichloroethane	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,1-Dichloroethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,1-Dichloroethene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,1-Dichloropropene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,2,3-Trichlorobenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,2,3-Trichloropropane	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,2,4-Trichlorobenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,2,4-Trimethylbenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,2-Dibromo-3-chloropropane	67000	U	5	U	29	UJ	22	UJ	26	U	21	U
VOCs	1,2-Dibromoethane	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,2-Dichlorobenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,2-Dichloroethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,2-Dichloropropane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,3,5-Trimethylbenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,3-Dichlorobenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	1,3-Dichloropropane	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,4-Dichlorobenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	1,4-Dioxane	670000	U	50	U	290	UJ	220	UJ	260	U	210	U
VOCs	2,2-Dichloropropane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	2,4,4-Trimethyl-1-pentene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	0.76	J
VOCs	2,4,4-Trimethyl-2-pentene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	2-Butanone	67000	U	1.6	J	29	U	22	U	26	U	21	U
VOCs	2-Chlorotoluene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	2-Hexanone	67000	U	10	U	29	UJ	22	UJ	26	U	21	U
VOCs	4-Chlorotoluene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	4-iso-Propyltoluene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	4-Methyl-2-pentanone	67000	U	10	U	29	U	22	U	26	U	21	U
VOCs	Acetic acid, methyl ester	130000	U	20	U	58	UJ	43	UJ	52	U	43	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162572-1		480-162572-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-TB-11122019		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX	
	Qc Code	TB		EB		FD		FS		FS		FS	
	Units	ug/kg		ug/l		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	670000	U	8.4	J	7.4	J-	14	J-	12	J	16	J
VOCs	Benzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Bromobenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Bromochloromethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Bromodichloromethane	13000	U	0.5	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Bromoform	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Bromomethane	13000	U	2	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Butane, 2-methoxy-2-methyl-	13000	U	5	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Carbon disulfide	13000	U	10	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Carbon tetrachloride	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Chlorobenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Chloroethane	13000	U	2	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Chloroform	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Chloromethane	13000	U	2	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	cis-1,2-Dichloroethene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	cis-1,3-Dichloropropene	13000	U	0.4	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Cyclohexane	67000	U	1	U	29	U	22	U	26	U	21	U
VOCs	Dibromochloromethane	13000	U	0.5	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Dibromomethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Dichlorodifluoromethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Diethyl ether	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Ethyl-t-Butyl Ether	13000	U	5	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Ethylbenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Hexachlorobutadiene	13000	U	0.4	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Isopropyl ether	13000	U	10	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Isopropylbenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Methyl cyclohexane	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Methyl Tertbutyl Ether	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Methylene chloride	13000	U	0.69	J	18	U	19	U	26	U	25	U
VOCs	n-Butylbenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Naphthalene	67000	U	5	U	29	UJ	22	UJ	26	U	15	J
VOCs	Propylbenzene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162572-1		480-162572-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-TB-11122019		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX	
	Qc Code	TB		EB		FD		FS		FS		FS	
	Units	ug/kg		ug/l		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Styrene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	tert-Butylbenzene	13000	U	1	U	5.8	UJ	4.3	UJ	5.2	U	4.3	U
VOCs	Tetrachloroethene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Tetrahydrofuran	130000	U	10	U	58	UJ	43	UJ	52	U	43	U
VOCs	Toluene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	trans-1,2-Dichloroethene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	trans-1,3-Dichloropropene	13000	U	0.4	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Trichloroethene	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Trichlorofluoromethane	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Vinyl chloride	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Xylene, o	13000	U	1	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Xylenes (m&p)	13000	U	2	U	5.8	U	4.3	U	5.2	U	4.3	U
VOCs	Xylenes, Total	13000	U	2	U	5.8	U	4.3	U	5.2	U	4.3	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-702		SB-702	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162426-1		480-162426-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1,1-Trichloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1,2,2-Tetrachloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1,2-Trichloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1-Dichloroethane	0.7	J	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1-Dichloroethene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,1-Dichloropropene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2,3-Trichlorobenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2,3-Trichloropropane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2,4-Trichlorobenzene	0.54	J	1.9	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2,4-Trimethylbenzene	16		3.8	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2-Dibromo-3-chloropropane	26	U	23	U	20	U	26	U	23	U	21	U
VOCs	1,2-Dibromoethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2-Dichlorobenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2-Dichloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,2-Dichloropropane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,3,5-Trimethylbenzene	0.79	J	0.82	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,3-Dichlorobenzene	5.2	U	0.32	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,3-Dichloropropane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,4-Dichlorobenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	1,4-Dioxane	260	U	230	U	200	U	260	U	230	U	210	U
VOCs	2,2-Dichloropropane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	2,4,4-Trimethyl-1-pentene	67		59		4.1	U	0.58	J	4.7	U	2.4	J
VOCs	2,4,4-Trimethyl-2-pentene	34		24		4.1	U	5.2	U	4.7	U	0.84	J
VOCs	2-Butanone	23	J+	21	J+	20	U	26	U	23	U	14	J+
VOCs	2-Chlorotoluene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	2-Hexanone	26	U	23	U	20	U	26	U	23	U	21	U
VOCs	4-Chlorotoluene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	4-iso-Propyltoluene	0.48	J	0.41	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	4-Methyl-2-pentanone	26	U	23	U	20	U	26	U	23	U	21	U
VOCs	Acetic acid, methyl ester	52	U	46	U	41	U	52	U	47	U	41	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-702		SB-702	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162426-1		480-162426-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	99	J	82	J	14	J	16	J	23	J	54	J
VOCs	Benzene	0.82	J	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Bromobenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Bromochloromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Bromodichloromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Bromoform	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Bromomethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Butane, 2-methoxy-2-methyl-	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Carbon disulfide	6.6		4.2	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Carbon tetrachloride	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Chlorobenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Chloroethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Chloroform	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Chloromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	cis-1,2-Dichloroethene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	cis-1,3-Dichloropropene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Cyclohexane	26	U	23	U	20	U	26	U	23	U	21	U
VOCs	Dibromochloromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Dibromomethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Dichlorodifluoromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Diethyl ether	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Ethyl-t-Butyl Ether	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Ethylbenzene	1.4	J	0.49	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Hexachlorobutadiene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Isopropyl ether	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Isopropylbenzene	3.7	J	1.2	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Methyl cyclohexane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Methyl Tertbutyl Ether	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Methylene chloride	17	U	26	U	15	U	26	U	6.5	U	5.6	U
VOCs	n-Butylbenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Naphthalene	180		3	J	20	U	26	U	23	U	21	U
VOCs	Propylbenzene	7		1.2	J	4.1	U	5.2	U	4.7	U	4.1	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-702		SB-702	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162426-1		480-162426-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Styrene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	tert-Butylbenzene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Tetrachloroethene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Tetrahydrofuran	52	U	46	U	41	U	52	U	47	U	41	U
VOCs	Toluene	5.2	U	0.43	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	trans-1,2-Dichloroethene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	trans-1,3-Dichloropropene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Trichloroethene	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Trichlorofluoromethane	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Vinyl chloride	5.2	U	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Xylene, o	1.6	J	0.75	J	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Xylenes (m&p)	0.98	J	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U
VOCs	Xylenes, Total	2.6	J	4.6	U	4.1	U	5.2	U	4.7	U	4.1	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162315-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
	Sample ID	OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1,1-Trichloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1,2,2-Tetrachloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1,2-Trichloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1-Dichloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1-Dichloroethene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,1-Dichloropropene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2,3-Trichlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2,3-Trichloropropane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2,4-Trichlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2,4-Trimethylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2-Dibromo-3-chloropropane	25	U	21	U	23	U	54	U	21	U	24	U
VOCs	1,2-Dibromoethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2-Dichlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2-Dichloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,2-Dichloropropane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,3,5-Trimethylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,3-Dichlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,3-Dichloropropane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,4-Dichlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	1,4-Dioxane	250	U	210	U	230	U	540	U	210	U	240	U
VOCs	2,2-Dichloropropane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	2,4,4-Trimethyl-1-pentene	1.2	J	13		16		11	U	4.2	U	0.9	J
VOCs	2,4,4-Trimethyl-2-pentene	4.9	U	4.4		3.1	J	11	U	4.2	U	4.7	U
VOCs	2-Butanone	29	J+	4.4	J+	23	U	54	U	21	U	6.6	J
VOCs	2-Chlorotoluene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	2-Hexanone	25	U	21	U	23	U	54	U	21	U	24	U
VOCs	4-Chlorotoluene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	4-iso-Propyltoluene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	4-Methyl-2-pentanone	25	U	21	U	23	U	54	U	21	U	24	U
VOCs	Acetic acid, methyl ester	8.1	J	42	U	6.3	J	7.5	J	42	U	47	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162315-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
	Sample ID	OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	54	J	20	J	5.6	J	12	J	5.1	J	30	J
VOCs	Benzene	4.9	U	0.37	J	4.6	U	11	U	4.2	U	4.7	U
VOCs	Bromobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Bromochloromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Bromodichloromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Bromoform	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Bromomethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Butane, 2-methoxy-2-methyl-	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Carbon disulfide	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Carbon tetrachloride	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Chlorobenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Chloroethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Chloroform	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Chloromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	cis-1,2-Dichloroethene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	cis-1,3-Dichloropropene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Cyclohexane	25	U	21	U	23	U	54	U	21	U	24	U
VOCs	Dibromochloromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Dibromomethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Dichlorodifluoromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Diethyl ether	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Ethyl-t-Butyl Ether	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Ethylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Hexachlorobutadiene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Isopropyl ether	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Isopropylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Methyl cyclohexane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Methyl Tertbutyl Ether	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Methylene chloride	8.4	U	4.5	U	20	U	57	U	21	U	4.7	U
VOCs	n-Butylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Naphthalene	25	U	21	U	23	U	54	U	21	U	24	U
VOCs	Propylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-703	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162315-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
	Sample ID	OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Styrene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	tert-Butylbenzene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Tetrachloroethene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Tetrahydrofuran	49	U	42	U	46	U	110	U	42	U	47	U
VOCs	Toluene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	trans-1,2-Dichloroethene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	trans-1,3-Dichloropropene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Trichloroethene	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Trichlorofluoromethane	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Vinyl chloride	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Xylene, o	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Xylenes (m&p)	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U
VOCs	Xylenes, Total	4.9	U	4.2	U	4.6	U	11	U	4.2	U	4.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1,1-Trichloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1,2,2-Tetrachloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1,2-Trichloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1-Dichloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1-Dichloroethene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,1-Dichloropropene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2,3-Trichlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2,3-Trichloropropane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2,4-Trichlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2,4-Trimethylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2-Dibromo-3-chloropropane	20	UJ	22	UJ	23	U	25	U	25	U	22	U
VOCs	1,2-Dibromoethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2-Dichlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2-Dichloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,2-Dichloropropane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,3,5-Trimethylbenzene	0.27	J-	0.37	J-	4.6	U	5	U	5	U	4.5	U
VOCs	1,3-Dichlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,3-Dichloropropane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,4-Dichlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	1,4-Dioxane	200	UJ	220	UJ	230	U	250	U	250	U	220	U
VOCs	2,2-Dichloropropane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	2,4,4-Trimethyl-1-pentene	1.4	J-	1.7	J-	4.6	U	5	U	5	U	4.5	U
VOCs	2,4,4-Trimethyl-2-pentene	0.46	J-	0.67	J-	4.6	U	5	U	5	U	4.5	U
VOCs	2-Butanone	9.5	J-	10	J	23	U	25	U	25	U	22	U
VOCs	2-Chlorotoluene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	2-Hexanone	20	UJ	22	UJ	23	U	25	U	25	U	22	U
VOCs	4-Chlorotoluene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	4-iso-Propyltoluene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	4-Methyl-2-pentanone	20	UJ	22	UJ	23	U	25	U	25	U	22	U
VOCs	Acetic acid, methyl ester	40	UJ	44	UJ	46	U	50	U	50	U	45	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	43	J-	37	J-	6.5	J	23	J	4.2	J	220	U
VOCs	Benzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Bromobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Bromochloromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Bromodichloromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Bromoform	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Bromomethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Butane, 2-methoxy-2-methyl-	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Carbon disulfide	6.5	J-	4.4	J-	4.6	U	5	U	5	U	4.5	U
VOCs	Carbon tetrachloride	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Chlorobenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Chloroethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Chloroform	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Chloromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	cis-1,2-Dichloroethene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	cis-1,3-Dichloropropene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Cyclohexane	20	UJ	22	UJ	23	U	25	U	25	U	22	U
VOCs	Dibromochloromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Dibromomethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Dichlorodifluoromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Diethyl ether	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Ethyl-t-Butyl Ether	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Ethylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Hexachlorobutadiene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Isopropyl ether	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Isopropylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Methyl cyclohexane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Methyl Tertbutyl Ether	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Methylene chloride	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	n-Butylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Naphthalene	20	UJ	22	UJ	23	U	25	U	25	U	22	U
VOCs	Propylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Styrene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	tert-Butylbenzene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Tetrachloroethene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Tetrahydrofuran	40	UJ	44	UJ	46	U	50	U	50	U	45	U
VOCs	Toluene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	trans-1,2-Dichloroethene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	trans-1,3-Dichloropropene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Trichloroethene	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Trichlorofluoromethane	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Vinyl chloride	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Xylene, o	4	UJ	4.4	UJ	4.6	U	5	U	5	U	4.5	U
VOCs	Xylenes (m&p)	4	UJ	0.77	J-	4.6	U	5	U	5	U	4.5	U
VOCs	Xylenes, Total	4	UJ	0.77	J-	4.6	U	5	U	5	U	4.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-704		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1,1-Trichloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1,2,2-Tetrachloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1,2-Trichloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1-Dichloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1-Dichloroethene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,1-Dichloropropene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2,3-Trichlorobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2,3-Trichloropropane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2,4-Trichlorobenzene	3	U	7.3	U	0.58	J	0.36	J	3.7	U	4.5	U
VOCs	1,2,4-Trimethylbenzene	3	U	3	J	2.7	J	4.1	U	3.7	U	4.5	U
VOCs	1,2-Dibromo-3-chloropropane	15	U	37	U	27	U	20	U	19	U	23	U
VOCs	1,2-Dibromoethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2-Dichlorobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2-Dichloroethane	1.1	J	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,2-Dichloropropane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,3,5-Trimethylbenzene	3	U	1.4	J	1.1	J	4.1	U	3.7	U	4.5	U
VOCs	1,3-Dichlorobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,3-Dichloropropane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,4-Dichlorobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	1,4-Dioxane	150	U	370	U	270	U	200	U	190	U	230	U
VOCs	2,2-Dichloropropane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	2,4,4-Trimethyl-1-pentene	3	U	5.1	J	6.2		1.3	J	3.7	U	4.5	U
VOCs	2,4,4-Trimethyl-2-pentene	3	U	7.3	U	3	J	0.56	J	3.7	U	4.5	U
VOCs	2-Butanone	15	U	17	J+	23	J+	64	J+	9.6	J+	29	J+
VOCs	2-Chlorotoluene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	2-Hexanone	15	U	37	U	27	U	20	U	19	U	23	U
VOCs	4-Chlorotoluene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	4-iso-Propyltoluene	3	U	1.9	J	1.2	J	4.1	U	3.7	U	4.5	U
VOCs	4-Methyl-2-pentanone	15	U	37	U	27	U	20	U	19	U	23	U
VOCs	Acetic acid, methyl ester	30	U	73	U	54	U	41	U	37	U	45	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-704		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	7.6	J	93	J	68	J	64	J	38	J	54	J
VOCs	Benzene	3	U	7.3	U	0.41	J	4.1	U	3.7	U	4.5	U
VOCs	Bromobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Bromochloromethane	0.78	J	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Bromodichloromethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Bromoform	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Bromomethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Butane, 2-methoxy-2-methyl-	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Carbon disulfide	3	U	7.3	U	6		2.5	J	3.7	U	2.4	J
VOCs	Carbon tetrachloride	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Chlorobenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Chloroethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Chloroform	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Chloromethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	cis-1,2-Dichloroethene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	cis-1,3-Dichloropropene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Cyclohexane	15	U	37	U	27	U	20	U	19	U	23	U
VOCs	Dibromochloromethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Dibromomethane	4.6		7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Dichlorodifluoromethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Diethyl ether	3	U	3.4	J	2.8	J	4.1	U	3.7	U	4.5	U
VOCs	Ethyl-t-Butyl Ether	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Ethylbenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Hexachlorobutadiene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Isopropyl ether	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Isopropylbenzene	3	U	7.3	U	1.3	J	4.1	U	3.7	U	4.5	U
VOCs	Methyl cyclohexane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Methyl Tertbutyl Ether	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Methylene chloride	3	U	14	U	11	U	6.1	U	4.7	U	8.8	U
VOCs	n-Butylbenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Naphthalene	15	U	2.5	J	1.4	J	20	U	19	U	23	U
VOCs	Propylbenzene	3	U	7.3	U	0.49	J	4.1	U	3.7	U	4.5	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-704		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Styrene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	tert-Butylbenzene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Tetrachloroethene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Tetrahydrofuran	30	U	73	U	54	U	41	U	37	U	45	U
VOCs	Toluene	0.62	J	1.4	J	4.2	J	0.5	J	0.38	J	4.5	U
VOCs	trans-1,2-Dichloroethene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	trans-1,3-Dichloropropene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Trichloroethene	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Trichlorofluoromethane	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Vinyl chloride	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Xylene, o	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Xylenes (m&p)	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U
VOCs	Xylenes, Total	3	U	7.3	U	5.4	U	4.1	U	3.7	U	4.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP	
	Qc Code	FS		FS		FS		FS		FS		FD	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1,1-Trichloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1,2,2-Tetrachloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1,2-Trichloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1-Dichloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1-Dichloroethene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,1-Dichloropropene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,2,3-Trichlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,2,3-Trichloropropane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,2,4-Trichlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,2,4-Trimethylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,2-Dibromo-3-chloropropane	24	U	22	U	21	U	21	U	22	U	23	UJ
VOCs	1,2-Dibromoethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,2-Dichlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,2-Dichloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,2-Dichloropropane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,3,5-Trimethylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,3-Dichlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,3-Dichloropropane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	1,4-Dichlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	1,4-Dioxane	240	U	220	U	210	U	210	U	220	U	230	U
VOCs	2,2-Dichloropropane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	2,4,4-Trimethyl-1-pentene	4.8	U	4.3	U	4.3	U	4.2	U	5.5		11	J-
VOCs	2,4,4-Trimethyl-2-pentene	4.8	U	4.3	U	4.3	U	4.2	U	2.1	J	3.8	J-
VOCs	2-Butanone	24	U	22	U	21	U	21	U	14	J+	32	J+
VOCs	2-Chlorotoluene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	2-Hexanone	24	U	22	U	21	U	21	U	22	U	23	UJ
VOCs	4-Chlorotoluene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	4-iso-Propyltoluene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	4-Methyl-2-pentanone	24	U	22	U	21	U	21	U	22	U	23	UJ
VOCs	Acetic acid, methyl ester	48	U	43	U	43	U	42	U	43	U	150	J+

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP	
	Qc Code	FS		FS		FS		FS		FS		FD	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	18	J	22	J	210	U	14	J	46	J	69	J-
VOCs	Benzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	0.28	J
VOCs	Bromobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Bromochloromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Bromodichloromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Bromoform	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Bromomethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Butane, 2-methoxy-2-methyl-	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Carbon disulfide	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Carbon tetrachloride	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Chlorobenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Chloroethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Chloroform	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Chloromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	cis-1,2-Dichloroethene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	cis-1,3-Dichloropropene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Cyclohexane	24	U	22	U	21	U	21	U	22	U	23	U
VOCs	Dibromochloromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Dibromomethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Dichlorodifluoromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Diethyl ether	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Ethyl-t-Butyl Ether	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Ethylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Hexachlorobutadiene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	Isopropyl ether	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Isopropylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Methyl cyclohexane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	Methyl Tertbutyl Ether	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Methylene chloride	7.8	U	7.2	U	6.7	U	9.7	U	6.2	U	6.9	U
VOCs	n-Butylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	Naphthalene	24	U	22	U	21	U	21	U	22	U	23	UJ
VOCs	Propylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP	
	Qc Code	FS		FS		FS		FS		FS		FD	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	Styrene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	tert-Butylbenzene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	UJ
VOCs	Tetrachloroethene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Tetrahydrofuran	48	U	43	U	43	U	42	U	43	U	47	UJ
VOCs	Toluene	4.8	U	0.53	J	4.3	U	4.2	U	0.48	J	0.72	J
VOCs	trans-1,2-Dichloroethene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	trans-1,3-Dichloropropene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Trichloroethene	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Trichlorofluoromethane	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Vinyl chloride	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Xylene, o	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Xylenes (m&p)	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U
VOCs	Xylenes, Total	4.8	U	4.3	U	4.3	U	4.2	U	4.3	U	4.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162353-1		480-162353-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1,1-Trichloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1,2,2-Tetrachloroethane	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1,2-Trichloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1-Dichloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1-Dichloroethene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,1-Dichloropropene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2,3-Trichlorobenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2,3-Trichloropropane	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2,4-Trichlorobenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2,4-Trimethylbenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2-Dibromo-3-chloropropane	24	UJ	21	U	19	U	21	U	23	U	21	U
VOCs	1,2-Dibromoethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2-Dichlorobenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2-Dichloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,2-Dichloropropane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,3,5-Trimethylbenzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,3-Dichlorobenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,3-Dichloropropane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,4-Dichlorobenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	1,4-Dioxane	240	U	210	U	190	U	210	U	230	U	210	U
VOCs	2,2-Dichloropropane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	2,4,4-Trimethyl-1-pentene	7.4	J-	4.3	U	3.7	U	4.2	U	4.5	U	1.3	J
VOCs	2,4,4-Trimethyl-2-pentene	2.3	J-	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	2-Butanone	20	J+	560	J+	19	U	21	U	23	U	15	J+
VOCs	2-Chlorotoluene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	2-Hexanone	24	UJ	21	U	19	U	21	U	23	U	21	U
VOCs	4-Chlorotoluene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	4-iso-Propyltoluene	0.52	J-	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	4-Methyl-2-pentanone	24	UJ	21	U	19	U	21	U	23	U	21	U
VOCs	Acetic acid, methyl ester	48	UJ	41	J	37	U	42	U	45	U	42	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162353-1		480-162353-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	74	J-	18	J	190	U	19	J	230	U	210	U
VOCs	Benzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Bromobenzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Bromochloromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Bromodichloromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Bromoform	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Bromomethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Butane, 2-methoxy-2-methyl-	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Carbon disulfide	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Carbon tetrachloride	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Chlorobenzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Chloroethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Chloroform	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Chloromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	cis-1,2-Dichloroethene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	cis-1,3-Dichloropropene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Cyclohexane	24	U	21	U	19	U	21	U	23	U	21	U
VOCs	Dibromochloromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Dibromomethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Dichlorodifluoromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Diethyl ether	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Ethyl-t-Butyl Ether	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Ethylbenzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Hexachlorobutadiene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Isopropyl ether	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Isopropylbenzene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Methyl cyclohexane	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Methyl Tertbutyl Ether	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Methylene chloride	7.3	U	29	U	26	U	9.1	U	4.5	U	4.2	U
VOCs	n-Butylbenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Naphthalene	24	UJ	21	U	19	U	21	U	23	U	21	U
VOCs	Propylbenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-706		SB-706	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162353-1		480-162353-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Styrene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	tert-Butylbenzene	4.8	UJ	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Tetrachloroethene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Tetrahydrofuran	48	UJ	43	U	37	U	42	U	45	U	42	U
VOCs	Toluene	0.6	J	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	trans-1,2-Dichloroethene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	trans-1,3-Dichloropropene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Trichloroethene	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Trichlorofluoromethane	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Vinyl chloride	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Xylene, o	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Xylenes (m&p)	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U
VOCs	Xylenes, Total	4.8	U	4.3	U	3.7	U	4.2	U	4.5	U	4.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019	
	Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1,1-Trichloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1,2,2-Tetrachloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1,2-Trichloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1-Dichloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1-Dichloroethene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,1-Dichloropropene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,2,3-Trichlorobenzene	3.9	U	3.7	U	0.85	J	5	U	3.1	U	5.2	U
VOCs	1,2,3-Trichloropropane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,2,4-Trichlorobenzene	3.9	U	3.7	U	1.9	J	5	U	3.1	U	2.5	J
VOCs	1,2,4-Trimethylbenzene	3.9	U	3.7	U	1.6	J	5	U	3.1	U	5.2	U
VOCs	1,2-Dibromo-3-chloropropane	19	U	19	U	21	U	25	U	15	U	26	U
VOCs	1,2-Dibromoethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,2-Dichlorobenzene	3.9	U	3.7	U	0.5	J	5	U	3.1	U	5.2	U
VOCs	1,2-Dichloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,2-Dichloropropane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,3,5-Trimethylbenzene	3.9	U	3.7	U	1.5	J	5	U	3.1	U	5.2	U
VOCs	1,3-Dichlorobenzene	3.9	U	3.7	U	1.2	J	5	U	3.1	U	5.2	U
VOCs	1,3-Dichloropropane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	1,4-Dichlorobenzene	3.9	U	3.7	U	0.68	J	5	U	3.1	U	5.2	U
VOCs	1,4-Dioxane	190	U	190	U	210	U	250	U	150	U	260	U
VOCs	2,2-Dichloropropane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	2,4,4-Trimethyl-1-pentene	1.9	J	3.7	U	75		0.54	J	1.9	J	5.2	U
VOCs	2,4,4-Trimethyl-2-pentene	3.9	U	3.7	U	25		5	U	3.1	U	5.2	U
VOCs	2-Butanone	8.2	J	19	U	17	J+	25	U	15	U	15	J
VOCs	2-Chlorotoluene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	2-Hexanone	19	U	19	U	21	U	25	U	15	U	26	U
VOCs	4-Chlorotoluene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	4-iso-Propyltoluene	3.9	U	3.7	U	2	J	5	U	3.1	U	5.2	U
VOCs	4-Methyl-2-pentanone	19	U	19	U	21	U	25	U	15	U	26	U
VOCs	Acetic acid, methyl ester	39	U	37	U	42	U	50	U	31	U	52	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019	
	Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	190	U	190	U	210	U	250	U	150	U	260	U
VOCs	Benzene	3.9	U	3.7	U	2	J	5	U	3.1	U	5.2	U
VOCs	Bromobenzene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Bromochloromethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Bromodichloromethane	3.9	U	3.7	U	2.6	J	5	U	3.1	U	5.2	U
VOCs	Bromoform	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Bromomethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Butane, 2-methoxy-2-methyl-	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Carbon disulfide	3.9	U	3.7	U	2.2	J	5	U	3.1	U	5.2	U
VOCs	Carbon tetrachloride	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Chlorobenzene	3.9	U	3.7	U	0.91	J	5	U	3.1	U	5.2	U
VOCs	Chloroethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Chloroform	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Chloromethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	cis-1,2-Dichloroethene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	cis-1,3-Dichloropropene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Cyclohexane	19	U	19	U	21	U	25	U	15	U	26	U
VOCs	Dibromochloromethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Dibromomethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Dichlorodifluoromethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Diethyl ether	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Ethyl-t-Butyl Ether	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Ethylbenzene	3.9	U	3.7	U	5.6		5	U	3.1	U	5.2	U
VOCs	Hexachlorobutadiene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Isopropyl ether	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Isopropylbenzene	3.9	U	3.7	U	2.9	J	5	U	3.1	U	5.2	U
VOCs	Methyl cyclohexane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Methyl Tertbutyl Ether	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Methylene chloride	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	n-Butylbenzene	3.9	U	3.7	U	0.94	J	5	U	3.1	U	5.2	U
VOCs	Naphthalene	19	U	19	U	21	U	25	U	15	U	26	U
VOCs	Propylbenzene	3.9	U	3.7	U	6.1		5	U	3.1	U	5.2	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019	
	Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Styrene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	tert-Butylbenzene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Tetrachloroethene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Tetrahydrofuran	39	U	37	U	42	U	50	U	31	U	52	U
VOCs	Toluene	3.9	U	3.7	U	0.5	J	5	U	3.1	U	5.2	U
VOCs	trans-1,2-Dichloroethene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	trans-1,3-Dichloropropene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Trichloroethene	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Trichlorofluoromethane	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Vinyl chloride	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Xylene, o	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Xylenes (m&p)	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U
VOCs	Xylenes, Total	3.9	U	3.7	U	4.2	U	5	U	3.1	U	5.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1,1-Trichloroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1,2,2-Tetrachloroethane	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1,2-Trichloroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1-Dichloroethane	0.83	J	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1-Dichloroethene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,1-Dichloropropene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,2,3-Trichlorobenzene	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	1,2,3-Trichloropropane	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	1,2,4-Trichlorobenzene	1.4	J	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,2,4-Trimethylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,2-Dibromo-3-chloropropane	20	U	21	U	20	UJ	19	UJ	19	U	25	U
VOCs	1,2-Dibromoethane	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	1,2-Dichlorobenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,2-Dichloroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,2-Dichloropropane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,3,5-Trimethylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,3-Dichlorobenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,3-Dichloropropane	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	1,4-Dichlorobenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	1,4-Dioxane	200	U	210	U	200	UJ	190	UJ	190	U	250	U
VOCs	2,2-Dichloropropane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	2,4,4-Trimethyl-1-pentene	6.3		1	J	4.1	U	3.8	U	3.9	U	5	U
VOCs	2,4,4-Trimethyl-2-pentene	3.5	J	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	2-Butanone	21	J+	21	U	3.9	J	19	U	19	U	25	U
VOCs	2-Chlorotoluene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	2-Hexanone	20	U	21	U	20	UJ	19	UJ	19	U	25	U
VOCs	4-Chlorotoluene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	4-iso-Propyltoluene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	4-Methyl-2-pentanone	20	U	21	U	20	UJ	19	UJ	19	U	25	U
VOCs	Acetic acid, methyl ester	39	U	42	U	41	UJ	38	UJ	39	U	50	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	200	U	210	U	200	UJ	190	UJ	190	U	250	U
VOCs	Benzene	0.2	J	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Bromobenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Bromochloromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Bromodichloromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Bromoform	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Bromomethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Butane, 2-methoxy-2-methyl-	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Carbon disulfide	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Carbon tetrachloride	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Chlorobenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Chloroethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Chloroform	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Chloromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	cis-1,2-Dichloroethene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	cis-1,3-Dichloropropene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Cyclohexane	20	U	21	U	20	U	19	U	19	U	25	U
VOCs	Dibromochloromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Dibromomethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Dichlorodifluoromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Diethyl ether	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Ethyl-t-Butyl Ether	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Ethylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Hexachlorobutadiene	3.9	U	4.2	U	4.1	UJ	3.8	UJ	3.9	U	5	U
VOCs	Isopropyl ether	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Isopropylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Methyl cyclohexane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Methyl Tertbutyl Ether	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Methylene chloride	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	n-Butylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Naphthalene	20	U	21	U	20	UJ	19	UJ	19	U	25	U
VOCs	Propylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Styrene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	tert-Butylbenzene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Tetrachloroethene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Tetrahydrofuran	39	U	42	U	41	UJ	38	UJ	39	U	50	U
VOCs	Toluene	0.41	J	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	trans-1,2-Dichloroethene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	trans-1,3-Dichloropropene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Trichloroethene	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Trichlorofluoromethane	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Vinyl chloride	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Xylene, o	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Xylenes (m&p)	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U
VOCs	Xylenes, Total	3.9	U	4.2	U	4.1	U	3.8	U	3.9	U	5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1,1-Trichloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1,2,2-Tetrachloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1,2-Trichloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1-Dichloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1-Dichloroethene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,1-Dichloropropene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2,3-Trichlorobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2,3-Trichloropropane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2,4-Trichlorobenzene	4.4	U	6.4	U	0.37	J	4.4	U	0.43	J	4.3	U
VOCs	1,2,4-Trimethylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2-Dibromo-3-chloropropane	22	U	32	U	30	U	22	U	19	U	21	U
VOCs	1,2-Dibromoethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2-Dichlorobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2-Dichloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,2-Dichloropropane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,3,5-Trimethylbenzene	4.4	U	0.63	J	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,3-Dichlorobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,3-Dichloropropane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,4-Dichlorobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	1,4-Dioxane	220	U	320	U	300	U	220	U	190	U	210	U
VOCs	2,2-Dichloropropane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	2,4,4-Trimethyl-1-pentene	4.4	U	2.7	J	6	U	5.7		9.1		2.7	J
VOCs	2,4,4-Trimethyl-2-pentene	4.4	U	0.88	J	6	U	0.76	J	2.1	J	4.3	U
VOCs	2-Butanone	22	U	32	U	11	J+	22	U	19	U	21	U
VOCs	2-Chlorotoluene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	2-Hexanone	22	U	32	U	30	U	22	U	19	U	21	U
VOCs	4-Chlorotoluene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	4-iso-Propyltoluene	4.4	U	1.3	J	6	U	4.4	U	3.9	U	4.3	U
VOCs	4-Methyl-2-pentanone	22	U	32	U	30	U	22	U	19	U	21	U
VOCs	Acetic acid, methyl ester	44	U	64	U	60	U	44	U	39	U	43	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	220	U	20	J	41	J	12	J	11	J	5.3	J
VOCs	Benzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Bromobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Bromochloromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Bromodichloromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Bromoform	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Bromomethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Butane, 2-methoxy-2-methyl-	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Carbon disulfide	4.4	U	3.9	J	6	U	4.4	U	3.9	U	4.3	U
VOCs	Carbon tetrachloride	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Chlorobenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Chloroethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Chloroform	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Chloromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	cis-1,2-Dichloroethene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	cis-1,3-Dichloropropene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Cyclohexane	22	U	32	U	30	U	22	U	19	U	21	U
VOCs	Dibromochloromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Dibromomethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Dichlorodifluoromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Diethyl ether	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Ethyl-t-Butyl Ether	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Ethylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Hexachlorobutadiene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Isopropyl ether	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Isopropylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Methyl cyclohexane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Methyl Tertbutyl Ether	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Methylene chloride	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	n-Butylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Naphthalene	22	U	1.1	J	30	U	22	U	19	U	21	U
VOCs	Propylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Styrene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	tert-Butylbenzene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Tetrachloroethene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Tetrahydrofuran	44	U	64	U	60	U	44	U	39	U	43	U
VOCs	Toluene	4.4	U	0.61	J	6	U	4.4	U	3.9	U	4.3	U
VOCs	trans-1,2-Dichloroethene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	trans-1,3-Dichloropropene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Trichloroethene	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Trichlorofluoromethane	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Vinyl chloride	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Xylene, o	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Xylenes (m&p)	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U
VOCs	Xylenes, Total	4.4	U	6.4	U	6	U	4.4	U	3.9	U	4.3	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162315-1		480-162315-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1,1-Trichloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1,2,2-Tetrachloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1,2-Trichloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1-Dichloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1-Dichloroethene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,1-Dichloropropene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2,3-Trichlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2,3-Trichloropropane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2,4-Trichlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	0.52	J
VOCs	1,2,4-Trimethylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2-Dibromo-3-chloropropane	21	U	22	U	17	U	18	U	22	U	19	U
VOCs	1,2-Dibromoethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2-Dichlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2-Dichloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,2-Dichloropropane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,3,5-Trimethylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,3-Dichlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,3-Dichloropropane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,4-Dichlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	1,4-Dioxane	210	U	220	U	170	U	180	U	220	U	190	U
VOCs	2,2-Dichloropropane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	2,4,4-Trimethyl-1-pentene	0.74	J	0.44	J	3.4	U	1	J	4.4	U	3	J
VOCs	2,4,4-Trimethyl-2-pentene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	1.2	J
VOCs	2-Butanone	4.1	J+	22	U	5.5	J+	18	U	22	U	9.5	J
VOCs	2-Chlorotoluene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	2-Hexanone	21	U	22	U	17	U	18	U	22	U	19	U
VOCs	4-Chlorotoluene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	4-iso-Propyltoluene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	4-Methyl-2-pentanone	21	U	22	U	17	U	18	U	22	U	19	U
VOCs	Acetic acid, methyl ester	41	U	45	U	34	U	36	U	44	U	39	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162315-1		480-162315-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	13	J	15	J	24	J	4.4	J	5.8	J	33	J
VOCs	Benzene	4.1	U	4.5	U	1.3	J	3.6	U	4.4	U	3.9	U
VOCs	Bromobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Bromochloromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Bromodichloromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Bromoform	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Bromomethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Butane, 2-methoxy-2-methyl-	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Carbon disulfide	2.9	J	4.5	U	3	J	3.6	U	4.4	U	3.9	U
VOCs	Carbon tetrachloride	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Chlorobenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Chloroethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Chloroform	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Chloromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	cis-1,2-Dichloroethene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	cis-1,3-Dichloropropene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Cyclohexane	21	U	22	U	17	U	18	U	22	U	19	U
VOCs	Dibromochloromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Dibromomethane	4.1	U	4.5	U	1	J	3.6	U	4.4	U	3.9	U
VOCs	Dichlorodifluoromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Diethyl ether	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Ethyl-t-Butyl Ether	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Ethylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	0.42	J	0.27	J
VOCs	Hexachlorobutadiene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Isopropyl ether	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Isopropylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Methyl cyclohexane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Methyl Tertbutyl Ether	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Methylene chloride	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	n-Butylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Naphthalene	21	U	22	U	0.53	J	18	U	22	U	19	U
VOCs	Propylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-709		SB-709	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162315-1		480-162315-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Styrene	4.1	U	4.5	U	0.34	J	3.6	U	4.4	U	3.9	U
VOCs	tert-Butylbenzene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Tetrachloroethene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Tetrahydrofuran	41	U	45	U	34	U	36	U	44	U	39	U
VOCs	Toluene	4.1	U	4.5	U	0.99	J	3.6	U	4.4	U	3.9	U
VOCs	trans-1,2-Dichloroethene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	trans-1,3-Dichloropropene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Trichloroethene	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Trichlorofluoromethane	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Vinyl chloride	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Xylene, o	4.1	U	4.5	U	3.4	U	3.6	U	4.4	U	3.9	U
VOCs	Xylenes (m&p)	4.1	U	4.5	U	3.4	U	3.6	U	1.4	J	0.75	J
VOCs	Xylenes, Total	4.1	U	4.5	U	3.4	U	3.6	U	1.4	J	0.75	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1,1-Trichloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1,2,2-Tetrachloroethane	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1,2-Trichloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1-Dichloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1-Dichloroethene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,1-Dichloropropene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2,3-Trichlorobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2,3-Trichloropropane	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U
VOCs	1,2,4-Trichlorobenzene	0.89	J	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2,4-Trimethylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2-Dibromo-3-chloropropane	22	U	23	U	25	UJ	18	UJ	22	U	21	U
VOCs	1,2-Dibromoethane	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U
VOCs	1,2-Dichlorobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2-Dichloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,2-Dichloropropane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,3,5-Trimethylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	0.28	J	4.2	U
VOCs	1,3-Dichlorobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,3-Dichloropropane	4.4	U	4.5	U	4.9	UJ	3.7	UJ	4.4	U	4.2	U
VOCs	1,4-Dichlorobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	1,4-Dioxane	220	U	230	U	250	UJ	180	UJ	220	U	210	U
VOCs	2,2-Dichloropropane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	2,4,4-Trimethyl-1-pentene	2.7	J	4.5	U	4.9	U	3.7	U	1.2	J	4.2	U
VOCs	2,4,4-Trimethyl-2-pentene	0.77	J	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	2-Butanone	16	J+	23	U	25	U	18	U	22	U	21	U
VOCs	2-Chlorotoluene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	2-Hexanone	22	U	23	U	25	UJ	18	UJ	22	U	21	U
VOCs	4-Chlorotoluene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	4-iso-Propyltoluene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	4-Methyl-2-pentanone	22	U	23	U	25	UJ	18	UJ	22	U	21	U
VOCs	Acetic acid, methyl ester	44	U	45	U	49	UJ	37	UJ	44	U	42	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	77	J	22	J	10	J-	11	J-	17	J	9.7	J
VOCs	Benzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Bromobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Bromochloromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Bromodichloromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Bromoform	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Bromomethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Butane, 2-methoxy-2-methyl-	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Carbon disulfide	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Carbon tetrachloride	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Chlorobenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Chloroethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Chloroform	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Chloromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	cis-1,2-Dichloroethene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	cis-1,3-Dichloropropene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Cyclohexane	22	U	23	U	25	U	18	U	22	U	21	U
VOCs	Dibromochloromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Dibromomethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Dichlorodifluoromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Diethyl ether	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Ethyl-t-Butyl Ether	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Ethylbenzene	0.33	J	4.5	U	0.57	J	0.29	J	0.54	J	0.38	J
VOCs	Hexachlorobutadiene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Isopropyl ether	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Isopropylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Methyl cyclohexane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Methyl Tertbutyl Ether	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Methylene chloride	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	n-Butylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Naphthalene	22	U	23	U	25	UJ	18	UJ	22	U	21	U
VOCs	Propylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Styrene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	tert-Butylbenzene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Tetrachloroethene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Tetrahydrofuran	44	U	45	U	49	UJ	37	UJ	44	U	42	U
VOCs	Toluene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	trans-1,2-Dichloroethene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	trans-1,3-Dichloropropene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Trichloroethene	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Trichlorofluoromethane	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Vinyl chloride	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Xylene, o	4.4	U	4.5	U	4.9	U	3.7	U	4.4	U	4.2	U
VOCs	Xylenes (m&p)	1.1	J	0.76	J	1.7	J	0.88	J	1.9	J	1.3	J
VOCs	Xylenes, Total	1.1	J	0.76	J	1.7	J	0.88	J	1.9	J	1.3	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1,1-Trichloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1,2,2-Tetrachloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1,2-Trichloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1-Dichloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1-Dichloroethene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,1-Dichloropropene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2,3-Trichlorobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2,3-Trichloropropane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2,4-Trichlorobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2,4-Trimethylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2-Dibromo-3-chloropropane	24	U	18	U	19	U	26	U	23	U	19	U
VOCs	1,2-Dibromoethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2-Dichlorobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,2-Dichloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	0.47	J
VOCs	1,2-Dichloropropane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,3,5-Trimethylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,3-Dichlorobenzene	4.8	U	0.35	J	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,3-Dichloropropane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,4-Dichlorobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	1,4-Dioxane	240	U	180	U	190	U	260	U	230	U	190	U
VOCs	2,2-Dichloropropane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	2,4,4-Trimethyl-1-pentene	7.1		35		3.9		0.81	J	4.6	U	3.7	U
VOCs	2,4,4-Trimethyl-2-pentene	1.4	J	18		1.8	J	5.2	U	4.6	U	3.7	U
VOCs	2-Butanone	24	U	7	J+	18	J+	26	U	23	U	19	U
VOCs	2-Chlorotoluene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	2-Hexanone	24	U	18	U	19	U	26	U	23	U	19	U
VOCs	4-Chlorotoluene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	4-iso-Propyltoluene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	4-Methyl-2-pentanone	24	U	18	U	19	U	26	U	23	U	19	U
VOCs	Acetic acid, methyl ester	48	U	37	U	37	U	52	U	46	U	37	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	15	J	30	J	30	J	8.3	J	230	U	14	J
VOCs	Benzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Bromobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Bromochloromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Bromodichloromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Bromoform	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Bromomethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Butane, 2-methoxy-2-methyl-	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Carbon disulfide	4.8	U	5.7		2.7	J	5.2	U	4.6	U	3.7	U
VOCs	Carbon tetrachloride	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Chlorobenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Chloroethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Chloroform	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Chloromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	cis-1,2-Dichloroethene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	cis-1,3-Dichloropropene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Cyclohexane	24	U	18	U	19	U	26	U	23	U	19	U
VOCs	Dibromochloromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Dibromomethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Dichlorodifluoromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Diethyl ether	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Ethyl-t-Butyl Ether	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Ethylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Hexachlorobutadiene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Isopropyl ether	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Isopropylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Methyl cyclohexane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Methyl Tertbutyl Ether	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Methylene chloride	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	n-Butylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Naphthalene	24	U	18	U	19	U	26	U	23	U	19	U
VOCs	Propylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Styrene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	tert-Butylbenzene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Tetrachloroethene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Tetrahydrofuran	48	U	37	U	37	U	52	U	46	U	37	U
VOCs	Toluene	4.8	U	0.29	J	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	trans-1,2-Dichloroethene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	trans-1,3-Dichloropropene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Trichloroethene	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Trichlorofluoromethane	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Vinyl chloride	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Xylene, o	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Xylenes (m&p)	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U
VOCs	Xylenes, Total	4.8	U	3.7	U	3.7	U	5.2	U	4.6	U	3.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1,1-Trichloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1,2,2-Tetrachloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1,2-Trichloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1-Dichloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1-Dichloroethene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,1-Dichloropropene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2,3-Trichlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2,3-Trichloropropane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2,4-Trichlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2,4-Trimethylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2-Dibromo-3-chloropropane	30	U	5200	U	9300	U	24	U	6100	U	19	U
VOCs	1,2-Dibromoethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2-Dichlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2-Dichloroethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,2-Dichloropropane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,3,5-Trimethylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,3-Dichlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,3-Dichloropropane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,4-Dichlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	1,4-Dioxane	300	U	52000	U	93000	U	240	U	61000	U	190	U
VOCs	2,2-Dichloropropane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	2,4,4-Trimethyl-1-pentene	1.7	J	8000		3200		4	J	1200	U	3.8	U
VOCs	2,4,4-Trimethyl-2-pentene	1.3	J	6300		2600		2	J	1200	U	3.8	U
VOCs	2-Butanone	30	U	5200	U	9300	U	5.7	J+	6100	U	19	U
VOCs	2-Chlorotoluene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	2-Hexanone	30	U	5200	U	9300	U	24	U	6100	U	19	U
VOCs	4-Chlorotoluene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	4-iso-Propyltoluene	5.9	U	420	J	1900	U	4.7	U	1200	U	3.8	U
VOCs	4-Methyl-2-pentanone	30	U	5200	U	9300	U	24	U	6100	U	19	U
VOCs	Acetic acid, methyl ester	59	U	330	J	19000	U	47	U	12000	U	38	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	300	U	52000	U	93000	U	240	UJ	61000	U	190	U
VOCs	Benzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Bromobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Bromochloromethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Bromodichloromethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Bromoform	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Bromomethane	5.9	U	1000	UJ	1900	UJ	4.7	U	1200	UJ	3.8	U
VOCs	Butane, 2-methoxy-2-methyl-	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Carbon disulfide	5.9	U	1000	U	1900	U	3.3	J	1200	U	3.8	U
VOCs	Carbon tetrachloride	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Chlorobenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Chloroethane	5.9	U	1000	UJ	1900	UJ	4.7	U	1200	UJ	3.8	U
VOCs	Chloroform	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Chloromethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	cis-1,2-Dichloroethene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	cis-1,3-Dichloropropene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Cyclohexane	30	U	5200	U	9300	U	24	U	6100	U	19	U
VOCs	Dibromochloromethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Dibromomethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Dichlorodifluoromethane	5.9	U	1000	U	1900	U	4.7	UJ	1200	U	3.8	U
VOCs	Diethyl ether	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Ethyl-t-Butyl Ether	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Ethylbenzene	5.9	U	370	J	1900	U	4.7	U	1200	U	3.8	U
VOCs	Hexachlorobutadiene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Isopropyl ether	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Isopropylbenzene	5.9	U	200	J	1900	U	4.7	U	1200	U	3.8	U
VOCs	Methyl cyclohexane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Methyl Tertbutyl Ether	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Methylene chloride	26	U	1000	U	1900	U	10	U	1200	U	17	U
VOCs	n-Butylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Naphthalene	30	U	150	J	9300	U	24	U	6100	U	19	U
VOCs	Propylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Styrene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	tert-Butylbenzene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Tetrachloroethene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Tetrahydrofuran	59	U	10000	U	19000	U	47	U	12000	U	38	U
VOCs	Toluene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	trans-1,2-Dichloroethene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	trans-1,3-Dichloropropene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Trichloroethene	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Trichlorofluoromethane	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Vinyl chloride	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Xylene, o	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Xylenes (m&p)	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U
VOCs	Xylenes, Total	5.9	U	1000	U	1900	U	4.7	U	1200	U	3.8	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1,1-Trichloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1,2,2-Tetrachloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1,2-Trichloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1-Dichloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1-Dichloroethene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,1-Dichloropropene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2,3-Trichlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2,3-Trichloropropane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2,4-Trichlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2,4-Trimethylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2-Dibromo-3-chloropropane	20	U	23	U	22	U	26	U	22	U	21	U
VOCs	1,2-Dibromoethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2-Dichlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2-Dichloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,2-Dichloropropane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,3,5-Trimethylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,3-Dichlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,3-Dichloropropane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,4-Dichlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	1,4-Dioxane	200	U	230	U	220	U	260	U	220	U	210	U
VOCs	2,2-Dichloropropane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	2,4,4-Trimethyl-1-pentene	4	U	4.6	U	2	J	4	J	8.6		2.4	J
VOCs	2,4,4-Trimethyl-2-pentene	4	U	4.6	U	0.67	J	1.5	J	3.3	J	0.59	J
VOCs	2-Butanone	20	U	23	U	6.9	J+	26	U	22	U	21	U
VOCs	2-Chlorotoluene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	2-Hexanone	20	U	23	U	22	U	26	U	22	U	21	U
VOCs	4-Chlorotoluene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	4-iso-Propyltoluene	4	U	4.6	U	4.3	U	0.45	J	4.4	U	4.2	U
VOCs	4-Methyl-2-pentanone	20	U	23	U	22	U	26	U	22	U	21	U
VOCs	Acetic acid, methyl ester	40	U	46	U	43	U	53	U	44	U	42	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Acetone	200	U	230	U	220	U	260	U	220	U	210	U
VOCs	Benzene	4	U	4.6	U	4.3	U	5.3	U	0.49	J	4.2	U
VOCs	Bromobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Bromochloromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Bromodichloromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Bromoform	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Bromomethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Butane, 2-methoxy-2-methyl-	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Carbon disulfide	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Carbon tetrachloride	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Chlorobenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Chloroethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Chloroform	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Chloromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	cis-1,2-Dichloroethene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	cis-1,3-Dichloropropene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Cyclohexane	20	U	23	U	22	U	26	U	22	U	21	U
VOCs	Dibromochloromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Dibromomethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Dichlorodifluoromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Diethyl ether	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Ethyl-t-Butyl Ether	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Ethylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Hexachlorobutadiene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Isopropyl ether	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Isopropylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Methyl cyclohexane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Methyl Tertbutyl Ether	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Methylene chloride	30	U	27	U	20	U	22	U	21	U	24	U
VOCs	n-Butylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Naphthalene	20	U	23	U	22	U	0.9	J	22	U	21	U
VOCs	Propylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-712		SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Styrene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	tert-Butylbenzene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Tetrachloroethene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Tetrahydrofuran	40	U	46	U	43	U	53	U	44	U	42	U
VOCs	Toluene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	trans-1,2-Dichloroethene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	trans-1,3-Dichloropropene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Trichloroethene	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Trichlorofluoromethane	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Vinyl chloride	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Xylene, o	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Xylenes (m&p)	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U
VOCs	Xylenes, Total	4	U	4.6	U	4.3	U	5.3	U	4.4	U	4.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS	
	Units	ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier
VOCs	1,1,1,2-Tetrachloroethane	4.3	U	4.2	U
VOCs	1,1,1-Trichloroethane	4.3	U	4.2	U
VOCs	1,1,2,2-Tetrachloroethane	4.3	U	4.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.3	U	4.2	U
VOCs	1,1,2-Trichloroethane	4.3	U	4.2	U
VOCs	1,1-Dichloroethane	4.3	U	4.2	U
VOCs	1,1-Dichloroethene	4.3	U	4.2	U
VOCs	1,1-Dichloropropene	4.3	U	4.2	U
VOCs	1,2,3-Trichlorobenzene	4.3	U	4.2	U
VOCs	1,2,3-Trichloropropane	4.3	U	4.2	U
VOCs	1,2,4-Trichlorobenzene	4.3	U	4.2	U
VOCs	1,2,4-Trimethylbenzene	4.3	U	4.2	U
VOCs	1,2-Dibromo-3-chloropropane	21	U	21	U
VOCs	1,2-Dibromoethane	4.3	U	4.2	U
VOCs	1,2-Dichlorobenzene	4.3	U	4.2	U
VOCs	1,2-Dichloroethane	4.3	U	4.2	U
VOCs	1,2-Dichloropropane	4.3	U	4.2	U
VOCs	1,3,5-Trimethylbenzene	4.3	U	4.2	U
VOCs	1,3-Dichlorobenzene	4.3	U	4.2	U
VOCs	1,3-Dichloropropane	4.3	U	4.2	U
VOCs	1,4-Dichlorobenzene	4.3	U	4.2	U
VOCs	1,4-Dioxane	210	U	210	U
VOCs	2,2-Dichloropropane	4.3	U	4.2	U
VOCs	2,4,4-Trimethyl-1-pentene	4.3	U	4.2	U
VOCs	2,4,4-Trimethyl-2-pentene	4.3	U	4.2	U
VOCs	2-Butanone	21	U	21	U
VOCs	2-Chlorotoluene	4.3	U	4.2	U
VOCs	2-Hexanone	21	U	21	U
VOCs	4-Chlorotoluene	4.3	U	4.2	U
VOCs	4-iso-Propyltoluene	4.3	U	4.2	U
VOCs	4-Methyl-2-pentanone	21	U	21	U
VOCs	Acetic acid, methyl ester	43	U	42	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS	
	Units	ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier
VOCs	Acetone	210	U	210	U
VOCs	Benzene	4.3	U	4.2	U
VOCs	Bromobenzene	4.3	U	4.2	U
VOCs	Bromochloromethane	4.3	U	4.2	U
VOCs	Bromodichloromethane	4.3	U	4.2	U
VOCs	Bromoform	4.3	U	4.2	U
VOCs	Bromomethane	4.3	U	4.2	U
VOCs	Butane, 2-methoxy-2-methyl-	4.3	U	4.2	U
VOCs	Carbon disulfide	4.3	U	4.2	U
VOCs	Carbon tetrachloride	4.3	U	4.2	U
VOCs	Chlorobenzene	4.3	U	4.2	U
VOCs	Chloroethane	4.3	U	4.2	U
VOCs	Chloroform	4.3	U	4.2	U
VOCs	Chloromethane	4.3	U	4.2	U
VOCs	cis-1,2-Dichloroethene	4.3	U	4.2	U
VOCs	cis-1,3-Dichloropropene	4.3	U	4.2	U
VOCs	Cyclohexane	21	U	21	U
VOCs	Dibromochloromethane	4.3	U	4.2	U
VOCs	Dibromomethane	4.3	U	4.2	U
VOCs	Dichlorodifluoromethane	4.3	U	4.2	U
VOCs	Diethyl ether	4.3	U	4.2	U
VOCs	Ethyl-t-Butyl Ether	4.3	U	4.2	U
VOCs	Ethylbenzene	4.3	U	4.2	U
VOCs	Hexachlorobutadiene	4.3	U	4.2	U
VOCs	Isopropyl ether	4.3	U	4.2	U
VOCs	Isopropylbenzene	4.3	U	4.2	U
VOCs	Methyl cyclohexane	4.3	U	4.2	U
VOCs	Methyl Tertbutyl Ether	4.3	U	4.2	U
VOCs	Methylene chloride	20	U	23	U
VOCs	n-Butylbenzene	4.3	U	4.2	U
VOCs	Naphthalene	21	U	21	U
VOCs	Propylbenzene	4.3	U	4.2	U

Table 2.1 - Final Results Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS	
	Units	ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier
VOCs	sec-Butylbenzene	4.3	U	4.2	U
VOCs	Styrene	4.3	U	4.2	U
VOCs	tert-Butylbenzene	4.3	U	4.2	U
VOCs	Tetrachloroethene	4.3	U	4.2	U
VOCs	Tetrahydrofuran	43	U	42	U
VOCs	Toluene	4.3	U	4.2	U
VOCs	trans-1,2-Dichloroethene	4.3	U	4.2	U
VOCs	trans-1,3-Dichloropropene	4.3	U	4.2	U
VOCs	Trichloroethene	4.3	U	4.2	U
VOCs	Trichlorofluoromethane	4.3	U	4.2	U
VOCs	Vinyl chloride	4.3	U	4.2	U
VOCs	Xylene, o	4.3	U	4.2	U
VOCs	Xylenes (m&p)	4.3	U	4.2	U
VOCs	Xylenes, Total	4.3	U	4.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		QC		QC		SB-701		SB-701	
	Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1		480-162513-1		480-162513-1	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
	Qc Code	EB		EB		EB		EB		FD		FS	
	Units	ug/l		ug/l		ug/l		ug/l		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	1-Methylnaphthalene	5	U	5	U	5	U	5	U	8.3	U	8.2	U
SVOCs	2,2'-Dichlorodiisopropylether	5	U	5	U	5	U	5	U	8.3	U	8.2	U
SVOCs	2,3,4,6-Tetrachlorophenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2,4,5-Trichlorophenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2,4,6-Trichlorophenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2,4-Dichlorophenol	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	2,4-Dimethylphenol	1	U	1	U	1	U	1	U	41	U	40	U
SVOCs	2,4-Dinitrophenol	5	U	5	U	5	U	5	U	410	U	400	U
SVOCs	2,4-Dinitrotoluene	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2,6-Dinitrotoluene	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2-Chloronaphthalene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	2-Chlorophenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	2-Methylnaphthalene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	2-Methylphenol	0.15	J	1	U	1	U	1	U	41	U	40	U
SVOCs	2-Nitroaniline	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	2-Nitrophenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	3 & 4 Methylphenol	1	U	1	U	1	U	1	U	41	U	40	U
SVOCs	3,3'-Dichlorobenzidine	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	3-Nitroaniline	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	4,6-Dinitro-2-methylphenol	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	4-Bromophenyl phenyl ether	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	4-Chloro-3-methylphenol	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	4-Chloroaniline	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	4-Chlorophenyl phenyl ether	5	U	5	U	5	U	5	U	41	U	40	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		QC		QC		SB-701		SB-701	
	Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1		480-162513-1		480-162513-1	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
	Qc Code	EB		EB		EB		EB		FD		FS	
	Units	ug/l		ug/l		ug/l		ug/l		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	4-Nitrophenol	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	Acenaphthene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Acenaphthylene	0.3	U	0.3	U	0.3	U	0.3	U	8.3	U	8.2	U
SVOCs	Acetophenone	0.78	J	0.81	J	2	J	0.83	J	2.2	J	82	U
SVOCs	Aniline	0.5	U	0.5	U	0.5	U	0.5	U	41	U	40	U
SVOCs	Anthracene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Atrazine	2	U	2	U	2	U	2	U	83	U	82	U
SVOCs	Azobenzene	5	U	5	U	5	U	5	U	400	U	400	U
SVOCs	Benzaldehyde	0.29	J	5	U	5	U	0.29	J	83	UJ	82	UJ
SVOCs	Benzo(a)anthracene	0.3	U	0.3	U	0.3	U	0.3	U	5.4	J	8.2	U
SVOCs	Benzo(a)pyrene	0.18	U	0.18	U	0.18	U	0.18	U	8.3	U	8.2	U
SVOCs	Benzo(b)fluoranthene	0.3	U	0.3	U	0.3	U	0.3	U	5.7	J	8.2	U
SVOCs	Benzo(ghi)perylene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Benzo(k)fluoranthene	0.3	U	0.3	U	0.3	U	0.3	U	8.3	U	8.2	U
SVOCs	Benzoic Acid	5	U	5	U	5	U	5	U	210	UJ	210	UJ
SVOCs	Benzyl alcohol	5	U	5	U	5.3	J	5	U	41	U	40	U
SVOCs	Biphenyl	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	Bis(2-Chloroethoxy)methane	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	Bis(2-Chloroethyl)ether	5	U	5	U	5	U	5	U	8.3	U	8.2	U
SVOCs	Bis(2-Ethylhexyl)phthalate	0.84	J	0.67	J	5	U	5	U	800		640	
SVOCs	Butylbenzylphthalate	3	U	3	U	1.6	J	3	U	41	U	40	U
SVOCs	Caprolactam	5	U	5	U	5	U	5	U	210	U	210	U
SVOCs	Carbazole	5	U	5	U	5	U	5	U	8.3	U	8.2	U
SVOCs	Chrysene	0.5	U	0.5	U	0.5	U	0.5	U	6	J	8.2	U
SVOCs	Di-n-butylphthalate	2	U	2	U	1.2	J	2	U	41	U	40	U
SVOCs	Di-n-octylphthalate	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	Dibenz(a,h)anthracene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Dibenzofuran	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	Diethylphthalate	0.3	J	0.27	J	25		0.24	J	41	U	40	U

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	QC		QC		QC		QC		SB-701		SB-701	
	Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1		480-162513-1		480-162513-1	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
	Qc Code	EB		EB		EB		EB		FD		FS	
	Units	ug/l		ug/l		ug/l		ug/l		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	0.096	J	0.087	J	1.8		0.085	J	41	U	40	U
SVOCs	Diphenylamine	5	U	5	U	5	U	5	U				
SVOCs	Fluoranthene	0.5	U	0.5	U	0.5	U	0.5	U	7.9	J	3.5	J
SVOCs	Fluorene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Hexachlorobenzene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Hexachlorocyclopentadiene	1	U	1	U	1	U	1	U	41	UJ	40	UJ
SVOCs	Hexachloroethane	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	Indeno(1,2,3-cd)pyrene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U
SVOCs	Isophorone	0.5		0.48	J	0.5	U	0.23	J	41	U	40	U
SVOCs	N-Nitrosodi-n-propylamine	5	U	5	U	5	U	5	U	8.3	U	8.2	U
SVOCs	N-Nitrosodimethylamine	5	U	5	U	5	U	5	U	41	U	40	U
SVOCs	N-Nitrosodiphenylamine	5	U	5	U	5	U	5	U	120		93	
SVOCs	Nitrobenzene	0.5	U	0.5	U	0.5	U	0.5	U	82	U	82	U
SVOCs	Pentachlorophenol	1	U	1	U	1	U	1	U	210	U	210	U
SVOCs	Phenanthrene	0.075	J	0.2	U	0.2	U	0.2	U	4.6	J	2.4	J
SVOCs	Phenol	1	U	1	U	0.39	J	1	U	41	U	40	U
SVOCs	Phthalic anhydride	500	U	500	U	500	U	500	U	12000	UJ	12000	UJ
SVOCs	Pyrene	0.5	U	0.5	U	0.5	U	0.5	U	8.3	U	8.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank
TB = trip blank

Created by: KMS 2/5/2020
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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	1-Methylnaphthalene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	2,2'-Dichlorodiisopropylether	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	2,3,4,6-Tetrachlorophenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2,4,5-Trichlorophenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2,4,6-Trichlorophenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2,4-Dichlorophenol	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	2,4-Dimethylphenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2,4-Dinitrophenol	400	U	380	U	390	U	380	U	340	U	370	U
SVOCs	2,4-Dinitrotoluene	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2,6-Dinitrotoluene	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2-Chloronaphthalene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	2-Chlorophenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2-Methylnaphthalene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	2-Methylphenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	2-Nitroaniline	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	2-Nitrophenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	3 & 4 Methylphenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	3,3'-Dichlorobenzidine	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	3-Nitroaniline	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	4-Bromophenyl phenyl ether	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	4-Chloro-3-methylphenol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	4-Chloroaniline	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	4-Chlorophenyl phenyl ether	40	U	38	U	39	U	38	U	34	U	37	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	4-Nitrophenol	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	Acenaphthene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Acenaphthylene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Acetophenone	81	U	78	U	79	U	77	U	70	U	75	U
SVOCs	Aniline	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Anthracene	8.1	U	7.8	U	2.1	J	7.7	U	7	U	7.5	U
SVOCs	Atrazine	81	U	78	U	79	U	77	U	70	U	75	U
SVOCs	Azobenzene	390	U	380	U	400	U	1900	U	350	U	62	J
SVOCs	Benzaldehyde	81	U	78	U	79	U	77	U	70	U	75	U
SVOCs	Benzo(a)anthracene	8.1	U	7.8	U	4.2	J	7.7	U	7	U	7.5	U
SVOCs	Benzo(a)pyrene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Benzo(b)fluoranthene	8.1	U	7.8	U	3.2	J	7.7	U	7	U	7.5	U
SVOCs	Benzo(ghi)perylene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Benzo(k)fluoranthene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Benzoic Acid	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	Benzyl alcohol	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Biphenyl	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Bis(2-Chloroethoxy)methane	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Bis(2-Chloroethyl)ether	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Bis(2-Ethylhexyl)phthalate	400	U	380	U	150	J	3900		340	U	370	U
SVOCs	Butylbenzylphthalate	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Caprolactam	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	Carbazole	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Chrysene	8.1	U	7.8	U	4.6	J	7.7	U	7	U	7.5	U
SVOCs	Di-n-butylphthalate	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Di-n-octylphthalate	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Dibenz(a,h)anthracene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Dibenzofuran	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Diethylphthalate	40	U	38	U	39	U	38	U	34	U	37	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	8.1	U	7.8	U	6.3	J	8.2		7	U	7.5	U
SVOCs	Fluorene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Hexachlorobenzene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Hexachlorocyclopentadiene	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Hexachloroethane	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	Indeno(1,2,3-cd)pyrene	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	Isophorone	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	N-Nitrosodi-n-propylamine	8.1	U	7.8	U	7.9	U	7.7	U	7	U	7.5	U
SVOCs	N-Nitrosodimethylamine	40	U	38	U	39	U	38	U	34	U	37	U
SVOCs	N-Nitrosodiphenylamine	40	U	38	U	1500		430		34	U	37	U
SVOCs	Nitrobenzene	80	U	77	U	79	U	77	U	69	U	74	U
SVOCs	Pentachlorophenol	200	U	200	U	200	U	200	U	180	U	190	U
SVOCs	Phenanthrene	8.1	U	2.8	J	5.6	J	6.5	J	7	U	7.5	U
SVOCs	Phenol	40	U	38	U	39	U	23	J	34	U	37	U
SVOCs	Phthalic anhydride	12000	UJ	11000	UJ	12000	UJ	56000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	8.1	U	7.8	U	7.6	J	8.6		7	U	7.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	1-Methylnaphthalene	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	2,2'-Dichlorodiisopropylether	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	2,3,4,6-Tetrachlorophenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2,4,5-Trichlorophenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2,4,6-Trichlorophenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2,4-Dichlorophenol	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	2,4-Dimethylphenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2,4-Dinitrophenol	380	U	350	U	370	U	750	U	350	U	350	U
SVOCs	2,4-Dinitrotoluene	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2,6-Dinitrotoluene	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2-Chloronaphthalene	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	2-Chlorophenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2-Methylnaphthalene	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	2-Methylphenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	2-Nitroaniline	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	2-Nitrophenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	3 & 4 Methylphenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	3,3'-Dichlorobenzidine	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	3-Nitroaniline	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	4,6-Dinitro-2-methylphenol	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	4-Bromophenyl phenyl ether	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	4-Chloro-3-methylphenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	4-Chloroaniline	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	4-Chlorophenyl phenyl ether	38	U	35	U	37	U	75	U	35	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	4-Nitrophenol	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	Acenaphthene	7.7	U	7.1	U	7.5	U	5.5	J	7.1	U	7.2	U
SVOCs	Acenaphthylene	7.7	U	1.7	J	7.5	U	3.3	J	7.1	U	7.2	U
SVOCs	Acetophenone	77	U	71	U	75	U	150	U	71	U	72	U
SVOCs	Aniline	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Anthracene	7.7	U	2.2	J	7.5	U	15		7.1	U	7.2	U
SVOCs	Atrazine	77	U	71	U	75	U	150	U	71	U	72	U
SVOCs	Azobenzene	380	U	350	U	370	U	360	U	350	U	350	U
SVOCs	Benzaldehyde	77	R	71	R	75	R	150	R	71	U	72	U
SVOCs	Benzo(a)anthracene	8.8		11		3.9	J	49		7.1	U	7.2	U
SVOCs	Benzo(a)pyrene	9.7		10		3.7	J	45		7.1	U	7.2	U
SVOCs	Benzo(b)fluoranthene	11		17		5.3	J	43		7.1	U	7.2	U
SVOCs	Benzo(ghi)perylene	8.5		10		3.2	J	29		7.1	U	7.2	U
SVOCs	Benzo(k)fluoranthene	5.3	J	5.9	J	7.5	U	20		7.1	U	7.2	U
SVOCs	Benzoic Acid	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	Benzyl alcohol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Biphenyl	38	U	2	J	37	U	75	U	35	U	35	U
SVOCs	Bis(2-Chloroethoxy)methane	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Bis(2-Chloroethyl)ether	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	Bis(2-Ethylhexyl)phthalate	230	J	270	J	3500		800		630		350	U
SVOCs	Butylbenzylphthalate	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Caprolactam	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	Carbazole	7.7	U	1.8	J	7.5	U	3.7	J	7.1	U	7.2	U
SVOCs	Chrysene	10		14		4.5	J	46		7.1	U	7.2	U
SVOCs	Di-n-butylphthalate	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Di-n-octylphthalate	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Dibenz(a,h)anthracene	3.4	J	2.7	J	7.5	U	9.6	J	7.1	U	7.2	U
SVOCs	Dibenzofuran	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Diethylphthalate	38	U	35	U	37	U	75	U	35	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	38	U	35	U	2	J	75	U	35	U	35	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	14		15		5.9	J	81		3	J	7.2	U
SVOCs	Fluorene	7.7	U	7.1	U	7.5	U	5.3	J	7.1	U	7.2	U
SVOCs	Hexachlorobenzene	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	Hexachlorocyclopentadiene	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Hexachloroethane	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.3	J	8.7		2.8	J	25		7.1	U	7.2	U
SVOCs	Isophorone	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	N-Nitrosodi-n-propylamine	7.7	U	7.1	U	7.5	U	15	U	7.1	U	7.2	U
SVOCs	N-Nitrosodimethylamine	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	N-Nitrosodiphenylamine	13	J	35	U	12	J	75	U	35	U	35	U
SVOCs	Nitrobenzene	77	U	70	U	75	U	150	U	71	U	71	U
SVOCs	Pentachlorophenol	200	U	180	U	190	U	390	U	180	U	180	U
SVOCs	Phenanthrene	6.4	J	9.4		4.5	J	48		7.1	U	7.2	U
SVOCs	Phenol	38	U	35	U	37	U	75	U	35	U	35	U
SVOCs	Phthalic anhydride	11000	UJ	10000	UJ	11000	UJ	11000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	13		14		6.4	J	87		3	J	7.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162426-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/8/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	1-Methylnaphthalene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	2,2'-Dichlorodiisopropylether	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	2,3,4,6-Tetrachlorophenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2,4,5-Trichlorophenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2,4,6-Trichlorophenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2,4-Dichlorophenol	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	2,4-Dimethylphenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2,4-Dinitrophenol	380	U	430	U	380	UJ	390	UJ	400	U	410	U
SVOCs	2,4-Dinitrotoluene	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2,6-Dinitrotoluene	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2-Chloronaphthalene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	2-Chlorophenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2-Methylnaphthalene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	2-Methylphenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	2-Nitroaniline	190	U	220	U	200	U	200	U	210	U	210	U
SVOCs	2-Nitrophenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	3 & 4 Methylphenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	3,3'-Dichlorobenzidine	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	3-Nitroaniline	190	U	220	U	200	U	200	U	210	U	210	U
SVOCs	4,6-Dinitro-2-methylphenol	190	U	220	U	200	R	200	R	210	U	210	U
SVOCs	4-Bromophenyl phenyl ether	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	4-Chloro-3-methylphenol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	4-Chloroaniline	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	4-Chlorophenyl phenyl ether	38	U	43	U	38	U	39	U	40	U	41	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162426-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/8/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	190	U	220	U	200	U	200	U	210	U	210	U
SVOCs	4-Nitrophenol	190	U	220	U	200	U	200	U	210	U	210	U
SVOCs	Acenaphthene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Acenaphthylene	7.7	U	3	J	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Acetophenone	77	U	87	U	2.4	J	79	U	82	U	84	U
SVOCs	Aniline	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Anthracene	7.7	U	3.1	J	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Atrazine	77	U	87	U	77	U	79	U	82	U	84	U
SVOCs	Azobenzene	370	U	430	U	370	U	400	U	410	U	410	U
SVOCs	Benzaldehyde	77	U	10	J	5.8	J-	79	R	82	U	84	U
SVOCs	Benzo(a)anthracene	7.7	U	6.9	J	4.3	J	3.5	J	8.2	U	8.4	U
SVOCs	Benzo(a)pyrene	7.7	U	7.3	J	4.3	J	3.4	J	8.2	U	8.4	U
SVOCs	Benzo(b)fluoranthene	7.7	U	10		6.8	J	4.1	J	8.2	U	8.4	U
SVOCs	Benzo(ghi)perylene	7.7	U	7.6	J	4.9	J	3.7	J	8.2	U	8.4	U
SVOCs	Benzo(k)fluoranthene	7.7	U	3.1	J	7.7	U	3	J	8.2	U	8.4	U
SVOCs	Benzoic Acid	190	U	220	U	50	J-	200	R	210	U	210	U
SVOCs	Benzyl alcohol	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Biphenyl	38	U	2.6	J	4.3	J	3.2	J	40	U	41	U
SVOCs	Bis(2-Chloroethoxy)methane	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Bis(2-Chloroethyl)ether	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Bis(2-Ethylhexyl)phthalate	380	U	1600		1400	J	650	J	400	U	410	U
SVOCs	Butylbenzylphthalate	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Caprolactam	190	U	220	U	200	U	200	U	210	U	210	U
SVOCs	Carbazole	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Chrysene	7.7	U	9.3		6.5	J	4.6	J	8.2	U	8.4	U
SVOCs	Di-n-butylphthalate	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Di-n-octylphthalate	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Dibenz(a,h)anthracene	7.7	U	2.4	J	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Dibenzofuran	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Diethylphthalate	38	U	43	U	38	U	39	U	40	U	41	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-702		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162426-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/8/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.7	U	14		9		6.3	J	8.2	U	8.4	U
SVOCs	Fluorene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Hexachlorobenzene	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	Hexachlorocyclopentadiene	38	U	43	U	38	UJ	39	UJ	40	U	41	U
SVOCs	Hexachloroethane	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.7	U	6	J	3.5	J	3	J	8.2	U	8.4	U
SVOCs	Isophorone	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	N-Nitrosodi-n-propylamine	7.7	U	8.7	U	7.7	U	7.9	U	8.2	U	8.4	U
SVOCs	N-Nitrosodimethylamine	38	U	43	U	38	U	39	U	40	U	41	U
SVOCs	N-Nitrosodiphenylamine	38	U	37	J	350	J	130	J	40	U	41	U
SVOCs	Nitrobenzene	76	U	86	U	77	U	79	U	82	U	83	U
SVOCs	Pentachlorophenol	190	U	220	U	200	UJ	200	UJ	210	U	210	U
SVOCs	Phenanthrene	7.7	U	8.1	J	5.4	J	3.9	J	8.2	U	8.4	U
SVOCs	Phenol	38	U	43	U	25	J	39	U	40	U	41	U
SVOCs	Phthalic anhydride	11000	UJ	13000	UJ	11000	UJ	12000	UJ	12000	UJ	12000	UJ
SVOCs	Pyrene	7.7	U	12		7.5	J	5.6	J	8.2	U	8.4	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	1-Methylnaphthalene	7.3	U	7.4	U	7.2	U	23		2	J	7.3	U
SVOCs	2,2'-Dichlorodiisopropylether	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	2,3,4,6-Tetrachlorophenol	36	U	37	U	36	U	84	UJ	38	U	36	U
SVOCs	2,4,5-Trichlorophenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2,4,6-Trichlorophenol	36	U	37	U	36	U	84	UJ	38	U	36	U
SVOCs	2,4-Dichlorophenol	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	2,4-Dimethylphenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2,4-Dinitrophenol	360	UJ	370	U	360	U	840	U	380	U	360	U
SVOCs	2,4-Dinitrotoluene	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2,6-Dinitrotoluene	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2-Chloronaphthalene	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	2-Chlorophenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2-Methylnaphthalene	7.3	U	7.4	U	7.2	U	37		1.9	J	7.3	U
SVOCs	2-Methylphenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	2-Nitroaniline	180	U	190	U	180	U	430	U	190	U	190	U
SVOCs	2-Nitrophenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	3 & 4 Methylphenol	36	U	37	U	36	U	47	J	90		36	U
SVOCs	3,3'-Dichlorobenzidine	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	3-Nitroaniline	180	U	190	U	180	U	430	U	190	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	190	U	180	U	430	UJ	190	U	190	U
SVOCs	4-Bromophenyl phenyl ether	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	4-Chloro-3-methylphenol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	4-Chloroaniline	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	4-Chlorophenyl phenyl ether	36	U	37	U	36	U	31	J	6.4	J	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	190	U	180	U	430	U	190	U	190	U
SVOCs	4-Nitrophenol	180	U	190	U	180	U	430	UJ	190	U	190	U
SVOCs	Acenaphthene	7.3	U	7.4	U	7.2	U	16	J	7.6	U	7.3	U
SVOCs	Acenaphthylene	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	Acetophenone	73	UJ	74	U	72	U	170	U	5.7	J	73	U
SVOCs	Aniline	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	Anthracene	7.3	U	7.4	U	7.2	U	9.1	J	7.6	U	7.3	U
SVOCs	Atrazine	73	U	74	U	72	U	170	U	76	U	73	U
SVOCs	Azobenzene	360	U	360	U	360	U	410	U	370	U	370	U
SVOCs	Benzaldehyde	73	R	74	U	72	U	170	R	10	J-	73	R
SVOCs	Benzo(a)anthracene	7.3	U	7.4	U	7.2	U	13	J	2.8	J	7.3	U
SVOCs	Benzo(a)pyrene	7.3	U	7.4	U	7.2	U	10	J	7.6	U	7.3	U
SVOCs	Benzo(b)fluoranthene	7.3	U	7.4	U	7.2	U	14	J	2.6	J	7.3	U
SVOCs	Benzo(ghi)perylene	7.3	U	7.4	U	7.2	U	8.4	J	1.8	J	7.3	U
SVOCs	Benzo(k)fluoranthene	7.3	U	7.4	U	7.2	U	5.2	J	7.6	U	7.3	U
SVOCs	Benzoic Acid	180	R	190	U	180	U	430	R	190	U	190	U
SVOCs	Benzyl alcohol	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Biphenyl	36	U	37	U	36	U	24	J	7.8	J	36	U
SVOCs	Bis(2-Chloroethoxy)methane	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Bis(2-Chloroethyl)ether	7.3	UJ	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	Bis(2-Ethylhexyl)phthalate	60	J	370	U	360	U	7600		2400		360	U
SVOCs	Butylbenzylphthalate	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Caprolactam	180	U	190	U	180	U	430	U	190	U	190	U
SVOCs	Carbazole	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	Chrysene	7.3	U	7.4	U	7.2	U	18		3.7	J	7.3	U
SVOCs	Di-n-butylphthalate	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Di-n-octylphthalate	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Dibenz(a,h)anthracene	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	Dibenzofuran	36	U	37	U	36	U	8.8	J	38	U	36	U
SVOCs	Diethylphthalate	36	U	37	U	36	U	84	U	38	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-703		SB-703		SB-703		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.3	U	7.4	U	7.2	U	47		6.9	J	7.3	U
SVOCs	Fluorene	7.3	U	7.4	U	7.2	U	21		1.9	J	7.3	U
SVOCs	Hexachlorobenzene	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	Hexachlorocyclopentadiene	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	Hexachloroethane	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.3	U	7.4	U	7.2	U	8.1	J	2	J	7.3	U
SVOCs	Isophorone	36	U	37	U	36	U	84	U	38	U	36	U
SVOCs	N-Nitrosodi-n-propylamine	7.3	U	7.4	U	7.2	U	17	U	7.6	U	7.3	U
SVOCs	N-Nitrosodimethylamine	36	UJ	37	U	36	U	84	U	38	U	36	U
SVOCs	N-Nitrosodiphenylamine	36	U	37	U	36	U	390		26	J	36	U
SVOCs	Nitrobenzene	72	UJ	74	U	72	U	170	U	76	U	73	U
SVOCs	Pentachlorophenol	180	U	190	U	180	U	430	UJ	190	U	190	U
SVOCs	Phenanthrene	7.3	U	7.4	U	2	J	84		9.7		2.8	J
SVOCs	Phenol	36	U	37	U	36	U	330		68		42	
SVOCs	Phthalic anhydride	11000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	7.3	U	7.4	U	7.2	U	42		6.3	J	7.3	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
	Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	1-Methylnaphthalene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	2,2'-Dichlorodiisopropylether	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	2,3,4,6-Tetrachlorophenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2,4,5-Trichlorophenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2,4,6-Trichlorophenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2,4-Dichlorophenol	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	2,4-Dimethylphenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2,4-Dinitrophenol	350	U	360	U	360	U	360	U	370	U	390	U
SVOCs	2,4-Dinitrotoluene	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2,6-Dinitrotoluene	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2-Chloronaphthalene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	2-Chlorophenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2-Methylnaphthalene	2.3	J	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	2-Methylphenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	2-Nitroaniline	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	2-Nitrophenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	3 & 4 Methylphenol	35	U	36	U	36	U	36	UJ	37	U	39	U
SVOCs	3,3'-Dichlorobenzidine	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	3-Nitroaniline	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	4-Bromophenyl phenyl ether	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	4-Chloro-3-methylphenol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	4-Chloroaniline	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	4-Chlorophenyl phenyl ether	35	U	36	U	36	U	36	U	37	U	39	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
	Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	4-Nitrophenol	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	Acenaphthene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Acenaphthylene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Acetophenone	72	U	74	U	74	U	74	U	74	U	78	U
SVOCs	Aniline	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Anthracene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Atrazine	72	U	74	U	74	U	74	U	74	U	78	U
SVOCs	Azobenzene	360	U	340	U	340	U	350	U	360	U	380	U
SVOCs	Benzaldehyde	72	R	74	R	74	R	74	R	74	R	78	R
SVOCs	Benzo(a)anthracene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	3	J
SVOCs	Benzo(a)pyrene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.6	J
SVOCs	Benzo(b)fluoranthene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	3.1	J
SVOCs	Benzo(ghi)perylene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	1.8	J
SVOCs	Benzo(k)fluoranthene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Benzoic Acid	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	Benzyl alcohol	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Biphenyl	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Bis(2-Chloroethoxy)methane	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Bis(2-Chloroethyl)ether	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Bis(2-Ethylhexyl)phthalate	350	U	360	U	360	U	360	U	370	U	110	J
SVOCs	Butylbenzylphthalate	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Caprolactam	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	Carbazole	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Chrysene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.8	J
SVOCs	Di-n-butylphthalate	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Di-n-octylphthalate	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Dibenz(a,h)anthracene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	2.6	J
SVOCs	Dibenzofuran	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Diethylphthalate	35	U	36	U	36	U	36	U	37	U	39	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
	Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	4.7	J
SVOCs	Fluorene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Hexachlorobenzene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	Hexachlorocyclopentadiene	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Hexachloroethane	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	1.7	J
SVOCs	Isophorone	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	N-Nitrosodi-n-propylamine	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	7.8	U
SVOCs	N-Nitrosodimethylamine	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	N-Nitrosodiphenylamine	35	U	36	U	36	U	36	U	37	U	39	U
SVOCs	Nitrobenzene	72	U	74	U	73	U	73	U	74	U	78	U
SVOCs	Pentachlorophenol	180	U	190	U	190	U	190	U	190	U	200	U
SVOCs	Phenanthrene	7.2	U	7.4	U	2.4	J	7.4	U	7.4	U	4.8	J
SVOCs	Phenol	14	J	36	U	36	U	36	U	37	U	39	U
SVOCs	Phthalic anhydride	11000	UJ	10000	UJ	10000	UJ	11000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	7.2	U	7.4	U	7.4	U	7.4	U	7.4	U	4.2	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX	
	Qc Code	FS		FD		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	1-Methylnaphthalene	23	U	200	U	60	J	7.6	U	7.2	U	7	U
SVOCs	2,2'-Dichlorodiisopropylether	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	2,3,4,6-Tetrachlorophenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2,4,5-Trichlorophenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2,4,6-Trichlorophenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2,4-Dichlorophenol	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	2,4-Dimethylphenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2,4-Dinitrophenol	1100	U	10000	U	11000	U	370	U	350	U	350	U
SVOCs	2,4-Dinitrotoluene	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2,6-Dinitrotoluene	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2-Chloronaphthalene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	2-Chlorophenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2-Methylnaphthalene	23	U	51	J	100	J	7.6	U	7.2	U	7	U
SVOCs	2-Methylphenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	2-Nitroaniline	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	2-Nitrophenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	3 & 4 Methylphenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	3,3'-Dichlorobenzidine	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	3-Nitroaniline	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	4,6-Dinitro-2-methylphenol	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	4-Bromophenyl phenyl ether	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	4-Chloro-3-methylphenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	4-Chloroaniline	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	4-Chlorophenyl phenyl ether	110	U	1000	U	1100	U	37	U	35	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX	
	Qc Code	FS		FD		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	4-Nitrophenol	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	Acenaphthene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Acenaphthylene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Acetophenone	230	U	2000	U	2100	U	76	U	72	U	70	U
SVOCs	Aniline	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Anthracene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Atrazine	230	U	2000	U	2100	U	76	U	72	U	70	U
SVOCs	Azobenzene	1800	U	2000	U	2100	U	370	U	360	U	350	U
SVOCs	Benzaldehyde	230	J-	2000	U	2100	U	76	U	72	U	70	U
SVOCs	Benzo(a)anthracene	8.9	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Benzo(a)pyrene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Benzo(b)fluoranthene	8.2	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Benzo(ghi)perylene	5.4	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Benzo(k)fluoranthene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Benzoic Acid	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	Benzyl alcohol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Biphenyl	33	J	45	J	1100	U	37	U	35	U	35	U
SVOCs	Bis(2-Chloroethoxy)methane	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Bis(2-Chloroethyl)ether	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Bis(2-Ethylhexyl)phthalate	2400		2200	J	2100	J	370	U	350	U	350	U
SVOCs	Butylbenzylphthalate	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Caprolactam	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	Carbazole	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Chrysene	7.6	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Di-n-butylphthalate	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Di-n-octylphthalate	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Dibenz(a,h)anthracene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Dibenzofuran	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Diethylphthalate	110	U	1000	U	1100	U	37	U	35	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX	
	Qc Code	FS		FD		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	11	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Fluorene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Hexachlorobenzene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Hexachlorocyclopentadiene	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Hexachloroethane	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Indeno(1,2,3-cd)pyrene	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Isophorone	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	N-Nitrosodi-n-propylamine	23	U	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	N-Nitrosodimethylamine	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	N-Nitrosodiphenylamine	400		2500		2700		37	U	35	U	35	U
SVOCs	Nitrobenzene	230	U	2000	U	2100	U	76	U	72	U	70	U
SVOCs	Pentachlorophenol	590	U	5100	U	5400	U	190	U	180	U	180	U
SVOCs	Phenanthrene	7.8	J	200	U	210	U	7.6	U	7.2	U	7	U
SVOCs	Phenol	110	U	1000	U	1100	U	37	U	35	U	35	U
SVOCs	Phthalic anhydride	56000	UJ	61000	UJ	65000	UJ	11000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	12	J	200	U	210	U	7.6	U	7.2	U	7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	1-Methylnaphthalene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	2,2'-Dichlorodiisopropylether	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	2,3,4,6-Tetrachlorophenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2,4,5-Trichlorophenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2,4,6-Trichlorophenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2,4-Dichlorophenol	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	2,4-Dimethylphenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2,4-Dinitrophenol	720	U	3500	U	360	U	720	U	400	U	360	U
SVOCs	2,4-Dinitrotoluene	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2,6-Dinitrotoluene	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2-Chloronaphthalene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	2-Chlorophenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2-Methylnaphthalene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	2-Methylphenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	2-Nitroaniline	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	2-Nitrophenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	3 & 4 Methylphenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	3,3'-Dichlorobenzidine	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	3-Nitroaniline	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	4,6-Dinitro-2-methylphenol	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	4-Bromophenyl phenyl ether	72	U	190	J	36	U	72	U	40	U	36	U
SVOCs	4-Chloro-3-methylphenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	4-Chloroaniline	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	4-Chlorophenyl phenyl ether	72	U	350	U	36	U	72	U	40	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	4-Nitrophenol	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	Acenaphthene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Acenaphthylene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Acetophenone	4.4	J	720	U	72	U	150	U	81	U	72	U
SVOCs	Aniline	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Anthracene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Atrazine	150	U	720	U	72	U	150	U	81	U	72	U
SVOCs	Azobenzene	360	U	3600	U	360	U	350	U	2000	U	360	U
SVOCs	Benzaldehyde	150	R	720	R	72	R	150	R	81	R	72	R
SVOCs	Benzo(a)anthracene	5.3	J	72	U	7.2	U	15	U	3.6	J	7.2	U
SVOCs	Benzo(a)pyrene	4.7	J	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Benzo(b)fluoranthene	6.8	J	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Benzo(ghi)perylene	3.8	J	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Benzo(k)fluoranthene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Benzoic Acid	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	Benzyl alcohol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Biphenyl	5.3	J	5500		36	U	72	U	910		36	U
SVOCs	Bis(2-Chloroethoxy)methane	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Bis(2-Chloroethyl)ether	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Bis(2-Ethylhexyl)phthalate	770		370000		170	J	210	J	120000		240	J
SVOCs	Butylbenzylphthalate	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Caprolactam	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	Carbazole	15	U	55	J	7.2	U	15	U	8.9		7.2	U
SVOCs	Chrysene	5.6	J	72	U	7.2	U	15	U	4	J	7.2	U
SVOCs	Di-n-butylphthalate	72	U	2100		36	U	72	U	360		36	U
SVOCs	Di-n-octylphthalate	72	U	350	U	36	U	72	U	47		36	U
SVOCs	Dibenz(a,h)anthracene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Dibenzofuran	72	U	29	J	36	U	72	U	4.6	J	36	U
SVOCs	Diethylphthalate	72	U	350	U	36	U	72	U	40	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	6.6	J	46	J	7.2	U	15	U	12		7.2	U
SVOCs	Fluorene	15	U	72	U	7.2	U	15	U	3.6	J	7.2	U
SVOCs	Hexachlorobenzene	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Hexachlorocyclopentadiene	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Hexachloroethane	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Indeno(1,2,3-cd)pyrene	3.2	J	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	Isophorone	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	N-Nitrosodi-n-propylamine	15	U	72	U	7.2	U	15	U	8.1	U	7.2	U
SVOCs	N-Nitrosodimethylamine	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	N-Nitrosodiphenylamine	52	J	28000	J	36	U	25	J	6200	J	36	U
SVOCs	Nitrobenzene	150	U	710	U	72	U	150	U	80	U	72	U
SVOCs	Pentachlorophenol	370	U	1800	U	180	U	370	U	200	U	180	U
SVOCs	Phenanthrene	4.5	J	150		4.5	J	4.5	J	28		2	J
SVOCs	Phenol	72	U	350	U	36	U	72	U	40	U	36	U
SVOCs	Phthalic anhydride	11000	UJ	110000	UJ	11000	UJ	11000	UJ	60000	UJ	11000	UJ
SVOCs	Pyrene	6.9	J	68	J	7.2	U	15	U	15		7.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	1-Methylnaphthalene	7.1	U	8.4	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	2,2'-Dichlorodiisopropylether	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	2,3,4,6-Tetrachlorophenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2,4,5-Trichlorophenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2,4,6-Trichlorophenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2,4-Dichlorophenol	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	2,4-Dimethylphenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2,4-Dinitrophenol	350	U	1600	U	360	U	350	U	350	U	340	U
SVOCs	2,4-Dinitrotoluene	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2,6-Dinitrotoluene	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2-Chloronaphthalene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	2-Chlorophenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2-Methylnaphthalene	7.1	U	10	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	2-Methylphenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	2-Nitroaniline	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	2-Nitrophenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	3 & 4 Methylphenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	3,3'-Dichlorobenzidine	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	3-Nitroaniline	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	4-Bromophenyl phenyl ether	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	4-Chloro-3-methylphenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	4-Chloroaniline	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	4-Chlorophenyl phenyl ether	35	U	160	U	36	U	35	U	35	U	34	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	4-Nitrophenol	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	Acenaphthene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Acenaphthylene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Acetophenone	71	U	330	U	73	U	72	U	71	U	69	U
SVOCs	Aniline	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Anthracene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Atrazine	71	U	330	U	73	U	72	U	71	U	69	U
SVOCs	Azobenzene	350	U	410	U	360	U	360	U	350	U	350	U
SVOCs	Benzaldehyde	71	R	330	R	73	R	72	R	71	R	69	R
SVOCs	Benzo(a)anthracene	7.1	U	17	J	1.4	J	7.2	U	7.1	U	6.9	U
SVOCs	Benzo(a)pyrene	7.1	U	11	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Benzo(b)fluoranthene	7.1	U	22	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Benzo(ghi)perylene	7.1	U	16	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Benzo(k)fluoranthene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Benzoic Acid	180	U	820	U	190	U	180	U	180	R	180	R
SVOCs	Benzyl alcohol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Biphenyl	35	U	19	J	36	U	35	U	35	U	34	U
SVOCs	Bis(2-Chloroethoxy)methane	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Bis(2-Chloroethyl)ether	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Bis(2-Ethylhexyl)phthalate	350	U	8100		500		2400		350	U	340	U
SVOCs	Butylbenzylphthalate	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Caprolactam	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	Carbazole	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Chrysene	7.1	U	19	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Di-n-butylphthalate	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Di-n-octylphthalate	35	U	160	U	36	U	23	J	35	U	34	U
SVOCs	Dibenz(a,h)anthracene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Dibenzofuran	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Diethylphthalate	35	U	160	U	36	U	35	U	35	U	34	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-706		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.1	U	21	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Fluorene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Hexachlorobenzene	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Hexachlorocyclopentadiene	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Hexachloroethane	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.1	U	17	J	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	Isophorone	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	N-Nitrosodi-n-propylamine	7.1	U	33	U	7.3	U	7.2	U	7.1	U	6.9	U
SVOCs	N-Nitrosodimethylamine	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	N-Nitrosodiphenylamine	35	U	510		18	J	35	U	35	U	34	U
SVOCs	Nitrobenzene	71	U	320	U	73	U	72	U	71	U	69	U
SVOCs	Pentachlorophenol	180	U	820	U	190	U	180	U	180	U	180	U
SVOCs	Phenanthrene	7.1	U	16	J	3.3	J	2.6	J	2.1	J	2.5	J
SVOCs	Phenol	35	U	160	U	36	U	35	U	35	U	34	U
SVOCs	Phthalic anhydride	11000	UJ	12000	UJ	11000	UJ	11000	UJ	10000	UJ	11000	UJ
SVOCs	Pyrene	7.1	U	31	J	1.7	J	7.2	U	7.1	U	6.9	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	1-Methylnaphthalene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	2,2'-Dichlorodiisopropylether	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	2,3,4,6-Tetrachlorophenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2,4,5-Trichlorophenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2,4,6-Trichlorophenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2,4-Dichlorophenol	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	2,4-Dimethylphenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2,4-Dinitrophenol	360	U	370	U	350	U	360	U	380	U	360	U
SVOCs	2,4-Dinitrotoluene	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2,6-Dinitrotoluene	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2-Chloronaphthalene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	2-Chlorophenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2-Methylnaphthalene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	2-Methylphenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	2-Nitroaniline	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	2-Nitrophenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	3 & 4 Methylphenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	3,3'-Dichlorobenzidine	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	3-Nitroaniline	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	4-Bromophenyl phenyl ether	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	4-Chloro-3-methylphenol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	4-Chloroaniline	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	4-Chlorophenyl phenyl ether	36	U	37	U	35	U	36	U	38	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	4-Nitrophenol	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	Acenaphthene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	Acenaphthylene	7.2	U	7.5	U	7.1	U	1.6	J	7.7	U	7.4	U
SVOCs	Acetophenone	72	U	75	U	71	U	3.4	J	77	U	74	U
SVOCs	Aniline	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Anthracene	7.2	U	7.5	U	7.1	U	2.6	J	7.7	U	7.4	U
SVOCs	Atrazine	72	U	75	U	71	U	72	U	77	U	74	U
SVOCs	Azobenzene	360	U	370	U	350	U	360	U	380	U	360	U
SVOCs	Benzaldehyde	72	R	75	R	71	R	72	R	77	R	74	R
SVOCs	Benzo(a)anthracene	7.2	U	7.5	U	7.1	U	10		1.7	J	7.4	U
SVOCs	Benzo(a)pyrene	7.2	U	7.5	U	7.1	U	8.5		7.7	U	7.4	U
SVOCs	Benzo(b)fluoranthene	7.2	U	7.5	U	7.1	U	17		7.7	U	7.4	U
SVOCs	Benzo(ghi)perylene	7.2	U	7.5	U	7.1	U	6.7	J	7.7	U	7.4	U
SVOCs	Benzo(k)fluoranthene	7.2	U	7.5	U	7.1	U	4.5	J	7.7	U	7.4	U
SVOCs	Benzoic Acid	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	Benzyl alcohol	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Biphenyl	36	U	37	U	35	U	3.5	J	38	U	36	U
SVOCs	Bis(2-Chloroethoxy)methane	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Bis(2-Chloroethyl)ether	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	Bis(2-Ethylhexyl)phthalate	360	U	370	U	350	U	500		72	J	57	J
SVOCs	Butylbenzylphthalate	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Caprolactam	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	Carbazole	7.2	U	7.5	U	7.1	U	1.9	J	7.7	U	7.4	U
SVOCs	Chrysene	7.2	U	7.5	U	7.1	U	16		2.1	J	7.4	U
SVOCs	Di-n-butylphthalate	36	U	37	U	35	U	18	J	38	U	36	U
SVOCs	Di-n-octylphthalate	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Dibenz(a,h)anthracene	7.2	U	7.5	U	7.1	U	2.7	J	7.7	U	7.4	U
SVOCs	Dibenzofuran	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Diethylphthalate	36	U	37	U	35	U	36	U	20	J	25	J

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.2	U	7.5	U	7.1	U	9.8		2.8	J	7.4	U
SVOCs	Fluorene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	Hexachlorobenzene	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	Hexachlorocyclopentadiene	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Hexachloroethane	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.2	U	7.5	U	7.1	U	5.9	J	7.7	U	7.4	U
SVOCs	Isophorone	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	N-Nitrosodi-n-propylamine	7.2	U	7.5	U	7.1	U	7.2	U	7.7	U	7.4	U
SVOCs	N-Nitrosodimethylamine	36	U	37	U	35	U	36	U	38	U	36	U
SVOCs	N-Nitrosodiphenylamine	36	U	37	U	35	U	100		38	U	36	U
SVOCs	Nitrobenzene	72	U	75	U	70	U	72	U	76	U	73	U
SVOCs	Pentachlorophenol	180	U	190	U	180	U	180	U	190	U	190	U
SVOCs	Phenanthrene	7.2	U	7.5	U	7.1	U	7.3		2.9	J	2.3	J
SVOCs	Phenol	36	U	37	U	35	U	13	J	38	U	36	U
SVOCs	Phthalic anhydride	11000	UJ	11000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ
SVOCs	Pyrene	7.2	U	7.5	U	7.1	U	10		2.9	J	7.4	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162140-1		480-162140-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	1-Methylnaphthalene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	2,2'-Dichlorodiisopropylether	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	2,3,4,6-Tetrachlorophenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2,4,5-Trichlorophenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2,4,6-Trichlorophenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2,4-Dichlorophenol	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	2,4-Dimethylphenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2,4-Dinitrophenol	350	U	340	U	340	U	380	U	360	U	350	U
SVOCs	2,4-Dinitrotoluene	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2,6-Dinitrotoluene	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2-Chloronaphthalene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	2-Chlorophenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2-Methylnaphthalene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	2-Methylphenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	2-Nitroaniline	180	U	180	U	180	UJ	200	U	180	UJ	180	UJ
SVOCs	2-Nitrophenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	3 & 4 Methylphenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	3,3'-Dichlorobenzidine	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	3-Nitroaniline	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	4-Bromophenyl phenyl ether	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	4-Chloro-3-methylphenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	4-Chloroaniline	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	4-Chlorophenyl phenyl ether	35	U	34	U	34	U	38	U	36	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162140-1		480-162140-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	4-Nitrophenol	180	U	180	U	180	UJ	200	UJ	180	UJ	180	UJ
SVOCs	Acenaphthene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Acenaphthylene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Acetophenone	71	U	70	U	69	U	78	U	72	U	72	U
SVOCs	Aniline	17	J	34	U	34	U	38	U	36	U	35	U
SVOCs	Anthracene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Atrazine	71	U	70	U	69	U	78	U	72	U	72	U
SVOCs	Azobenzene	340	U	330	U	350	U	380	U	350	U	360	U
SVOCs	Benzaldehyde	71	R	70	R	69	R	78	R	72	R	72	R
SVOCs	Benzo(a)anthracene	1.6	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Benzo(a)pyrene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Benzo(b)fluoranthene	2.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Benzo(ghi)perylene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Benzo(k)fluoranthene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Benzoic Acid	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	Benzyl alcohol	35	U	34	U	34	U	38	U	2.9	J	35	U
SVOCs	Biphenyl	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Bis(2-Chloroethoxy)methane	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Bis(2-Chloroethyl)ether	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Bis(2-Ethylhexyl)phthalate	2900		340	U	340	U	380	U	360	U	350	U
SVOCs	Butylbenzylphthalate	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Caprolactam	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	Carbazole	2.2	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Chrysene	2.7	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Di-n-butylphthalate	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Di-n-octylphthalate	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Dibenz(a,h)anthracene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Dibenzofuran	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Diethylphthalate	35	U	34	U	34	U	38	U	36	U	35	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162140-1		480-162140-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	3.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Fluorene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Hexachlorobenzene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Hexachlorocyclopentadiene	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Hexachloroethane	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	Isophorone	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	N-Nitrosodi-n-propylamine	7.1	U	7	U	6.9	U	7.8	U	7.2	U	7.2	U
SVOCs	N-Nitrosodimethylamine	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	N-Nitrosodiphenylamine	280		34	U	34	U	38	U	36	U	35	U
SVOCs	Nitrobenzene	71	U	69	U	69	U	78	U	72	U	72	U
SVOCs	Pentachlorophenol	180	U	180	U	180	U	200	U	180	U	180	U
SVOCs	Phenanthrene	2.3	J	7	U	6.9	U	2.8	J	7.2	U	7.2	U
SVOCs	Phenol	35	U	34	U	34	U	38	U	36	U	35	U
SVOCs	Phthalic anhydride	10000	UJ	10000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	4.1	J	7	U	6.9	U	7.8	U	7.2	U	7.2	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	1-Methylnaphthalene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	2,2'-Dichlorodiisopropylether	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	2,3,4,6-Tetrachlorophenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2,4,5-Trichlorophenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2,4,6-Trichlorophenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2,4-Dichlorophenol	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	2,4-Dimethylphenol	39	U	110	U	3.9	J	38	U	38	U	39	U
SVOCs	2,4-Dinitrophenol	390	U	1100	U	380	U	380	U	380	U	390	U
SVOCs	2,4-Dinitrotoluene	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2,6-Dinitrotoluene	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2-Chloronaphthalene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	2-Chlorophenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2-Methylnaphthalene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	2-Methylphenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	2-Nitroaniline	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	2-Nitrophenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	3 & 4 Methylphenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	3,3'-Dichlorobenzidine	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	3-Nitroaniline	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	4,6-Dinitro-2-methylphenol	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	4-Bromophenyl phenyl ether	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	4-Chloro-3-methylphenol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	4-Chloroaniline	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	4-Chlorophenyl phenyl ether	39	U	110	U	38	U	38	U	38	U	39	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	4-Nitrophenol	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	Acenaphthene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Acenaphthylene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Acetophenone	4.1	J	230	U	8.3	J	77	U	77	U	78	U
SVOCs	Aniline	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Anthracene	8	U	23	U	2.3	J	7.7	U	7.7	U	7.8	U
SVOCs	Atrazine	80	U	230	U	77	U	77	U	77	U	78	U
SVOCs	Azobenzene	390	U	380	U	380	U	380	U	380	U	380	U
SVOCs	Benzaldehyde	80	R	230	R	77	R	77	R	77	R	78	R
SVOCs	Benzo(a)anthracene	9.4		26		8.5		7.7	U	7.7	U	7.8	U
SVOCs	Benzo(a)pyrene	8.9		22	J	7.5	J	7.7	U	7.7	U	7.8	U
SVOCs	Benzo(b)fluoranthene	12		28		13		7.7	U	7.7	U	7.8	U
SVOCs	Benzo(ghi)perylene	7.4	J	13	J	6.5	J	7.7	U	7.7	U	7.8	U
SVOCs	Benzo(k)fluoranthene	5.2	J	11	J	4.3	J	7.7	U	7.7	U	7.8	U
SVOCs	Benzoic Acid	200	U	580	U	200	U	190	U	200	R	200	R
SVOCs	Benzyl alcohol	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Biphenyl	4.4	J	10	J	7	J	3.4	J	38	U	39	U
SVOCs	Bis(2-Chloroethoxy)methane	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Bis(2-Chloroethyl)ether	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Bis(2-Ethylhexyl)phthalate	940		6300		6900		6700		380	U	390	U
SVOCs	Butylbenzylphthalate	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Caprolactam	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	Carbazole	8	U	5.7	J	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Chrysene	12		27		12		7.7	U	7.7	U	7.8	U
SVOCs	Di-n-butylphthalate	39	U	72	J	29	J	38	U	38	U	39	U
SVOCs	Di-n-octylphthalate	61		110	U	38	U	38	U	38	U	39	U
SVOCs	Dibenz(a,h)anthracene	2.1	J	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Dibenzofuran	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Diethylphthalate	39	U	110	U	38	U	38	U	38	U	39	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	14		35		16		7.7	U	7.7	U	7.8	U
SVOCs	Fluorene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Hexachlorobenzene	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	Hexachlorocyclopentadiene	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Hexachloroethane	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	Indeno(1,2,3-cd)pyrene	6.3	J	13	J	6.5	J	7.7	U	7.7	U	7.8	U
SVOCs	Isophorone	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	N-Nitrosodi-n-propylamine	8	U	23	U	7.7	U	7.7	U	7.7	U	7.8	U
SVOCs	N-Nitrosodimethylamine	39	U	110	U	38	U	38	U	38	U	39	U
SVOCs	N-Nitrosodiphenylamine	49		1600		450		27	J	38	U	39	U
SVOCs	Nitrobenzene	79	U	230	U	77	U	76	U	77	U	78	U
SVOCs	Pentachlorophenol	200	U	580	U	200	U	190	U	200	U	200	U
SVOCs	Phenanthrene	8.3		15	J	9.3		2.5	J	2.1	J	3.6	J
SVOCs	Phenol	80		53	J	340		38	U	38	U	39	U
SVOCs	Phthalic anhydride	12000	UJ	11000	UJ	12000	UJ	12000	UJ	11000	UJ	12000	UJ
SVOCs	Pyrene	14		34		16		1.8	J	7.7	U	7.8	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162315-1		480-162315-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	1-Methylnaphthalene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	2,2'-Dichlorodiisopropylether	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	2,3,4,6-Tetrachlorophenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2,4,5-Trichlorophenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2,4,6-Trichlorophenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2,4-Dichlorophenol	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	2,4-Dimethylphenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2,4-Dinitrophenol	350	U	360	U	420	U	370	U	370	U	360	U
SVOCs	2,4-Dinitrotoluene	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2,6-Dinitrotoluene	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2-Chloronaphthalene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	2-Chlorophenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2-Methylnaphthalene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	2-Methylphenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	2-Nitroaniline	180	U	180	U	220	UJ	190	UJ	190	UJ	190	U
SVOCs	2-Nitrophenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	3 & 4 Methylphenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	3,3'-Dichlorobenzidine	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	3-Nitroaniline	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	4-Bromophenyl phenyl ether	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	4-Chloro-3-methylphenol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	4-Chloroaniline	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	4-Chlorophenyl phenyl ether	35	U	36	U	42	U	37	U	37	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
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November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162315-1		480-162315-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	4-Nitrophenol	180	U	180	U	220	UJ	190	UJ	190	UJ	190	UJ
SVOCs	Acenaphthene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Acenaphthylene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Acetophenone	72	U	72	U	85	U	75	U	75	U	73	U
SVOCs	Aniline	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Anthracene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Atrazine	72	U	72	U	85	U	75	U	75	U	73	U
SVOCs	Azobenzene	360	U	350	U	420	U	370	U	370	U	350	U
SVOCs	Benzaldehyde	72	R	72	R	85	R	75	R	75	R	73	R
SVOCs	Benzo(a)anthracene	7.2	U	7.2	U	3.8	J	5.7	J	7.5	U	7.3	U
SVOCs	Benzo(a)pyrene	7.2	U	7.2	U	4.4	J	4.7	J	7.5	U	7.3	U
SVOCs	Benzo(b)fluoranthene	7.2	U	7.2	U	6.3	J	5.8	J	7.5	U	7.3	U
SVOCs	Benzo(ghi)perylene	7.2	U	7.2	U	4.1	J	3.2	J	7.5	U	7.3	U
SVOCs	Benzo(k)fluoranthene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Benzoic Acid	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	Benzyl alcohol	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Biphenyl	35	U	36	U	42	U	4.4	J	37	U	36	U
SVOCs	Bis(2-Chloroethoxy)methane	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Bis(2-Chloroethyl)ether	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Bis(2-Ethylhexyl)phthalate	50	J	360	U	300	J	1000		370	U	120	J
SVOCs	Butylbenzylphthalate	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Caprolactam	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	Carbazole	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Chrysene	7.2	U	7.2	U	5.9	J	5.8	J	7.5	U	7.3	U
SVOCs	Di-n-butylphthalate	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Di-n-octylphthalate	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Dibenz(a,h)anthracene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Dibenzofuran	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Diethylphthalate	35	U	36	U	42	U	37	U	37	U	36	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162315-1		480-162315-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	7.2	U	7.2	U	6.7	J	10		7.5	U	7.3	U
SVOCs	Fluorene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Hexachlorobenzene	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	Hexachlorocyclopentadiene	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Hexachloroethane	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	Indeno(1,2,3-cd)pyrene	7.2	U	7.2	U	3.8	J	2.9	J	7.5	U	7.3	U
SVOCs	Isophorone	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	N-Nitrosodi-n-propylamine	7.2	U	7.2	U	8.5	U	7.5	U	7.5	U	7.3	U
SVOCs	N-Nitrosodimethylamine	35	U	36	U	42	U	37	U	37	U	36	U
SVOCs	N-Nitrosodiphenylamine	35	U	36	U	35	J	62		37	U	36	U
SVOCs	Nitrobenzene	72	U	72	U	84	U	75	U	75	U	73	U
SVOCs	Pentachlorophenol	180	U	180	U	220	U	190	U	190	U	190	U
SVOCs	Phenanthrene	7.2	U	7.2	U	3.9	J	7.9		7.5	U	2.2	J
SVOCs	Phenol	35	U	36	U	42	U	11	J	37	U	36	U
SVOCs	Phthalic anhydride	11000	UJ	11000	UJ	13000	UJ	11000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	7.2	U	7.2	U	6.6	J	8.9		7.5	U	7.3	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162199-1		480-162199-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	1-Methylnaphthalene	8.2	U	7.2	U	8	U	53	J	15	U	7.6	U
SVOCs	2,2'-Dichlorodiisopropylether	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	2,3,4,6-Tetrachlorophenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2,4,5-Trichlorophenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2,4,6-Trichlorophenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2,4-Dichlorophenol	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	2,4-Dimethylphenol	40	U	35	U	40	U	920	U	12	J	38	U
SVOCs	2,4-Dinitrophenol	400	U	350	U	400	UJ	9200	U	710	U	380	U
SVOCs	2,4-Dinitrotoluene	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2,6-Dinitrotoluene	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2-Chloronaphthalene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	2-Chlorophenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2-Methylnaphthalene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	2-Methylphenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	2-Nitroaniline	210	UJ	180	UJ	200	U	4700	U	370	U	190	U
SVOCs	2-Nitrophenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	3 & 4 Methylphenol	40	U	35	U	40	U	920	U	27	J	38	U
SVOCs	3,3'-Dichlorobenzidine	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	3-Nitroaniline	210	U	180	U	200	U	4700	U	370	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	210	U	180	U	200	U	4700	U	370	U	190	U
SVOCs	4-Bromophenyl phenyl ether	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	4-Chloro-3-methylphenol	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	4-Chloroaniline	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	4-Chlorophenyl phenyl ether	40	U	35	U	40	U	920	U	71	U	38	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162199-1		480-162199-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	210	U	180	U	200	U	4700	U	370	U	190	U
SVOCs	4-Nitrophenol	210	UJ	180	UJ	200	U	4700	U	370	U	190	U
SVOCs	Acenaphthene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	Acenaphthylene	8.2	U	7.2	U	1.8	J	190	U	15	U	7.6	U
SVOCs	Acetophenone	82	U	72	U	80	U	1900	U	150	U	76	U
SVOCs	Aniline	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Anthracene	8.2	U	7.2	U	6.3	J	60	J	4.3	J	7.6	U
SVOCs	Atrazine	82	U	72	U	80	U	1900	U	150	U	76	U
SVOCs	Azobenzene	400	U	360	U	400	U	7500	U	1800	U	1900	U
SVOCs	Benzaldehyde	82	R	72	R	80	R	1900	U	150	U	76	U
SVOCs	Benzo(a)anthracene	8.2	U	7.2	U	22		190	U	9.9	J	7.6	U
SVOCs	Benzo(a)pyrene	8.2	U	7.2	U	17		190	U	15	U	7.6	U
SVOCs	Benzo(b)fluoranthene	8.2	U	7.2	U	25		190	U	19		7.6	U
SVOCs	Benzo(ghi)perylene	8.2	U	7.2	U	11		190	U	15	U	7.6	U
SVOCs	Benzo(k)fluoranthene	8.2	U	7.2	U	8.8		190	U	8.3	J	7.6	U
SVOCs	Benzoic Acid	210	U	180	U	200	R	4700	U	370	U	190	U
SVOCs	Benzyl alcohol	40	U	35	U	40	U	920	U	71	U	59	
SVOCs	Biphenyl	40	U	35	U	7.1	J	14000		75		38	U
SVOCs	Bis(2-Chloroethoxy)methane	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Bis(2-Chloroethyl)ether	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	Bis(2-Ethylhexyl)phthalate	400	U	350	U	4900		420000		19000		56	J
SVOCs	Butylbenzylphthalate	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Caprolactam	210	U	180	U	200	U	4700	U	370	U	190	U
SVOCs	Carbazole	8.2	U	7.2	U	3.5	J	190	U	15	U	7.6	U
SVOCs	Chrysene	8.2	U	7.2	U	27		190	U	20		7.6	U
SVOCs	Di-n-butylphthalate	40	U	35	U	21	J	920	U	71	U	38	U
SVOCs	Di-n-octylphthalate	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Dibenz(a,h)anthracene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	Dibenzofuran	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Diethylphthalate	40	U	35	U	40	U	920	U	71	U	38	U

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162199-1		480-162199-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	8.2	U	7.2	U	46		160	J	23		7.6	U
SVOCs	Fluorene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	Hexachlorobenzene	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	Hexachlorocyclopentadiene	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Hexachloroethane	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	Indeno(1,2,3-cd)pyrene	8.2	U	7.2	U	11		190	U	15	U	7.6	U
SVOCs	Isophorone	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	N-Nitrosodi-n-propylamine	8.2	U	7.2	U	8	U	190	U	15	U	7.6	U
SVOCs	N-Nitrosodimethylamine	40	U	35	U	40	U	920	U	71	U	38	U
SVOCs	N-Nitrosodiphenylamine	40	U	35	U	40	U	54000		1700		31	J
SVOCs	Nitrobenzene	81	U	72	U	80	U	1900	U	140	U	76	U
SVOCs	Pentachlorophenol	210	U	180	U	200	UJ	4700	U	370	U	190	U
SVOCs	Phenanthrene	8.2	U	7.2	U	21		660		15		7.6	U
SVOCs	Phenol	40	U	35	U	40	U	920	U	8800		120	
SVOCs	Phthalic anhydride	12000	UJ	11000	UJ	12000	UJ	230000	UJ	54000	UJ	57000	UJ
SVOCs	Pyrene	8.2	U	7.2	U	40		190	U	20		7.6	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	1-Methylnaphthalene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	2.1	J
SVOCs	2,2'-Dichlorodiisopropylether	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	2,3,4,6-Tetrachlorophenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2,4,5-Trichlorophenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2,4,6-Trichlorophenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2,4-Dichlorophenol	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	2,4-Dimethylphenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2,4-Dinitrophenol	430	U	360	U	350	U	2000	U	360	U	370	U
SVOCs	2,4-Dinitrotoluene	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2,6-Dinitrotoluene	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2-Chloronaphthalene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	2-Chlorophenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2-Methylnaphthalene	2.7	J	7.3	U	7.2	U	40	U	7.3	U	2.3	J
SVOCs	2-Methylphenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	2-Nitroaniline	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	2-Nitrophenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	3 & 4 Methylphenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	3,3'-Dichlorobenzidine	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	3-Nitroaniline	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	4-Bromophenyl phenyl ether	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	4-Chloro-3-methylphenol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	4-Chloroaniline	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	4-Chlorophenyl phenyl ether	43	U	36	U	35	U	200	U	36	U	37	U

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Table 2.2 - Final Results Summary - SVOCs
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November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	4-Nitrophenol	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	Acenaphthene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	Acenaphthylene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	4.7	J
SVOCs	Acetophenone	87	U	73	U	72	U	400	U	73	U	4.4	J
SVOCs	Aniline	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Anthracene	8.7	U	2.3	J	2	J	40	U	2.6	J	4.3	J
SVOCs	Atrazine	87	U	73	U	72	U	400	U	73	U	75	U
SVOCs	Azobenzene	420	U	350	U	350	U	390	U	360	U	370	U
SVOCs	Benzaldehyde	87	U	73	U	72	U	400	U	73	U	6.7	J
SVOCs	Benzo(a)anthracene	2.2	J	10		9.7		11	J	7.6		20	
SVOCs	Benzo(a)pyrene	8.7	U	6	J	4.9	J	40	U	9.5		23	
SVOCs	Benzo(b)fluoranthene	8.7	U	7.9		5.7	J	14	J	12		39	
SVOCs	Benzo(ghi)perylene	8.7	U	3.2	J	2.1	J	40	U	8.2		24	
SVOCs	Benzo(k)fluoranthene	8.7	U	7.3	U	7.2	U	40	U	3.7	J	13	
SVOCs	Benzoic Acid	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	Benzyl alcohol	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Biphenyl	43	U	36	U	35	U	9.7	J	1.7	J	3.4	J
SVOCs	Bis(2-Chloroethoxy)methane	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Bis(2-Chloroethyl)ether	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	Bis(2-Ethylhexyl)phthalate	210	J	360	U	48	J	2100		43	J	570	
SVOCs	Butylbenzylphthalate	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Caprolactam	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	Carbazole	8.7	U	1.9	J	7.2	U	40	U	1.7	J	2.4	J
SVOCs	Chrysene	2.6	J	9.9		9.3		12	J	8.6		27	
SVOCs	Di-n-butylphthalate	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Di-n-octylphthalate	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Dibenz(a,h)anthracene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	6.1	J
SVOCs	Dibenzofuran	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Diethylphthalate	43	U	36	U	35	U	200	U	36	U	37	U

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
revised CR 2/27/20

Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Diphenylamine												
SVOCs	Fluoranthene	4.8	J	13		8.5		19	J	18		30	
SVOCs	Fluorene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	2	J
SVOCs	Hexachlorobenzene	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	Hexachlorocyclopentadiene	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Hexachloroethane	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	Indeno(1,2,3-cd)pyrene	8.7	U	2.7	J	1.7	J	40	U	6.5	J	21	
SVOCs	Isophorone	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	N-Nitrosodi-n-propylamine	8.7	U	7.3	U	7.2	U	40	U	7.3	U	7.5	U
SVOCs	N-Nitrosodimethylamine	43	U	36	U	35	U	200	U	36	U	37	U
SVOCs	N-Nitrosodiphenylamine	43	U	36	U	35	U	200	U	36	U	72	
SVOCs	Nitrobenzene	86	U	72	U	72	U	400	U	73	U	75	U
SVOCs	Pentachlorophenol	220	U	180	U	180	U	1000	U	190	U	190	U
SVOCs	Phenanthrene	8.1	J	8.5		7.1	J	40	U	10		17	
SVOCs	Phenol	43	U	36	U	35	U	200	U	36	U	14	J
SVOCs	Phthalic anhydride	13000	UJ	11000	UJ	11000	UJ	12000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	4.8	J	12		9.2		17	J	15		26	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
revised CR 2/27/20

Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	1,2,4,5-Tetrachlorobenzene	110	U	36	U	35	U	36	U
SVOCs	1-Methylnaphthalene	22	U	7.4	U	7.2	U	7.3	U
SVOCs	2,2'-Dichlorodiisopropylether	22	U	7.4	U	7.2	U	7.3	U
SVOCs	2,3,4,6-Tetrachlorophenol	110	U	36	U	35	U	36	U
SVOCs	2,4,5-Trichlorophenol	110	U	36	U	35	U	36	U
SVOCs	2,4,6-Trichlorophenol	110	U	36	U	35	U	36	U
SVOCs	2,4-Dichlorophenol	22	U	7.4	U	7.2	U	7.3	U
SVOCs	2,4-Dimethylphenol	110	U	36	U	35	U	36	U
SVOCs	2,4-Dinitrophenol	1100	U	360	U	350	U	360	U
SVOCs	2,4-Dinitrotoluene	110	U	36	U	35	U	36	U
SVOCs	2,6-Dinitrotoluene	110	U	36	U	35	U	36	U
SVOCs	2-Chloronaphthalene	22	U	7.4	U	7.2	U	7.3	U
SVOCs	2-Chlorophenol	110	U	36	U	35	U	36	U
SVOCs	2-Methylnaphthalene	22	U	7.4	U	7.2	U	7.3	U
SVOCs	2-Methylphenol	110	U	36	U	35	U	36	U
SVOCs	2-Nitroaniline	570	U	190	U	180	U	190	U
SVOCs	2-Nitrophenol	110	U	36	U	35	U	36	U
SVOCs	3 & 4 Methylphenol	110	U	36	U	35	U	36	U
SVOCs	3,3'-Dichlorobenzidine	110	U	36	U	35	U	36	U
SVOCs	3-Nitroaniline	570	U	190	U	180	U	190	U
SVOCs	4,6-Dinitro-2-methylphenol	570	U	190	U	180	U	190	U
SVOCs	4-Bromophenyl phenyl ether	110	U	36	U	35	U	36	U
SVOCs	4-Chloro-3-methylphenol	110	U	36	U	35	U	36	U
SVOCs	4-Chloroaniline	110	U	36	U	35	U	36	U
SVOCs	4-Chlorophenyl phenyl ether	110	U	36	U	35	U	36	U

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
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Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	4-Nitroaniline	570	U	190	U	180	U	190	U
SVOCs	4-Nitrophenol	570	U	190	U	180	U	190	U
SVOCs	Acenaphthene	17	J	7.4	U	7.2	U	7.3	U
SVOCs	Acenaphthylene	6.3	J	7.4	U	7.2	U	7.3	U
SVOCs	Acetophenone	220	U	74	U	72	U	73	U
SVOCs	Aniline	110	U	36	U	35	U	36	U
SVOCs	Anthracene	36		7.4	U	7.2	U	7.3	U
SVOCs	Atrazine	220	U	74	U	72	U	73	U
SVOCs	Azobenzene	1800	U	360	U	360	U	360	U
SVOCs	Benzaldehyde	220	U	74	U	72	U	73	U
SVOCs	Benzo(a)anthracene	72		7.4	U	7.2	U	7.3	U
SVOCs	Benzo(a)pyrene	67		7.4	U	7.2	U	7.3	U
SVOCs	Benzo(b)fluoranthene	68		7.4	U	7.2	U	7.3	U
SVOCs	Benzo(ghi)perylene	56		7.4	U	7.2	U	7.3	U
SVOCs	Benzo(k)fluoranthene	32		7.4	U	7.2	U	7.3	U
SVOCs	Benzoic Acid	570	U	190	U	180	U	190	U
SVOCs	Benzyl alcohol	110	U	36	U	35	U	36	U
SVOCs	Biphenyl	110	U	36	U	35	U	36	U
SVOCs	Bis(2-Chloroethoxy)methane	110	U	36	U	35	U	36	U
SVOCs	Bis(2-Chloroethyl)ether	22	U	7.4	U	7.2	U	7.3	U
SVOCs	Bis(2-Ethylhexyl)phthalate	1200		140	J	350	U	360	U
SVOCs	Butylbenzylphthalate	110	U	36	U	35	U	36	U
SVOCs	Caprolactam	570	U	190	U	180	U	190	U
SVOCs	Carbazole	8.1	J	7.4	U	7.2	U	7.3	U
SVOCs	Chrysene	75		7.4	U	7.2	U	7.3	U
SVOCs	Di-n-butylphthalate	110	U	36	U	35	U	36	U
SVOCs	Di-n-octylphthalate	110	U	36	U	35	U	36	U
SVOCs	Dibenz(a,h)anthracene	12	J	7.4	U	7.2	U	7.3	U
SVOCs	Dibenzofuran	9.4	J	36	U	35	U	36	U
SVOCs	Diethylphthalate	110	U	36	U	35	U	36	U

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
revised CR 2/27/20

Table 2.2 - Final Results Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Location	SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg	
Method C	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Dimethylphthalate	110	U	36	U	35	U	36	U
SVOCs	Diphenylamine								
SVOCs	Fluoranthene	120		7.4	U	7.2	U	7.3	U
SVOCs	Fluorene	12	J	7.4	U	7.2	U	7.3	U
SVOCs	Hexachlorobenzene	22	U	7.4	U	7.2	U	7.3	U
SVOCs	Hexachlorocyclopentadiene	110	U	36	U	35	U	36	U
SVOCs	Hexachloroethane	110	U	36	U	35	U	36	U
SVOCs	Indeno(1,2,3-cd)pyrene	38		7.4	U	7.2	U	7.3	U
SVOCs	Isophorone	110	U	36	U	35	U	36	U
SVOCs	N-Nitrosodi-n-propylamine	22	U	7.4	U	7.2	U	7.3	U
SVOCs	N-Nitrosodimethylamine	110	U	36	U	35	U	36	U
SVOCs	N-Nitrosodiphenylamine	130		36	U	35	U	36	U
SVOCs	Nitrobenzene	220	U	73	U	72	U	73	U
SVOCs	Pentachlorophenol	570	U	190	U	180	U	190	U
SVOCs	Phenanthrene	93		7.4	U	7.2	U	2.1	J
SVOCs	Phenol	110	U	36	U	35	U	36	U
SVOCs	Phthalic anhydride	54000	UJ	11000	UJ	11000	UJ	11000	UJ
SVOCs	Pyrene	150		7.4	U	7.2	U	7.3	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Created by: KMS 2/5/2020
Checked by: MAD 02/06/2020
revised CR 2/27/20

Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	QC		QC		QC		QC		SB-701		SB-701	
		Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1		480-162513-1		480-162513-1	
		Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019		11/11/2019	
		Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
		Qc Code	EB		EB		EB		EB		FD		FS	
		Units	mg/l		mg/l		mg/l		mg/l		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	0	U	0	U	0	U	0	U	8,200		9,900	
Metals	Antimony	T	0.02	U	0.02	U	0.02	U	0.02	U	0.53	J-	0.63	J-
Metals	Arsenic	T	0.01	U	0.01	U	0.015	U	0.015	U	10		8.6	
Metals	Barium	T	0.01	U	0.01	U	0.002	U	0.002	U	49	J+	71	J+
Metals	Beryllium	T	0.001	U	0.001	U	0.002	U	0.002	U	0.34		0.46	J
Metals	Cadmium	T	0.001	U	0.001	U	0.002	U	0.002	U	0.35		0.37	
Metals	Calcium	T	0	J	1	U	0	J	0	J	24,000		28,000	
Metals	Chromium	T	0.005	U	0.0033	J	0.004	U	0.004	U	120	J+	72	J+
Metals	Cobalt	T	0.0078		0.004	U	0.004	U	0.004	U	5.2		3.9	
Metals	Copper	T	0.032		0.038		0.0023	J	0.0051	J	9.9		10	
Metals	Iron	T	0		0		0	U	0	U	11,000		10,000	
Metals	Lead	T	0.005	U	0.005	U	0.01	U	0.01	U	12		11	
Metals	Magnesium	T	0	U	0	U	0	U	0	U	2,900	J+	3,700	J+
Metals	Manganese	T	0.0059		0.0029	J	0.003	U	0.003	U	150	J	180	J
Metals	Mercury	T	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.036		0.031	J
Metals	Nickel	T	0.01	U	0.01	U	0.01	U	0.01	U	11		11	
Metals	Potassium	T	1	U	1	U	1	U	0	J	1,100	J+	1,200	J+
Metals	Selenium	T	0.01	U	0.01	U	0.025	U	0.025	U	4.9	U	4.8	U
Metals	Silver	T	0.005	U	0.005	U	0.006	U	0.006	U	0.73	U	0.72	U
Metals	Sodium	T	1	U	1	U	1	U	1	U	130	J	150	J
Metals	Thallium	T	0.02	U	0.02	U	0.02	U	0.02	U	7.3	U	7.2	U
Metals	Tin	T	0.01	U	0.01	U	0.01	U	0.01	U	1.1	J	0.72	J
Metals	Vanadium	T	0.01	U	0.01	U	0.005	U	0.005	U	18	J+	19	J+
Metals	Zinc	T	0.012	J	0.0089	J	0.0063	J	0.0029	J	28	J+	26	J+

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
T= total

EB = equipment blank
TB = trip blank

Created by: KMS 1/30/2020
Checked by: LLK 02/06/2020

Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
		Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	3,400		4,000		4,700		7,400		13,000		5,200	
Metals	Antimony	T	19	U	17	U	18	U	17	U	0.85	J	1.1	J
Metals	Arsenic	T	3.5		1.9	J	0.76	J	7.3		2.4		11	
Metals	Barium	T	9.9		7.5		7		46		58		16	
Metals	Beryllium	T	0.16	J	0.18	J	0.16	J	0.33		0.58	J	0.31	
Metals	Cadmium	T	0.25	U	0.22	U	0.24	U	0.17	J	0.22	U	0.23	U
Metals	Calcium	T	1,100		1,100		2,100		44,000		7,500		1,300	
Metals	Chromium	T	12		14		8.1		200		460		580	
Metals	Cobalt	T	3		1.4		1.1		3.5		11		2.1	
Metals	Copper	T	2.9		1.6		0.75	J	8.2		27		7.7	
Metals	Iron	T	4,700		3,700		3,200		8,800		22,000		15,000	
Metals	Lead	T	1.9		1.9		2.5		7.8		3.7		3.8	
Metals	Magnesium	T	1,200		1,200		1,000		2,400		8,700		1,600	
Metals	Manganese	T	45		41		50		120		340		100	
Metals	Mercury	T	0.024	U	0.023	U	0.024	U	0.069		0.02	U	0.022	U
Metals	Nickel	T	6.3		5.2	J	4.1	J	11		15		7.3	
Metals	Potassium	T	530		400		340		920		4,100		550	
Metals	Selenium	T	5	U	4.4	U	4.9	U	4.4	U	4.4	U	4.6	U
Metals	Silver	T	0.75	U	0.67	U	0.73	U	0.66	U	0.66	U	0.69	U
Metals	Sodium	T	73	J	75	J	97	J	160		1,100		240	
Metals	Thallium	T	7.5	U	6.7	U	7.3	U	6.6	U	6.6	U	6.9	U
Metals	Tin	T	2.5	U	2.2	U	2.4	U	1.1	J	0.69	J	0.61	J
Metals	Vanadium	T	6.6		6		6.1		16		58		21	
Metals	Zinc	T	10		8.4		7		27		36		12	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
T= total

Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	9,200		9,000		11,000		10,000		6,300		11,000	
Metals	Antimony	T	17	U	16	U	17	U	16	U	0.55	J	0.74	J
Metals	Arsenic	T	5.1		7.6		9.7		11		26		3.8	
Metals	Barium	T	46		33		41		41		29		41	
Metals	Beryllium	T	0.5		0.44		0.65		0.55		0.28		5.9	
Metals	Cadmium	T	0.036	J	0.21	U	0.22	U	0.22	U	0.23	U	0.22	U
Metals	Calcium	T	14,000		3,800		2,800		2,300		1,400		5,000	
Metals	Chromium	T	32		20		34		42		22		580	
Metals	Cobalt	T	5.6		4.1		6.5		6		7		13	
Metals	Copper	T	8.2		9.3		9.4		12		9.5		29	
Metals	Iron	T	13,000		9,800		13,000		13,000		15,000		20,000	
Metals	Lead	T	12		22		7.4		14		9.3		5	
Metals	Magnesium	T	4,000		2,600		3,900		4,500		3,600		6,300	
Metals	Manganese	T	270		130		200		200		250		220	
Metals	Mercury	T	0.041		0.11		0.011	J	0.02	J	0.022	U	0.021	U
Metals	Nickel	T	8.2		10		23		23		31		15	
Metals	Potassium	T	1,300		1,400		1,800		1,800		1,500		2,100	
Metals	Selenium	T	4.6	U	4.3	U	0.61	J	4.4	U	4.6	U	4.4	U
Metals	Silver	T	0.69	U	0.64	U	0.66	U	0.65	U	0.68	U	0.66	U
Metals	Sodium	T	220		130	J	160		130	J	110	J	340	
Metals	Thallium	T	6.9	U	6.4	U	6.6	U	6.5	U	6.8	U	6.6	U
Metals	Tin	T	0.91	J	0.69	J	0.82	J	1.2	J	0.62	J	0.61	J
Metals	Vanadium	T	25		18		23		22		16		58	
Metals	Zinc	T	30		28		28		33		26		32	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-702		SB-703		SB-703		SB-703		SB-703		SB-703	
		Lab SDG	480-162426-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
		Sample Date	11/8/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
		Sample ID	OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX	
		Qc Code	FS		FS		FD		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	3,700		9,000		6,700	J+	6,500	J+	4,700		4,600	
Metals	Antimony	T	18	U	20	U	18	U	18	U	19	U	18	U
Metals	Arsenic	T	6.5		13		4.7		4.1		3.4		7.5	
Metals	Barium	T	24		89	J	15	J-	12	J-	11	J	10	J
Metals	Beryllium	T	0.15	J	0.39		0.24		0.21	J	0.19	J	0.22	J
Metals	Cadmium	T	0.23	U	0.3	J	0.11	J	0.06	J	0.26	U	0.25	U
Metals	Calcium	T	2,200		92,000		6,300	J+	5,900	J+	3,800		2,000	
Metals	Chromium	T	64		180		20	J+	14	J+	6.8		9.9	
Metals	Cobalt	T	3.2		3.5		2.6		2.2		2.4		2.4	
Metals	Copper	T	7		9.2		5.3	J	2.9	J	2.1		2.9	
Metals	Iron	T	8,000		9,200		6,400	J+	5,000	J+	5,200		7,900	
Metals	Lead	T	10		9.7		6.4		3.6		2.3		2.6	
Metals	Magnesium	T	1,700		2,500		1,300	J+	1,100	J+	1,100		1,800	
Metals	Manganese	T	72		110		76	J+	63	J+	61		89	
Metals	Mercury	T	0.022	U	0.037		0.025		0.032		0.024	U	0.025	U
Metals	Nickel	T	3.8	J	8.9		8		7		4.6	J	7.3	
Metals	Potassium	T	1,100		980		660		550		430		580	
Metals	Selenium	T	0.54	J	5.3	U	4.7	U	4.9	U	5.2	U	4.9	U
Metals	Silver	T	0.7	U	0.8	U	0.71	U	0.73	U	0.77	U	0.74	U
Metals	Sodium	T	200		160	J	170	U	170	U	180	U	170	U
Metals	Thallium	T	7	U	8	U	7.1	U	7.3	U	7.7	U	7.4	U
Metals	Tin	T	2.3	U	1.1	J	0.73	J	2.4	U	2.6	U	2.5	U
Metals	Vanadium	T	17		16		9.7		8.4		7.8		8.9	
Metals	Zinc	T	11		22		29		24		10		11	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-703		SB-703		SB-703		SB-704		SB-704		SB-704	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	6,100		1,100		4,800		7,700		5,600		4,800	
Metals	Antimony	T	16	U	17	U	17	U	19	U	18	U	16	U
Metals	Arsenic	T	4.2		0.91	J	3.3		17		5.4		4.8	
Metals	Barium	T	15	J	20	J	14	J	61		11		12	
Metals	Beryllium	T	0.3		0.059	J	0.14	J	0.38		0.27		0.17	J
Metals	Cadmium	T	0.22	U	0.044	J	0.23	U	0.45		0.058	J	0.22	U
Metals	Calcium	T	1,200		4,800		5,400		110,000		3,700		2,200	
Metals	Chromium	T	52		10		190		140		8.6		13	
Metals	Cobalt	T	2.8		0.62		4.3		3.7		2.2		2.3	
Metals	Copper	T	7.3		0.5	J	19		8.5		0.84	J	3.9	
Metals	Iron	T	7,600		1,400		11,000		10,000		3,800		6,200	
Metals	Lead	T	3.6		1.6		3		8.3		3.1		2.7	
Metals	Magnesium	T	1,800		250		3,100		2,300		820		1,700	
Metals	Manganese	T	73		32		110		93		31		68	
Metals	Mercury	T	0.022	U	0.021	U	0.008	J	0.035		0.023	U	0.022	U
Metals	Nickel	T	7.5		0.9	J	5.4	J	8.6		4.7	J	7.8	
Metals	Potassium	T	670		330		820		770		410		640	
Metals	Selenium	T	4.3	U	4.6	U	4.5	U	5	U	4.7	U	4.4	U
Metals	Silver	T	0.65	U	0.68	U	0.68	U	0.75	U	0.71	U	0.66	U
Metals	Sodium	T	150	U	160	U	260		190		80	J	130	J
Metals	Thallium	T	6.5	U	6.8	U	6.8	U	7.5	U	7.1	U	6.6	U
Metals	Tin	T	2.2	U	2.3	U	2.3	U	0.97	J	0.51	J	2.2	U
Metals	Vanadium	T	12		3.6		27		18		7.5		9.4	
Metals	Zinc	T	17		2.9		15		22		10		13	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
		Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	15,000		9,200		5,200		3,500		6,800		5,100	
Metals	Antimony	T	16	U	16	U	17	U	17	U	17	U	17	U
Metals	Arsenic	T	11		7.8		3.1		4.5		14		14	
Metals	Barium	T	79		37		18		10		22		12	
Metals	Beryllium	T	0.67	J	0.5	J	0.18	J	0.16	J	0.33		0.28	
Metals	Cadmium	T	0.21	U	0.21	U	0.22	U	0.039	J	0.22	U	0.17	J
Metals	Calcium	T	2,100		1,800		2,100		2,400		1,700		1,200	
Metals	Chromium	T	63		97		58		300		310		13	
Metals	Cobalt	T	6.1		4.4		2.9		3.6		7.1		1.9	
Metals	Copper	T	14		11		4.8		12		17		4.5	
Metals	Iron	T	20,000		13,000		9,600		5,300		17,000		6,400	
Metals	Lead	T	5.9		5.2		4.1		2.1		4.2		3.9	
Metals	Magnesium	T	5,200		3,100		2,500		1,600		2,800		1,600	
Metals	Manganese	T	210		130		91		98		120		83	
Metals	Mercury	T	0.021	U	0.02	U	0.01	J	0.022	U	0.022	U	0.022	U
Metals	Nickel	T	18		11		7		6.9		14		6.1	
Metals	Potassium	T	4,300		1,700		740		460		1,300		650	
Metals	Selenium	T	4.3	U	4.2	U	4.4	U	4.6	U	4.5	U	0.52	J
Metals	Silver	T	0.64	U	0.64	U	0.66	U	0.69	U	0.67	U	0.69	U
Metals	Sodium	T	280		240		100	J	2,600		110	J	90	J
Metals	Thallium	T	6.4	U	6.4	U	6.6	U	6.9	U	6.7	U	6.9	U
Metals	Tin	T	0.92	J	0.59	J	2.2	U	2.3	U	0.66	J	0.52	J
Metals	Vanadium	T	34		21		14		9.3		26		9.3	
Metals	Zinc	T	42		27		15		8.6		24		11	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX	
		Qc Code	FS		FD		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	5,400		5,700	J+	5,900	J+	3,700		5,800		9,700	
Metals	Antimony	T	17	U	19	U	20	U	17	U	16	U	17	U
Metals	Arsenic	T	7.1		7.1		6.6		6.5		4.4		3.6	
Metals	Barium	T	17		15		16		9.3		23		52	
Metals	Beryllium	T	0.22		0.24	J	0.23	J	0.14	J	0.34	J	0.4	J
Metals	Cadmium	T	0.26		0.43		0.45		0.23	U	0.21	U	0.22	U
Metals	Calcium	T	1,600		3,500	J+	3,600	J+	1,200		1,800		3,300	
Metals	Chromium	T	21		130	J	77	J	410		250		330	
Metals	Cobalt	T	2.4		2.4		2.9		2.1		3.9		7.4	
Metals	Copper	T	5		6.4		5.5		5		11		20	
Metals	Iron	T	6,100		7,100	J+	7,700	J+	4,900		9,000		16,000	
Metals	Lead	T	6.3		8.9		7.9		2.2		3.2		3	
Metals	Magnesium	T	1,800		1,500		1,900		920		2,500		6,900	
Metals	Manganese	T	60		88	J+	98	J+	55		100		170	
Metals	Mercury	T	0.028		0.031		0.026	J	0.022	U	0.022	U	0.02	U
Metals	Nickel	T	7.6		6.9		8.1		4.7	J	11		17	
Metals	Potassium	T	970		570		700		380		950		2,600	
Metals	Selenium	T	4.5	U	5	U	5.5	U	0.79	J	4.3	U	4.5	U
Metals	Silver	T	0.67	U	0.74	U	0.82	U	0.68	U	0.64	U	0.67	U
Metals	Sodium	T	60	J	58	J	67	J	69	J	140	J	170	
Metals	Thallium	T	6.7	U	7.4	U	8.2	U	6.8	U	6.4	U	6.7	U
Metals	Tin	T	2.2	U	0.57	J	0.69	J	2.3	U	2.1	U	0.53	J
Metals	Vanadium	T	10		11		12		7		16		34	
Metals	Zinc	T	25		22		22		7.5		18		25	

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Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	5,000		13,000		9,000		11,000		3,800		5,400	
Metals	Antimony	T	0.63	J	1.1	J	0.95	J	83	U	18	U	0.6	J
Metals	Arsenic	T	11		7.6		6.2		17		3.2		3.3	
Metals	Barium	T	16		43		34		41		10		25	
Metals	Beryllium	T	0.27		0.39		0.35		0.48		0.14	J	0.24	
Metals	Cadmium	T	0.5		0.22	U	0.23	U	0.22	U	0.24	U	0.22	U
Metals	Calcium	T	1,600		3,500		1,700		3,800		1,500		770	
Metals	Chromium	T	19		200		890		1300		310		460	
Metals	Cobalt	T	2.2		9.1		4.4		6.8		1.6		3.3	
Metals	Copper	T	5.7		27		11		25		3.5		9.9	
Metals	Iron	T	7,000		16,000		12,000		23,000		4,500		11,000	
Metals	Lead	T	4.7		8.2		5.6		21		3.4		3	
Metals	Magnesium	T	1,700		6,200		2,700		4,200		1,100		1,700	
Metals	Manganese	T	87		210		130		180		53		89	
Metals	Mercury	T	0.011	J	0.09		0.022	U	0.022	U	0.065		0.01	J
Metals	Nickel	T	6.3		23		12		17		4	J	7	
Metals	Potassium	T	750		2,000		1,500		2,000		460		730	
Metals	Selenium	T	0.82	J	4.4	U	4.6	U	4.4	U	4.8	U	4.4	U
Metals	Silver	T	0.66	U	0.66	U	0.68	U	0.66	U	0.71	U	0.66	U
Metals	Sodium	T	82	J	220		210		330		58	J	97	J
Metals	Thallium	T	6.6	U	6.6	U	6.8	U	6.6	U	7.1	U	6.6	U
Metals	Tin	T	0.59	J	0.78	J	2.3	U	0.81	J	2.4	U	2.2	U
Metals	Vanadium	T	10		40		19		35		8.3		18	
Metals	Zinc	T	14		27		23		46		9.5		19	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-706		SB-707		SB-707		SB-707		SB-707		SB-707	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
		Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX	
		Qc Code	FS		FS		FS		FS		FD		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	8,100		8,300		14,000		6,400		8,200	J+	7,400	J+
Metals	Antimony	T	1.3	J	1	J	1.2	J	15	U	0.62	J-	0.65	J-
Metals	Arsenic	T	3.1		33		29		5		3.5		3.6	
Metals	Barium	T	42		28		55		16		26		26	
Metals	Beryllium	T	0.23		0.38		0.62		0.32		0.38		0.4	
Metals	Cadmium	T	0.22	U	0.18	J	0.22	U	0.051	J	0.21	U	0.22	U
Metals	Calcium	T	3,200		12,000		3,700		7,000		2,700		2,400	
Metals	Chromium	T	460		79		44		120		84	J-	83	J-
Metals	Cobalt	T	6.2		5.7		13		3.2		3.7		3.2	
Metals	Copper	T	39		11		22		12		11		11	
Metals	Iron	T	14,000		16,000		19,000		7,700		10,000		9,500	
Metals	Lead	T	3.8		11		14		4.8		5.4		5.5	
Metals	Magnesium	T	3,900		3,000		6,400		3,200		2,900		2,500	
Metals	Manganese	T	140		110		310		150		180	J+	160	J+
Metals	Mercury	T	0.0089	J	0.042		0.022	U	0.0086	J	0.021	U	0.022	U
Metals	Nickel	T	12		15		40		13		10		8.9	
Metals	Potassium	T	1,500		890		2,700		750		1,700		1,400	
Metals	Selenium	T	4.3	U	5	U	4.4	U	4.1	U	4.2	U	4.4	U
Metals	Silver	T	0.65	U	0.75	U	0.66	U	0.62	U	0.63	U	0.66	U
Metals	Sodium	T	290		86	J	170		130	J	310		240	
Metals	Thallium	T	6.5	U	7.5	U	6.6	U	6.2	U	6.3	U	6.6	U
Metals	Tin	T	2.2	U	0.61	J	0.84	J	2.1	U	0.57	J	0.57	J
Metals	Vanadium	T	35		19		33		15		19	J	17	J
Metals	Zinc	T	26		28		43		16		23		21	

Notes:
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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162140-1		480-162140-1		480-162140-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	7,700		14,000		2,700		8,600		5,200		11,000	
Metals	Antimony	T	0.5	J	1	J	17	U	0.72	J	18	U	1.1	J
Metals	Arsenic	T	2.4		3.7		1.4	J	17		6.3		16	
Metals	Barium	T	25		60		15		54		16		47	
Metals	Beryllium	T	0.38		0.48		0.14	J	0.43		0.24		0.34	
Metals	Cadmium	T	0.23	U	0.23	U	0.22	U	0.035	J	0.16	J	0.036	J
Metals	Calcium	T	3,300		4,400		950		7,900		2,400		2,300	
Metals	Chromium	T	72		170		100		26		40		40	
Metals	Cobalt	T	3.8		6.2		1.2		5.8		2.8		7.4	
Metals	Copper	T	9.6		13		3.9		11		5.2		15	
Metals	Iron	T	7,800		16,000		4,500		11,000		5,700		16,000	
Metals	Lead	T	4.3		9.2		1.7		7.5		4.4		7.2	
Metals	Magnesium	T	2,500		4,900		960		3,200		1,700		7,300	
Metals	Manganese	T	120		170		36		170		77		190	
Metals	Mercury	T	0.021	U	0.02	J	0.011	J	0.016	J	0.012	J	0.022	U
Metals	Nickel	T	9.8		19		3.2	J	18		9.5		33	
Metals	Potassium	T	1,300		2,600		710		1,700		780		2,800	
Metals	Selenium	T	4.5	U	4.5	U	4.5	U	4.2	U	4.7	U	4.6	U
Metals	Silver	T	0.68	U	0.68	U	0.67	U	0.63	U	0.71	U	0.7	U
Metals	Sodium	T	370		470		110	J	200		63	J	160	
Metals	Thallium	T	6.8	U	6.8	U	6.7	U	6.3	U	7.1	U	7	U
Metals	Tin	T	0.5	J	0.85	J	2.2	U	0.65	J	2.4	U	0.59	J
Metals	Vanadium	T	15		32		8.6		18		9.9		28	
Metals	Zinc	T	15		40		7.8		22		17		35	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
		Lab SDG	480-162140-1		480-162140-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	7,300		12,000		9,500		2,300		4,800		8,800	
Metals	Antimony	T	16	U	0.57	J	0.77	J	17	U	16	U	0.91	J
Metals	Arsenic	T	2.9		3.2		3.8		0.75	J	1.2	J	2.3	
Metals	Barium	T	23		45		15	J+	15		23		58	
Metals	Beryllium	T	0.34		0.52		0.36		0.085	J	0.16	J	0.27	
Metals	Cadmium	T	0.2	J	0.14	J	0.21	U	0.23	U	0.22	U	0.22	U
Metals	Calcium	T	3,700		2,900		1,200	J+	910		1,500		2,300	
Metals	Chromium	T	18		31		150	J-	140		400		270	
Metals	Cobalt	T	2.9		6.6		5.6		0.87		2.4		4	
Metals	Copper	T	10		17		15	J-	2		9.3		9	
Metals	Iron	T	6,900		12,000		14,000		9,200		7,200		15,000	
Metals	Lead	T	4.5		6.2		3		2		2.3		5.4	
Metals	Magnesium	T	2,100		3,800		5,200	J-	1,000		2,500		4,100	
Metals	Manganese	T	110		140		100	J-	42		90		140	
Metals	Mercury	T	0.019	U	0.019	U	0.022	U	0.021	U	0.012	J	0.021	U
Metals	Nickel	T	9		19		17		2.8	J	8.6		12	
Metals	Potassium	T	1,100		2,400		1,000	J+	1,700		1,400		3,000	
Metals	Selenium	T	4.4	U	4.1	U	1.3	J	4.6	U	4.3	U	0.61	J
Metals	Silver	T	0.66	U	0.61	U	0.63	U	0.69	U	0.65	U	0.65	U
Metals	Sodium	T	86	J	470		81	J	230		380		300	
Metals	Thallium	T	6.6	U	6.1	U	6.3	U	6.9	U	6.5	U	6.5	U
Metals	Tin	T	0.52	J	0.96	J	2.1	U	2.3	U	2.2	U	0.68	J
Metals	Vanadium	T	17		36		31	J-	9.1		16		33	
Metals	Zinc	T	23		37		23		7.2		15		26	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
		Qc Code	FS		FS		FS		FS		FD		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	8,400		5,200		7,500		5,000		8,300		10,000	
Metals	Antimony	T	19	U	18	U	17	U	18	U	16	U	18	U
Metals	Arsenic	T	7.6		5.6		6		3.8		4.8		7	
Metals	Barium	T	49	J	13	J	21	J	12	J	46	J-	49	J-
Metals	Beryllium	T	0.3		0.18	J	0.25	J	0.22	J	0.36	J	0.52	
Metals	Cadmium	T	0.13	J	0.6	J	0.29	J	0.24	U	0.22	U	0.24	U
Metals	Calcium	T	11,000		4,600		4,200		550		1,500		2,200	
Metals	Chromium	T	63		29		39		420		17		21	
Metals	Cobalt	T	3.7		2.6		4.6		2.1		6.5		6.6	
Metals	Copper	T	7.7		4.8		11		5		9.2		11	
Metals	Iron	T	10,000		5,900		8,100		5,300		9,900		13,000	
Metals	Lead	T	8.2		5		6.2		5.7		5.7		7.1	
Metals	Magnesium	T	3,100		1,400		2,600		1,300		3,000	J-	3,300	J-
Metals	Manganese	T	150		53		100		45		120	J-	130	J-
Metals	Mercury	T	0.022	J	0.042		0.041		0.014	J	0.021	U	0.024	U
Metals	Nickel	T	10		7.4		14		7.1		14		13	
Metals	Potassium	T	1,000		540		1,000		580		1,800		1,600	
Metals	Selenium	T	5	U	4.7	U	4.5	U	4.9	U	4.4	U	4.9	U
Metals	Silver	T	0.75	U	0.7	U	0.67	U	0.73	U	0.66	U	0.73	U
Metals	Sodium	T	170	U	160	U	160	U	170	U	150	U	150	J
Metals	Thallium	T	7.5	U	7	U	6.7	U	7.3	U	6.6	U	7.3	U
Metals	Tin	T	2.5	U	0.5	J	0.62	J	2.4	U	0.5	J	0.77	J
Metals	Vanadium	T	16		10		16		8.2		18		23	
Metals	Zinc	T	21		18		20		17		24	J-	28	J-

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
		Lab SDG	480-162315-1		480-162315-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
		Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	9,700		12,000		7,300		5,800		2,100		6,500	
Metals	Antimony	T	16	U	17	U	19	U	0.56	J	17	U	17	U
Metals	Arsenic	T	4.2		0.97	J	10		9.2		2.1	J	2	J
Metals	Barium	T	81	J	53	J	43		24		14		14	
Metals	Beryllium	T	0.28	J	2.2	U	0.32		0.21	J	0.08	J	0.27	
Metals	Cadmium	T	0.22	U	0.22	U	0.1	J	0.05	J	0.04	J	1.9	
Metals	Calcium	T	2,800		8,700		11,000		2,800		1,100		950	
Metals	Chromium	T	44		420		140		41		10		12	
Metals	Cobalt	T	6.8		13		4.6		3.7		0.79		3.2	
Metals	Copper	T	9		29		14		7.5		3.8		8.6	
Metals	Iron	T	15,000		21,000		9,900		8,700		3,200		5,300	
Metals	Lead	T	4.7		5.7		7.4		4.4		1.9		4.8	
Metals	Magnesium	T	4,500		10,000		3,000		3,000		840		1,900	
Metals	Manganese	T	200		270		170		130		47		69	
Metals	Mercury	T	0.022	U	0.021	U	0.021	J	0.01	J	0.022	U	0.02	U
Metals	Nickel	T	14		60		14		14		2.5	J	10	
Metals	Potassium	T	3,500		2,700		1,700		1,200		650		810	
Metals	Selenium	T	4.3	U	4.4	U	5.2	U	4.7	U	4.5	U	0.57	J
Metals	Silver	T	0.65	U	0.67	U	0.78	U	0.7	U	0.67	U	0.67	U
Metals	Sodium	T	160		870		250		130	J	81	J	110	J
Metals	Thallium	T	6.5	U	6.7	U	7.8	U	7	U	6.7	U	6.7	U
Metals	Tin	T	0.47	J	0.57	J	0.74	J	0.51	J	2.2	U	2.2	U
Metals	Vanadium	T	28		53		18		13		5.2		9.9	
Metals	Zinc	T	35		39		28		19		6.4		21	

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Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
		Lab SDG	480-162199-1		480-162199-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	3,900		12,000		8,200		4,000		8,100	J	3,100	
Metals	Antimony	T	19	U	1.2	J	0.64	J	17	U	0.45	J-	17	U
Metals	Arsenic	T	8.9		8.4		8.1		3.9		12		0.91	J
Metals	Barium	T	26		46		73		18		32		6.6	
Metals	Beryllium	T	0.17	J	0.35		0.34		0.16	J	0.36		0.11	J
Metals	Cadmium	T	0.25	U	0.21	U	0.34		9.3		2.5		0.79	
Metals	Calcium	T	1,500		6,400		30,000		1,200		4,100	J-	1,000	
Metals	Chromium	T	310		740		95		28		63	J+	5.9	
Metals	Cobalt	T	2.1		15		3.9		1.5		5.4		0.92	
Metals	Copper	T	7		25		8.6		4.3		12		2.8	
Metals	Iron	T	11,000		26,000		9,300		5,300		11,000		2,800	
Metals	Lead	T	4.9		5.6		8.1		5.7		13		1.7	
Metals	Magnesium	T	1,400		11,000		3,400		940		2,800		860	
Metals	Manganese	T	72		290		160		45		140	J+	42	
Metals	Mercury	T	0.025	U	0.0093	J	0.035		0.029		0.19		0.024	U
Metals	Nickel	T	7.1		39		9.2		6.4		16		4.6	J
Metals	Potassium	T	1,900		2,300		1,200		460		1,500		440	
Metals	Selenium	T	5.1	U	0.58	J	1.1	J	0.5	J	0.58	J	4.5	U
Metals	Silver	T	0.76	U	0.62	U	0.76	U	0.7	U	0.65	U	0.68	U
Metals	Sodium	T	380		1,300		140	J	87	J	180	J	81	J
Metals	Thallium	T	7.6	U	6.2	U	7.6	U	7	U	6.5	U	6.8	U
Metals	Tin	T	0.55	J	0.75	J	0.76	J	2.3	U	0.86	J	2.3	U
Metals	Vanadium	T	16		60		16		7.4		19		5.2	
Metals	Zinc	T	12		46		25		63		78	J+	8.8	

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Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
		Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	3,000		13,000		6,900		8,100		10,000		8,400	
Metals	Antimony	T	20	U	0.52	J	16	U	18	U	16	U	16	U
Metals	Arsenic	T	1.5	J	1.6	J	2.8		7.7		8.9		7.5	
Metals	Barium	T	11		110		21		61		43		34	
Metals	Beryllium	T	0.12	J	0.29		0.38		0.36		0.54		0.37	
Metals	Cadmium	T	0.054	J	0.21	U	0.21	U	0.16	J	0.062	J	0.067	J
Metals	Calcium	T	1,300		3,000		1,400		22,000		4,100		15,000	
Metals	Chromium	T	5.3		260		250		78		35		38	
Metals	Cobalt	T	1		8.4		3.3		4.2		5.8		3.7	
Metals	Copper	T	3.6		28		14		11		11		11	
Metals	Iron	T	2,700		16,000		7,900		9,800		11,000		8,900	
Metals	Lead	T	1.7		2.5		4		12		6.3		20	
Metals	Magnesium	T	900		11,000		2,100		3,300		3,800		2,200	
Metals	Manganese	T	45		270		110		160		190		130	
Metals	Mercury	T	0.025	U	0.022	U	0.021	U	0.048		0.021	U	0.069	
Metals	Nickel	T	4.5	J	17		9.8		10		24		9.3	
Metals	Potassium	T	620		7,100		970		1,500		2,100		1,500	
Metals	Selenium	T	0.7	J	4.1	U	0.46	J	4.8	U	0.55	J	4.3	U
Metals	Silver	T	0.81	U	0.62	U	0.64	U	0.73	U	0.65	U	0.65	U
Metals	Sodium	T	95	J	350		82	J	170		200		170	
Metals	Thallium	T	8.1	U	6.2	U	6.4	U	7.3	U	6.5	U	6.5	U
Metals	Tin	T	2.7	U	0.76	J	2.1	U	0.69	J	0.84	J	0.72	J
Metals	Vanadium	T	5.4		38		12		19		22		17	
Metals	Zinc	T	9.2		37		21		25		24		24	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
T= total

Table 2.3 - Final Results Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO	
		Location	SB-712		SB-712		SB-712		SB-712	
		Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Qc Code	FS		FS		FS		FS	
		Units	mg/kg		mg/kg		mg/kg		mg/kg	
Method C	**Parameter**	**Fraction**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Aluminum	T	10,000		4,500		10,000		2,500	
Metals	Antimony	T	0.86	J	0.53	J	1.5	J	16	U
Metals	Arsenic	T	13		5.5		4.1		4.5	
Metals	Barium	T	41		15		71		18	
Metals	Beryllium	T	0.5		0.16	J	0.27		0.097	J
Metals	Cadmium	T	0.098	J	0.22	U	0.22	U	0.21	U
Metals	Calcium	T	3,300		1,500		12,000		850	
Metals	Chromium	T	38		130		250		32	
Metals	Cobalt	T	7.1		2.5		18		1.4	
Metals	Copper	T	23		4.8		64		2.2	
Metals	Iron	T	13,000		7,700		28,000		5,000	
Metals	Lead	T	19		2.8		2.8		2	
Metals	Magnesium	T	4,000		2,600		5,700		1,300	
Metals	Manganese	T	210		120		310		58	
Metals	Mercury	T	0.087		0.021	U	0.02	U	0.021	U
Metals	Nickel	T	21		11		15		4.7	J
Metals	Potassium	T	1,800		1,200		3,300		940	
Metals	Selenium	T	4.4	U	4.4	U	0.58	J	4.2	U
Metals	Silver	T	0.66	U	0.66	U	0.65	U	0.63	U
Metals	Sodium	T	220		110	J	1,500		92	J
Metals	Thallium	T	6.6	U	6.6	U	6.5	U	6.3	U
Metals	Tin	T	1.6	J	2.2	U	0.87	J	2.1	U
Metals	Vanadium	T	25		12		110		7.9	
Metals	Zinc	T	41		15		48		7.4	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
T= total

Table 2.4 - Final Results Summary - TCLP Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
			Location	SB-701		SB-702		SB-703		SB-704		SB-705		SB-706	
			Lab SDG	480-162513-1		480-162426-1		480-162315-1		480-162426-1		480-162426-1		480-162353-1	
			Sample Date	11/11/2019		11/8/2019		11/5/2019		11/7/2019		11/8/2019		11/6/2019	
			Sample ID	OC-SB-701-0.0/10-XXX		OC-SB-702-0.0/10-XXX		OC-SB-703-0.0/10-XXX		OC-SB-704-0.0/10-XXX		OC-SB-705-0.0/10-XXX		OC-SB-706-0.0/10-XXX	
			Qc Code	FS		FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Fraction**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Arsenic	C	mg/l	0.0097	J	0.0077	J	0.015	U	0.011	J	0.017		0.015	U
Metals	Barium	C	mg/l	0.21	J	0.2	J	0.2	J	0.18	J	0.15	J	0.19	J
Metals	Cadmium	C	mg/l	0.0011	J	0.002	U	0.00061	J	0.0014	J	0.0047		0.0028	
Metals	Chromium	C	mg/l	0.13		0.017	J	0.095		0.24		0.19		0.18	
Metals	Lead	C	mg/l	0.011	J	0.012	J	0.012	J	0.012	J	0.0097	J	0.014	J
Metals	Mercury	C	mg/l	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	UJ
Metals	Selenium	C	mg/l	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U
Metals	Silver	C	mg/l	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
C = TCLP extract

Table 2.4 - Final Results Summary - TCLP Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Lab ID	TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO		TALBFLO	
			Location	SB-707		SB-708		SB-709		SB-710		SB-711		SB-712	
			Lab SDG	480-162353-1		480-162140-1		480-162315-1		480-162199-1		480-162572-1		480-162572-1	
			Sample Date	11/7/2019		11/4/2019		11/6/2019		11/4/2019		11/12/2019		11/11/2019	
			Sample ID	OC-SB-707-0.0/10-XXX		OC-SB-708-0.0/10-XXX		OC-SB-709-0.0/10-XXX		OC-SB-710-0.0/10XXX		OC-SB-711-0.0/10-XXX		OC-SB-712-0.0/10-DUP	
			Qc Code	FS		FS		FS		FS		FS		FD	
Method Class	**Parameter**	**Fraction**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Arsenic	C	mg/l	0.035	J+	0.015	U	0.015	U	0.015		0.012	J	0.011	J
Metals	Barium	C	mg/l	0.15	J	0.45	J	0.27	J	0.23	J	0.28	J	0.26	J
Metals	Cadmium	C	mg/l	0.0018	J	0.002	U	0.0037		0.0016	J	0.0025		0.0015	J
Metals	Chromium	C	mg/l	0.057		0.035		0.056		0.045		0.1		0.15	
Metals	Lead	C	mg/l	0.027		0.02	U	0.015	J	0.0068	J	0.011	J	0.022	J
Metals	Mercury	C	mg/l	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Metals	Selenium	C	mg/l	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U
Metals	Silver	C	mg/l	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
C = TCLP extract

Table 2.4 - Final Results Summary - TCLP Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

			Lab ID	TALBFLO	
			Location	SB-712	
			Lab SDG	480-162572-1	
			Sample Date	11/11/2019	
			Sample ID	OC-SB-712-0.0/10-XXX	
			Qc Code	FS	
Method Class	**Parameter**	**Fraction**	**Units**	Result	Qualifier
Metals	Arsenic	C	mg/l	0.013	J
Metals	Barium	C	mg/l	0.29	J
Metals	Cadmium	C	mg/l	0.0012	J
Metals	Chromium	C	mg/l	0.12	
Metals	Lead	C	mg/l	0.059	J
Metals	Mercury	C	mg/l	0.0002	U
Metals	Selenium	C	mg/l	0.025	U
Metals	Silver	C	mg/l	0.006	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
C = TCLP extract

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	2074150		2074150		2074150		2074150		2074150		2074150	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	2.5		2.8		0.98		0.73		0.66		3.7	
pH Units	pH	7.78	J	7.25	J	7.95	J	8.23	J	8.19	J	8.53	J
mV	ORP	399		415		356		347		352		367	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-701		SB-701		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	2074150		2074150		2073916		2073916		2073916		2073916	
	Sample Date	11/11/2019		11/11/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	22.6		8.9		1.6		0.98		0.71		0.55	
pH Units	pH	7.47	J	7.43	J	11.3	J	8.15	J	6.74	J	7.63	J
mV	ORP	373		356		204		320		419		411	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-702		SB-702		SB-702		SB-703		SB-703		SB-703	
	Lab SDG	2073916		2073916		2073916		2073905		2073905		2073905	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.44	U	7.5		1		5.8		2.3	J	0.7	J
pH Units	pH	8.06	J	6.49	J	7.34	J	10.4	J	9.31	J	8.61	J
mV	ORP	344		373		326		266		263		321	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-704	
	Lab SDG	2073905		2073905		2073905		2073905		2073905		2073916	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
	Sample ID	OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.29	J	0.37	J	3.2		0.41	J	9.8		4.1	
pH Units	pH	7.57	J	7.93	J	8.13	J	8.71	J	5.19	J	10.6	J
mV	ORP	326		322		320		313		334		260	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	2073916		2073916		2073916		2073916		2073916		2073916	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.49	U	0.46	U	2.4		5.3		1.3		6.3	
pH Units	pH	8.91	J	8.48	J	8.43	J	8.28	J	9.08	J	5.63	J
mV	ORP	345		215		268		293		271		319	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-704		SB-705		SB-705		SB-705		SB-705		SB-705	
	Lab SDG	2073916		2073916		2073916		2073916		2073916		2073916	
	Sample Date	11/7/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FD		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	4.1		0.46	U	1.1		2.7	J	1.5	J	7.4	
pH Units	pH	7.07	J	8.29	J	7.24	J	7.43	J	7.34	J	7.89	J
mV	ORP	420		334		358		373		385		355	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-705		SB-705		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	2073916		2073916		2073662		2073662		2073662		2073662	
	Sample Date	11/8/2019		11/8/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	9.9		4.2		0.95		2.9		6.6		20.8	
pH Units	pH	7.94	J	7.91	J	7.44	J	6.98	J	6.77	J	7.33	J
mV	ORP	351		385		337		275		420		400	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-706		SB-706		SB-706		SB-707		SB-707		SB-707	
	Lab SDG	2073662		2073662		2073662		2073662		2073662		2073662	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	3.6		4.7		5.6		2.7		1		7.6	
pH Units	pH	6.63	J	7.09	J	7.03	J	7.19	J	7.34	J	7.38	J
mV	ORP	214		325		397		375		379		380	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-708	
	Lab SDG	2073662		2073662		2073662		2073662		2073662		2072711	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/4/2019	
	Sample ID	OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	2.9		3.4		4.2		5.5		5.5		4.9	
pH Units	pH	7.97	J	7.91	J	7.22	J	8.27	J	8.64	J	10.1	J
mV	ORP	361		362		402		351		340		85.5	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	2072711		2072711		2072711		2072711		2072990		2072990	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.7		0.76		0.72		0.8		2.6		7.9	
pH Units	pH	7.52	J	7.95	J	7.21	J	7.57	J	7.25	J	5.55	J
mV	ORP	257		280		306		298		307		323	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-708		SB-708		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	2072990		2072990		2073905		2073905		2073905		2073905	
	Sample Date	11/4/2019		11/4/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	6		11.4		2.2		1.2		1.7		8	
pH Units	pH	6.02	J	6.15	J	7.74	J	7.4	J	6.86	J	6.43	J
mV	ORP	318		313		415		413		266		313	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-709		SB-709		SB-709		SB-709		SB-710		SB-710	
	Lab SDG	2073905		2073905		2073905		2073905		2072990		2072990	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.7		0.74		3.9		6.7		2		1.2	
pH Units	pH	5.81	J	6.04	J	7.68	J	6.85	J	7.99	J	7.56	J
mV	ORP	427		391		421		394		371		253	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-710		SB-710		SB-710		SB-710		SB-711		SB-711	
	Lab SDG	2072990		2072990		2072990		2072990		2074385		2074385	
	Sample Date	11/4/2019		11/4/2019		11/5/2019		11/5/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.79		0.61		8.5		7.3		5.1		0.49	
pH Units	pH	8.37	J	7.16	J	6.36	J	4.57	J	10.1	J	8.45	J
mV	ORP	228		298		363		387		311		323	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-711		SB-711		SB-711		SB-711		SB-711		SB-712	
	Lab SDG	2074385		2074385		2074385		2074385		2074385		2074385	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/11/2019	
	Sample ID	OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.74		0.18	J	0.37	J	10.1		5.7		5.5	
pH Units	pH	8.29	J	8.75	J	8.01	J	7.74	J	7.34	J	9.88	J
mV	ORP	333		362		381		394		397		318	

Table 2.5 - Final Results Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-712		SB-712		SB-712		SB-712		SB-712		SB-712	
	Lab SDG	2074385		2074385		2074385		2074385		2074385		2074385	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	0.71		0.56		1.4		2.8		16.8		1	
pH Units	pH	8.84	J	7.84	J	7.73	J	7.42	J	7.79	J	8.76	J
mV	ORP	321		341		345		411		337		300	

Table 2.5 - Final Results Summary - QC Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST	
	Location	QC		QC		QC		QC	
	Lab SDG	2073662		2073662		2074032		2074262	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX	
	Qc Code	EB		EB		EB		EB	
	Units	ug/l		ug/l		ug/l		ug/l	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Chromium, Hexavalent	10	U	10	U	10	U	10	U

Notes:

U = undetected

J = estimated value

J+ = estimated biased high

J- = estimated biased low

R = rejected/unusable

FS= field sample

FD = field duplicate

EB = equipment blank

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701	
		Lab SDG	2074150		2074150		2074150		2074150		2074150	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX	
		Qc Code	FD		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	19		18.1		19.5		14.8		18	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701	
		Lab SDG	2074150		2074150		2074150		480-162513-1		480-162513-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FD		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg							12	UJ	12	UJ
Inorganics & Wet Chem	Sulfate	mg/kg							13000	J	12000	J
Inorganics & Wet Chem	Ammonia	mg/kg							6.5		4.7	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	16.4		6.7		18.2		18.9		18.4	
Moisture/Solids	Percent Solids	Percent							81.1		81.6	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-701		SB-701		SB-701	
		Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-0.0/10-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	12	UJ	11	UJ	12	UJ	11	UJ		
Inorganics & Wet Chem	Sulfate	mg/kg	250	J	130	J	230	J	15000	J		
Inorganics & Wet Chem	Ammonia	mg/kg	27		21		35		28			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg									10	UJ
Inorganics & Wet Chem	Ignitability	mm/sec									2.2	U
Inorganics & Wet Chem	pH (Corrosivity)	pH Units									8.4	J
Moisture/Solids	Percent Moisture	Percent	16.8		13.7		18.3		12.9			
Moisture/Solids	Percent Solids	Percent	83.2		86.3		81.7		87.1			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-701		SB-701		SB-702		SB-702		SB-702	
		Lab SDG	480-162513-1		480-162513-1		2073916		2073916		2073916	
		Sample Date	11/11/2019		11/11/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	390	J	11	UJ						
Inorganics & Wet Chem	Sulfate	mg/kg	3900	J	190	J						
Inorganics & Wet Chem	Ammonia	mg/kg	210		25							
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	6.7		10.5		14.6		7.4		8.7	
Moisture/Solids	Percent Solids	Percent	93.3		89.5							

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702	
		Lab SDG	2073916		2073916		2073916		2073916		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-702-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg									9.3	J
Inorganics & Wet Chem	Sulfate	mg/kg									610	J
Inorganics & Wet Chem	Ammonia	mg/kg									4	J
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	9.8		8.6		9		5.5		14.3	
Moisture/Solids	Percent Solids	Percent									85.7	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-702		SB-702		SB-702	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-0.0/10-XXX		OC-SB-702-8.0/10-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	10	UJ	11	UJ	11	UJ			10	U
Inorganics & Wet Chem	Sulfate	mg/kg	3000	J	6100	J	730	J			180	
Inorganics & Wet Chem	Ammonia	mg/kg	6		6		7.8				13	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg							10	U		
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg							10	U		
Inorganics & Wet Chem	Ignitability	mm/sec							2.2	U		
Inorganics & Wet Chem	pH (Corrosivity)	pH Units							7.4	J		
Moisture/Solids	Percent Moisture	Percent	6.4		11		10				8.3	
Moisture/Solids	Percent Solids	Percent	93.6		89		90				91.7	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-702		SB-702		SB-703		SB-703		SB-703	
		Lab SDG	480-162426-1		480-162426-1		2073905		2073905		2073905	
		Sample Date	11/8/2019		11/8/2019		11/5/2019		11/5/2019		11/5/2019	
		Sample ID	OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FD		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	5.8	J	5.3	J						
Inorganics & Wet Chem	Sulfate	mg/kg	1000		140							
Inorganics & Wet Chem	Ammonia	mg/kg	41		11							
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	7.6		12.5		25.8		22.5		16	
Moisture/Solids	Percent Solids	Percent	92.4		87.5							

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703	
		Lab SDG	2073905		2073905		2073905		2073905		2073905	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
		Sample ID	OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	25.8		15		15.1		14.2		12.2	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-703	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
		Sample ID	OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-0.0/10-XXX	
		Qc Code	FS		FD		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	5.4	J	11	U	12	U	12	U		
Inorganics & Wet Chem	Sulfate	mg/kg	18000		16000		10000		430			
Inorganics & Wet Chem	Ammonia	mg/kg	7		10		12		7.9			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg									10	UJ
Inorganics & Wet Chem	Ignitability	mm/sec									2.2	U
Inorganics & Wet Chem	pH (Corrosivity)	pH Units									5.4	J
Moisture/Solids	Percent Moisture	Percent	23.1		13		17.6		21			
Moisture/Solids	Percent Solids	Percent	76.9		87		82.4		79			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-703		SB-703		SB-703		SB-703		SB-704	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		2073916	
		Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/7/2019	
		Sample ID	OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	5.8	J	9.2	J	11	U	210			
Inorganics & Wet Chem	Sulfate	mg/kg	180		160		16000		1300			
Inorganics & Wet Chem	Ammonia	mg/kg	10		10		5.1		130			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	20		10.8		10.5		8.3		28.5	
Moisture/Solids	Percent Solids	Percent	80		89.2		89.5		91.7			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704	
		Lab SDG	2073916		2073916		2073916		2073916		2073916	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	16.9		12.4		9.2		7.4		7.2	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704	
		Lab SDG	2073916		2073916		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg					4.7	J	11	UJ	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg					18000	J	16000	J	760	J
Inorganics & Wet Chem	Ammonia	mg/kg					15		44		40	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	11.9		12.4		19.8		13.2		10.6	
Moisture/Solids	Percent Solids	Percent					80.2		86.8		89.4	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-704		SB-704		SB-704		SB-704	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-0.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	11	UJ	4.8	J			10	UJ	1300	J
Inorganics & Wet Chem	Sulfate	mg/kg	530	J	150	J			68	J	6100	J
Inorganics & Wet Chem	Ammonia	mg/kg	46		41				29		620	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg					10	U				
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg					10	UJ				
Inorganics & Wet Chem	Ignitability	mm/sec					2.2	U				
Inorganics & Wet Chem	pH (Corrosivity)	pH Units					7.7	J				
Moisture/Solids	Percent Moisture	Percent	8.2		6.8				5.7		9.5	
Moisture/Solids	Percent Solids	Percent	91.8		93.2				94.3		90.5	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-704		SB-705		SB-705		SB-705		SB-705	
		Lab SDG	480-162426-1		2073916		2073916		2073916		2073916	
		Sample Date	11/7/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FD		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	11	UJ								
Inorganics & Wet Chem	Sulfate	mg/kg	270	J								
Inorganics & Wet Chem	Ammonia	mg/kg	40									
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	8.4		12.2		10.8		15.1		15.6	
Moisture/Solids	Percent Solids	Percent	91.6									

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705	
		Lab SDG	2073916		2073916		2073916		480-162426-1		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg							11	UJ	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg							77	J	1400	J
Inorganics & Wet Chem	Ammonia	mg/kg							3.8	J	5.8	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	10.1		13.5		12.8		12.3		10.6	
Moisture/Solids	Percent Solids	Percent							87.7		89.4	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-705		SB-705		SB-705		SB-705	
		Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-705-0.0/10-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX	
		Qc Code	FS		FD		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg			12	U	13	U	11	U	11	U
Inorganics & Wet Chem	Sulfate	mg/kg			3400	J	3400	J	160		190	
Inorganics & Wet Chem	Ammonia	mg/kg			11		7.5		8.2		29	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg	10	U								
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg	10	U								
Inorganics & Wet Chem	Ignitability	mm/sec	2.2	U								
Inorganics & Wet Chem	pH (Corrosivity)	pH Units	7.6	J								
Moisture/Solids	Percent Moisture	Percent			19.1		24		13.5		9.3	
Moisture/Solids	Percent Solids	Percent			80.9		76		86.5		90.7	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-705		SB-706		SB-706		SB-706		SB-706	
		Lab SDG	480-162426-1		2073662		2073662		2073662		2073662	
		Sample Date	11/8/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	5.4	J								
Inorganics & Wet Chem	Sulfate	mg/kg	200	J								
Inorganics & Wet Chem	Ammonia	mg/kg	39									
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	7.6		8.8		12.9		11.2		10.7	
Moisture/Solids	Percent Solids	Percent	92.4									

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706	
		Lab SDG	2073662		2073662		2073662		480-162353-1		480-162353-1	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg							11	UJ	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg							1000	J-	410	J
Inorganics & Wet Chem	Ammonia	mg/kg							10		14	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	19.1		10.1		12.8		11.4		9.1	
Moisture/Solids	Percent Solids	Percent							88.6		90.9	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-706		SB-706		SB-706		SB-706	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-0.0/10-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	7	J	4.8	J			12	UJ	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg	120	J	160	J			290	J	66	J
Inorganics & Wet Chem	Ammonia	mg/kg	9.6		12				11		11	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg					10	U				
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg					10	U				
Inorganics & Wet Chem	Ignitability	mm/sec					2.2	U				
Inorganics & Wet Chem	pH (Corrosivity)	pH Units					6.1	J				
Moisture/Solids	Percent Moisture	Percent	9.5		8.6				18.6		8.8	
Moisture/Solids	Percent Solids	Percent	90.5		91.4				81.4		91.2	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-706		SB-707		SB-707		SB-707		SB-707	
		Lab SDG	480-162353-1		2073662		2073662		2073662		2073662	
		Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP	
		Qc Code	FS		FS		FS		FS		FD	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	15	J								
Inorganics & Wet Chem	Sulfate	mg/kg	140	J								
Inorganics & Wet Chem	Ammonia	mg/kg	12									
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	7.9		19.1		14.5		7.8		6.9	
Moisture/Solids	Percent Solids	Percent	92.1									

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707	
		Lab SDG	2073662		2073662		2073662		2073662		480-162353-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-707-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg									5.2	J
Inorganics & Wet Chem	Sulfate	mg/kg									170	J
Inorganics & Wet Chem	Ammonia	mg/kg									6	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	6.5		9.9		22.4		6.8		19.2	
Moisture/Solids	Percent Solids	Percent									80.8	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-707		SB-707	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
		Sample ID	OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX	
		Qc Code	FS		FS		FD		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	11	UJ	11	UJ	5.6	J	4.1	J	9.9	J
Inorganics & Wet Chem	Sulfate	mg/kg	2100	J	7100	J	150		130	J	190	
Inorganics & Wet Chem	Ammonia	mg/kg	13		6.5		5.5	J-	5.6	J-	7.5	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	8.9		8.2		6.2		6.1		8.2	
Moisture/Solids	Percent Solids	Percent	91.1		91.8		93.8		93.9		91.8	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-707		SB-707		SB-707		SB-708		SB-708	
		Lab SDG	480-162353-1		480-162353-1		480-162353-1		2072711		2072711	
		Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-707-0.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg			11	U	11	U				
Inorganics & Wet Chem	Sulfate	mg/kg			53		46					
Inorganics & Wet Chem	Ammonia	mg/kg			17		18					
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg	10	U								
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg	10	UJ								
Inorganics & Wet Chem	Ignitability	mm/sec	2.2	U								
Inorganics & Wet Chem	pH (Corrosivity)	pH Units	7.4	J								
Moisture/Solids	Percent Moisture	Percent			11.7		6.3		19.7		15.1	
Moisture/Solids	Percent Solids	Percent			88.3		93.7					

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708	
		Lab SDG	2072711		2072711		2072711		2072990		2072990	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	9.9		8.7		5.8		10.4		17	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708	
		Lab SDG	2072990		2072990		480-162140-1		480-162140-1		480-162140-1	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg					11	UJ	12	UJ	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg					430	J	590	J	190	J
Inorganics & Wet Chem	Ammonia	mg/kg					7.3	U	18		6.6	U
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	15.9		12.1		10		15.6		10.9	
Moisture/Solids	Percent Solids	Percent					90		84.4		89.1	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-708		SB-708		SB-708	
		Lab SDG	480-162140-1		480-162140-1		480-162140-1		480-162199-1		480-162199-1	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-0.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	10	UJ	10	UJ			11	UJ	70	J
Inorganics & Wet Chem	Sulfate	mg/kg	1800	J	57	J			35	J	460	J
Inorganics & Wet Chem	Ammonia	mg/kg	15		9.9	U			8.5		62	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg					10	U				
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg					10	UJ				
Inorganics & Wet Chem	Ignitability	mm/sec					2.2	U				
Inorganics & Wet Chem	pH (Corrosivity)	pH Units					5.8	J				
Moisture/Solids	Percent Moisture	Percent	5.7		3.7				6.5		13.9	
Moisture/Solids	Percent Solids	Percent	94.3		96.3				93.5		86.1	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-708		SB-708		SB-709		SB-709		SB-709	
		Lab SDG	480-162199-1		480-162199-1		2073905		2073905		2073905	
		Sample Date	11/4/2019		11/4/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	210	J	7.2	J						
Inorganics & Wet Chem	Sulfate	mg/kg	1200	J	100	J						
Inorganics & Wet Chem	Ammonia	mg/kg	150		17							
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	8		8.8		18		15.5		28.5	
Moisture/Solids	Percent Solids	Percent	92		91.2							

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709	
		Lab SDG	2073905		2073905		2073905		2073905		2073905	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX	
		Qc Code	FS		FD		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	13.4		12.1		13.6		12.8		8.6	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-709	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
		Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP	
		Qc Code	FS		FS		FS		FS		FD	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	12	U	11	U	12	U	17		11	U
Inorganics & Wet Chem	Sulfate	mg/kg	1300		12000		63		150		140	
Inorganics & Wet Chem	Ammonia	mg/kg	4.1	J	7.6		15		3.5	J	14	J
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	16.5		14.3		14.5		15		14	
Moisture/Solids	Percent Solids	Percent	83.5		85.7		85.5		85		86	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-709		SB-709		SB-709		SB-709		SB-710	
		Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		2072990	
		Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019	
		Sample ID	OC-SB-709-8.0/10-XXX		OC-SB-709-0.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	12	U			11	U	11	U		
Inorganics & Wet Chem	Sulfate	mg/kg	110				890		320			
Inorganics & Wet Chem	Ammonia	mg/kg	6.7	J			8.6		150			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg			10	U						
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg			10	U						
Inorganics & Wet Chem	Ignitability	mm/sec			2.2	U						
Inorganics & Wet Chem	pH (Corrosivity)	pH Units			6.3	J						
Moisture/Solids	Percent Moisture	Percent	14.4				9.3		7.8		13	
Moisture/Solids	Percent Solids	Percent	85.6				90.7		92.2			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-710	
		Lab SDG	2072990		2072990		2072990		2072990		2072990	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/5/2019		11/5/2019	
		Sample ID	OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg										
Inorganics & Wet Chem	Sulfate	mg/kg										
Inorganics & Wet Chem	Ammonia	mg/kg										
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	14		13.7		7.4		20.2		7.9	
Moisture/Solids	Percent Solids	Percent										

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-710		SB-710		SB-710	
		Lab SDG	480-162199-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
		Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
		Sample ID	OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-0.0/10XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	19	J	6.9	J	11	UJ	11	UJ		
Inorganics & Wet Chem	Sulfate	mg/kg	3900	J	6400	J	170	J	71	J		
Inorganics & Wet Chem	Ammonia	mg/kg	15		12		18		14			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg									10	UJ
Inorganics & Wet Chem	Ignitability	mm/sec									2.2	U
Inorganics & Wet Chem	pH (Corrosivity)	pH Units									5.5	J
Moisture/Solids	Percent Moisture	Percent	22.6		12.4		12.3		8.4			
Moisture/Solids	Percent Solids	Percent	77.4		87.6		87.7		91.6			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-710		SB-710		SB-711		SB-711		SB-711	
		Lab SDG	480-162199-1		480-162199-1		2074385		2074385		2074385	
		Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	57	J	670	J						
Inorganics & Wet Chem	Sulfate	mg/kg	1100	J	3700	J						
Inorganics & Wet Chem	Ammonia	mg/kg	52		58							
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	18.6		8		16.4		11.6		9.4	
Moisture/Solids	Percent Solids	Percent	81.4		92							

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-711		SB-711	
		Lab SDG	2074385		2074385		2074385		2074385		480-162572-1	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-711-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg									12	UJ
Inorganics & Wet Chem	Sulfate	mg/kg									1800	J
Inorganics & Wet Chem	Ammonia	mg/kg									14	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	16		18.3		8.4		7.8		18.9	
Moisture/Solids	Percent Solids	Percent									81.1	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-711		SB-711		SB-711	
		Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
		Sample ID	OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX		OC-SB-711-0.0/10-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	11	UJ	11	UJ	12	UJ	7.2	J		
Inorganics & Wet Chem	Sulfate	mg/kg	290	J	2400	J	12	J	43	J		
Inorganics & Wet Chem	Ammonia	mg/kg	42		8.8		58		50			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Ignitability	mm/sec									2.2	U
Inorganics & Wet Chem	pH (Corrosivity)	pH Units									8.5	J
Moisture/Solids	Percent Moisture	Percent	12.7		9.4		14.9		23.8			
Moisture/Solids	Percent Solids	Percent	87.3		90.6		85.1		76.2			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-711		SB-711		SB-712		SB-712		SB-712	
		Lab SDG	480-162572-1		480-162572-1		2074385		2074385		2074385	
		Sample Date	11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	42	J	11	UJ						
Inorganics & Wet Chem	Sulfate	mg/kg	500	J	13	J						
Inorganics & Wet Chem	Ammonia	mg/kg	42		9.2							
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	7.9		8.1		14.8		8.4		9.5	
Moisture/Solids	Percent Solids	Percent	92.1		91.9							

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-712		SB-712		SB-712		SB-712		SB-712	
		Lab SDG	2074385		2074385		2074385		2074385		480-162572-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX		OC-SB-712-0.0/2.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg									12	UJ
Inorganics & Wet Chem	Sulfate	mg/kg									4000	J
Inorganics & Wet Chem	Ammonia	mg/kg									4.4	J
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg										
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg										
Inorganics & Wet Chem	Ignitability	mm/sec										
Inorganics & Wet Chem	pH (Corrosivity)	pH Units										
Moisture/Solids	Percent Moisture	Percent	11		11.8		8.2		10		17.6	
Moisture/Solids	Percent Solids	Percent									82.4	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-712		SB-712		SB-712		SB-712		SB-712	
		Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX		OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-0.0/10-DUP	
		Qc Code	FS		FS		FS		FS		FD	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg	6.8	J	11	UJ	12	J	6.7	J		
Inorganics & Wet Chem	Sulfate	mg/kg	520	J	12000	J	1500	J	180	J		
Inorganics & Wet Chem	Ammonia	mg/kg	3.6	J	18		11		9.9			
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg									10	U
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg									10	UJ
Inorganics & Wet Chem	Ignitability	mm/sec									2.2	U
Inorganics & Wet Chem	pH (Corrosivity)	pH Units									8.9	J
Moisture/Solids	Percent Moisture	Percent	10.9		11		11		10.2			
Moisture/Solids	Percent Solids	Percent	89.1		89		89		89.8			

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Location	SB-712		SB-712		SB-712	
		Lab SDG	480-162572-1		480-162572-1		480-162572-1	
		Sample Date	11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-0.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Qc Code	FS		FS		FS	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/kg			250	J	11	UJ
Inorganics & Wet Chem	Sulfate	mg/kg			3700	J	43	J
Inorganics & Wet Chem	Ammonia	mg/kg			140		5.9	
Inorganics & Wet Chem	Cyanide, Reactive	mg/kg	10	U				
Inorganics & Wet Chem	Sulfide, Reactive	mg/kg	10	UJ				
Inorganics & Wet Chem	Ignitability	mm/sec	2.2	U				
Inorganics & Wet Chem	pH (Corrosivity)	pH Units	8.9	J				
Moisture/Solids	Percent Moisture	Percent			8		9.3	
Moisture/Solids	Percent Solids	Percent			92		90.7	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.6 - Final Results Summary - QC General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	TA-PIT		TA-PIT		TA-PIT		TA-PIT	
		Location	QC		QC		QC		QC	
		Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1	
		Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019	
		Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX	
		Qc Code	EB		EB		EB		EB	
Method Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Inorganics & Wet Chem	Chloride	mg/l	1	U	1	U	1	U	1	U
Inorganics & Wet Chem	Sulfate	mg/l	1	U	1	U	1	U	1	U
Inorganics & Wet Chem	Ammonia	mg/l	1.5		0.19	J	0.19	J	0.27	

Notes:

U = undetected

J = estimated value

J+ = estimated biased high

J- = estimated biased low

R = rejected/unusable

FS= field sample

FD = field duplicate

EB = equipment blank

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	QC		QC		QC		QC		SB-701		SB-701	
	Lab SDG	480-162353-1		480-162353-1		480-162515-1		480-162572-1		480-162513-1		480-162513-1	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX	
	Qc Code	EB		EB		EB		EB		FD		FS	
	Units	mg/l		mg/l		mg/l		mg/l		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	0.05	U	0.05	U	0.05	U	0.05	U	2500	UJ	2500	UJ

Notes:

U = undetected

J = estimated value

J+ = estimated biased high

J- = estimated biased low

R = rejected/unusable

FS= field sample

FD = field duplicate

EB = equipment blank

Created by: KMS 2/5/2020
Checked by: LP 02/06/2020

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1		480-162513-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2400	UJ	2300	UJ	1500	J	1600	J	5300	J	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2300	U	1500	J	2200	UJ	2200	UJ	2200	UJ	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-702		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	480-162426-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/8/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX	
	Qc Code	FS		FS		FD		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2300	UJ	1800	J	4900	J	2900	J	2500	U	2500	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-703		SB-703		SB-703		SB-704		SB-704		SB-704	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-8.0/10-XXX		OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2200	U	2200	U	1300	J	2500	U	2700		2200	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-704		SB-704		SB-704		SB-704		SB-704		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019	
	Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2200	U	1600	J	2100	U	1600	J	2200	U	1400	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-705	
	Lab SDG	480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1		480-162426-1	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX	
	Qc Code	FS		FD		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2200	U	7200	J	5400	J	1500	J	2200	UJ	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2300	UJ	2200	UJ	2200	UJ	2200	UJ	2400	J	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-706		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1		480-162353-1	
	Sample Date	11/6/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2200	UJ	3200	J	2200	UJ	2200	UJ	2100	UJ	1300	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-707		SB-707		SB-707		SB-708		SB-708		SB-708	
	Lab SDG	480-162353-1		480-162353-1		480-162353-1		480-162140-1		480-162140-1		480-162140-1	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-8.0/10-XXX		OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	1500	J	2300	UJ	2100	UJ	2200	UJ	2400	UJ	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-708		SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	480-162140-1		480-162140-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2100	UJ	2100	UJ	2100	UJ	2300	UJ	1900	J	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1		480-162315-1	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2400	U	2100	J	2900	J	2400	UJ	2300	UJ	2300	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	480-162315-1		480-162315-1		480-162199-1		480-162199-1		480-162199-1		480-162199-1	
	Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	3300	J	2300	J	2000	J	4000	J	11000	J	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	480-162199-1		480-162199-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2500	UJ	3700	J	2500	UJ	2900	J	1500	J	2300	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2600	UJ	4700	J	2200	UJ	2400	UJ	2100	J	2000	J

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.7 - Final Results Summary - Formaldehyde
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	TA-NC		TA-NC		TA-NC		TA-NC	
	Location	SB-712		SB-712		SB-712		SB-712	
	Lab SDG	480-162572-1		480-162572-1		480-162572-1		480-162572-1	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS	
	Units	ug/kg		ug/kg		ug/kg		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aldehydes	Formaldehyde	2600	J	2200	UJ	6100	J	2200	UJ

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	QC		QC		QC		QC		SB-701	
	Lab SDG	2073662		2073662		2074032		2074262		2074150	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/11/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-701-0.0/2.0-DUP	
	Qc Code	EB		EB		EB		EB		FD	
	Units	ug/l		ug/l		ug/l		ug/l		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	0.5	U	0.5	U	0.5	U	0.5	U	5.7	J
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	0.8	U	0.8	U	0.8	U	0.8	U	6.1	U
Hydrazine/aldehydes	UDMH	0.8	U	0.8	U	0.8	U	0.8	U	6.1	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-701		SB-701		SB-701		SB-701		SB-701	
	Lab SDG	2074150		2074150		2074150		2074150		2074150	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX		OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.3	J	2.2	J	1.7	J	2.8	J	11	
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	6.1	U	6.2	U	5.9	U	6	U	6	U
Hydrazine/aldehydes	UDMH	6.1	U	6.2	U	5.9	U	6	U	6	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-701		SB-701		SB-702		SB-702		SB-702	
	Lab SDG	2074150		2074150		2073916		2073916		2073916	
	Sample Date	11/11/2019		11/11/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX		OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.3	U	1.8	J	5.8	U	1.5	J	5.4	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.3	U	6.1	U	5.8	U	5.3	U	5.4	U
Hydrazine/aldehydes	UDMH	5.3	U	6.1	U	5.8	U	5.3	U	5.4	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-702		SB-702		SB-702		SB-702		SB-703	
	Lab SDG	2073916		2073916		2073916		2073916		2073905	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/5/2019	
	Sample ID	OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX		OC-SB-703-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.5	U	2.1	J	5.5	U	5.5		6.7	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.5	U	5.4	U	5.5	U	5.3	U	6.7	U
Hydrazine/aldehydes	UDMH	5.5	U	5.4	U	5.5	U	5.3	U	6.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	2073905		2073905		2073905		2073905		2073905	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX	
	Qc Code	FD		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	4.2	J	7.4	J	6.6	U	5.8	U	5.8	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	6.4	U	5.8	U	6.6	U	5.8	UJ	5.8	UJ
Hydrazine/aldehydes	UDMH	6.4	U	5.8	U	6.6	U	5.8	U	5.8	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-703		SB-703		SB-704		SB-704		SB-704	
	Lab SDG	2073905		2073905		2073916		2073916		2073916	
	Sample Date	11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.8	U	9.4		86		19		1.3	J
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.8	U	5.6	U	7	UJ	6	UJ	5.7	U
Hydrazine/aldehydes	UDMH	5.8	U	5.6	U	7	U	6	U	5.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-704		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	2073916		2073916		2073916		2073916		2073916	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-704-6.0/8.0-XXX		OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.5	U	1.7	J	5.3	U	5.6	U	5.7	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.5	U	5.3	U	5.3	UJ	5.6	U	5.7	UJ
Hydrazine/aldehydes	UDMH	5.5	U	5.3	U	5.3	U	5.6	U	5.7	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
		Location	SB-705		SB-705		SB-705		SB-705		SB-705	
		Lab SDG	2073916		2073916		2073916		2073916		2073916	
		Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
		Sample ID	OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX		OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX	
		Qc Code	FS		FS		FD		FS		FS	
		Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine		5.6	U	5.6	U	5.8	UJ	1.7	J	5.5	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)		5.6	U	5.6	U	5.8	UJ	5.8	UJ	5.5	U
Hydrazine/aldehydes	UDMH		5.6	U	5.6	U	5.8	U	5.8	U	5.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-705		SB-705		SB-706		SB-706		SB-706	
	Lab SDG	2073916		2073916		2073662		2073662		2073662	
	Sample Date	11/8/2019		11/8/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX		OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.8	U	5.7	U	5.4	U	5.7	U	5.6	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.8	U	5.7	U	5.4	U	5.7	U	5.6	U
Hydrazine/aldehydes	UDMH	5.8	U	5.7	U	5.4	U	5.7	U	5.6	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-706		SB-706		SB-706		SB-706		SB-707	
	Lab SDG	2073662		2073662		2073662		2073662		2073662	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/7/2019	
	Sample ID	OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX		OC-SB-707-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.5	U	6.1	U	5.6	U	5.6	U	5.6	J
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.5	U	6.1	U	5.6	U	5.6	U	6.1	U
Hydrazine/aldehydes	UDMH	5.5	U	6.1	U	5.6	U	5.6	U	6.1	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	2073662		2073662		2073662		2073662		2073662	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX	
	Qc Code	FS		FS		FD		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	2	J	9.3		2.6	J	2.7	J	1.7	J
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.8	U	5.4	U	5.4	U	5.3	U	5.5	U
Hydrazine/aldehydes	UDMH	5.8	U	5.4	U	5.4	U	5.3	U	5.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-707		SB-707		SB-708		SB-708		SB-708	
	Lab SDG	2073662		2073662		2072711		2072711		2072711	
	Sample Date	11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX		OC-SB-708-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	6.3	U	5.4	U	6.4		5.9	U	5.5	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	6.3	U	5.4	U	6.2	UJ	5.9	UJ	5.5	UJ
Hydrazine/aldehydes	UDMH	6.3	U	5.4	U	6.2	U	5.9	U	5.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
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Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-708		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	2072711		2072711		2072990		2072990		2072990	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.5	U	5.3	UJ	5.6	UJ	1.5	J	5.9	UJ
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.5	UJ	5.3	UJ	5.6	UJ	6	UJ	5.9	UJ
Hydrazine/aldehydes	UDMH	5.5	U	5.3	U	5.6	U	6	U	5.9	U

Notes:
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J = estimated value
J+ = estimated biased high
J- = estimated biased low
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Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-708		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	2072990		2073905		2073905		2073905		2073905	
	Sample Date	11/4/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-708-22/24-XXX		OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	2.4	J	6.1	U	5.8	U	6.9	U	5.7	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.7	UJ	6.1	UJ	5.8	UJ	6.9	UJ	5.7	UJ
Hydrazine/aldehydes	UDMH	5.7	U	6.1	U	5.8	U	6.9	U	5.7	U

Notes:
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Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-709		SB-709		SB-709		SB-709		SB-710	
	Lab SDG	2073905		2073905		2073905		2073905		2072990	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/4/2019	
	Sample ID	OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX		OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX	
	Qc Code	FD		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	5.6	UJ	5.7	UJ	4.9	J	5.4	U	5.7	UJ
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.6	UJ	5.7	UJ	5.6	UJ	5.4	UJ	5.7	UJ
Hydrazine/aldehydes	UDMH	5.6	U	5.7	U	5.6	U	5.4	U	5.7	U

Notes:
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J+ = estimated biased high
J- = estimated biased low
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FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-710		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	2072990		2072990		2072990		2072990		2072990	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX		OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	1.8	J	1.6	J	1.8	J	1.7	J	1.9	J
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.8	UJ	5.8	UJ	5.4	UJ	6.3	UJ	5.4	UJ
Hydrazine/aldehydes	UDMH	5.8	U	5.8	U	5.4	U	6.3	U	5.4	U

Notes:
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J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
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EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
	Location	SB-711		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	2074385		2074385		2074385		2074385		2074385	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX		OC-SB-711-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS	
	Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine	1.9	J	13		5.7		5.9	U	6	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)	5.9	U	5.6	U	5.5	U	5.9	U	6	U
Hydrazine/aldehydes	UDMH	5.9	U	5.6	U	5.5	U	5.9	U	6	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	LANCAST		LANCAST		LANCAST		LANCAST		LANCAST	
		Location	SB-711		SB-711		SB-712		SB-712		SB-712	
		Lab SDG	2074385		2074385		2074385		2074385		2074385	
		Sample Date	11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
		Qc Code	FS		FS		FS		FS		FS	
		Units	ng/g		ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine		5.5	U	5.3	U	3.8	J	7.7		5.5	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)		5.5	U	5.3	U	5.8	U	5.5	U	5.5	U
Hydrazine/aldehydes	UDMH		5.5	U	5.3	U	5.8	U	5.5	U	5.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.8 - Final Results Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

		Lab ID	LANCAST		LANCAST		LANCAST		LANCAST	
		Location	SB-712		SB-712		SB-712		SB-712	
		Lab SDG	2074385		2074385		2074385		2074385	
		Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
		Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
		Qc Code	FS		FS		FS		FS	
		Units	ng/g		ng/g		ng/g		ng/g	
Method Class	**Parameter**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Hydrazine/aldehydes	Hydrazine		5.6	U	5.6	U	5.4	U	5.5	U
Hydrazine/aldehydes	Monomethylhydrazine (MMH)		5.6	U	5.6	U	5.4	U	5.5	U
Hydrazine/aldehydes	UDMH		5.6	U	5.6	U	5.4	U	5.5	U

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate
EB = equipment blank

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	KATAHDIN		KATAHDIN		KATAHDIN		KATAHDIN		KATAHDIN		KATAHDIN	
	Location	QC		QC		QC		QC		SB-708		SB-708	
	Lab SDG	TM1916		TM1916		TM2018		TM2019		TM1675		TM1675	
	Sample Date	11/7/2019		11/7/2019		11/11/2019		11/12/2019		11/4/2019		11/4/2019	
	Sample ID	OC-EBK-01-XXX		OC-EBK-02-XXX		OC-EBK-03-XXX		OC-EBK-04-XXX		OC-SB-708-0.0/2.0-XXX		OC-SB-708-2.0/4.0-XXX	
	Qc Code	EB		EB		EB		EB		FS		FS	
	Units	mg/l		mg/l		mg/l		mg/l		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.02	U	0.02	U	0.02	U	0.02	U	0.2	U	0.21	U
Moisture/Solids	Percent Solids									89		88	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	KATAHDIN		KATAHDIN		KATAHDIN		Katahdin		Katahdin		Katahdin	
	Location	SB-708		SB-708		SB-708		SB-701		SB-701		SB-701	
	Lab SDG	TM1675		TM1675		TM1675		TM2017		TM2017		TM2017	
	Sample Date	11/4/2019		11/4/2019		11/4/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-708-4.0/6.0-XXX		OC-SB-708-6.0/8.0-XXX		OC-SB-708-8.0/10-XXX		OC-SB-701-0.0/2.0-DUP		OC-SB-701-0.0/2.0-XXX		OC-SB-701-8.0/10-XXX	
	Qc Code	FS		FS		FS		FD		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.21	U	0.21	U	0.18	U	0.18	U	0.16	U
Moisture/Solids	Percent Solids	93		93		93		82		81		85	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
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FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-701		SB-701		SB-701		SB-701		SB-701		SB-702	
	Lab SDG	TM2017		TM2017		TM2017		TM2017		TM2017		TM1920	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/11/2019		11/8/2019	
	Sample ID	OC-SB-701-6.0/8.0-XXX		OC-SB-701-4.0/6.0-XXX		OC-SB-701-2.0/4.0-XXX		OC-SB-701-31/32-XXX		OC-SB-701-20/21-XXX		OC-SB-702-0.0/2.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.15	U	0.22	U	0.2	U	0.17	U	0.17	U	0.16	U
Moisture/Solids	Percent Solids	88		82		85		94		87		91	

Notes:
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J+ = estimated biased high
J- = estimated biased low
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FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-702		SB-702		SB-702		SB-702		SB-702		SB-702	
	Lab SDG	TM1920		TM1920		TM1920		TM1920		TM1920		TM1920	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-702-2.0/4.0-XXX		OC-SB-702-4.0/6.0-XXX		OC-SB-702-6.0/8.0-XXX		OC-SB-702-8.0/10-XXX		OC-SB-702-34/35-XXX		OC-SB-702-28/29-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.16	U	0.17	U	0.15	U	0.14	U	0.14	U	0.17	U
Moisture/Solids	Percent Solids	93		91		91		93		92		94	

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Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-703		SB-703		SB-703		SB-703		SB-703		SB-703	
	Lab SDG	TM1922		TM1922		TM1922		TM1922		TM1922		TM1922	
	Sample Date	11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Sample ID	OC-SB-703-0.0/2.0-XXX		OC-SB-703-2.0/4.0-DUP		OC-SB-703-2.0/4.0-XXX		OC-SB-703-4.0/6.0-XXX		OC-SB-703-6.0/8.0-XXX		OC-SB-703-8.0/10-XXX	
	Qc Code	FS		FD		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.19	U	0.2	U	0.2	U	0.2	U	0.2	U
Moisture/Solids	Percent Solids	75		81		83		74		82		87	

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Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-703		SB-703		SB-704		SB-704		SB-704		SB-704	
	Lab SDG	TM1922		TM1922		TM1920		TM1920		TM1920		TM1920	
	Sample Date	11/5/2019		11/5/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-703-17/18-XXX		OC-SB-703-30/32-XXX		OC-SB-704-0.0/2.0-XXX		OC-SB-704-2.0/4.0-XXX		OC-SB-704-4.0/6.0-XXX		OC-SB-704-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.19	U	0.26	U	0.18	U	0.18	U	0.15	U
Moisture/Solids	Percent Solids	90		86		75		84		88		93	

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Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-704		SB-704		SB-704		SB-704		SB-705		SB-705	
	Lab SDG	TM1920		TM1920		TM1920		TM1920		TM1920		TM1920	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/8/2019		11/8/2019	
	Sample ID	OC-SB-704-8.0/10-XXX		OC-SB-704-12/13-XXX		OC-SB-704-33/34-XXX		OC-SB-704-19/20-XXX		OC-SB-705-0.0/2.0-XXX		OC-SB-705-2.0/4.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.16	U	0.14	U	0.16	U	0.17	U	0.17	U
Moisture/Solids	Percent Solids	94		93		92		91		90		90	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-705		SB-705		SB-705		SB-705		SB-705		SB-706	
	Lab SDG	TM1920		TM1920		TM1920		TM1920		TM1920		TM1921	
	Sample Date	11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/8/2019		11/6/2019	
	Sample ID	OC-SB-705-4.0/6.0-DUP		OC-SB-705-4.0/6.0-XXX		OC-SB-705-6.0/8.0-XXX		OC-SB-705-8.0/10-XXX		OC-SB-705-17/18-XXX		OC-SB-706-0.0/2.0-XXX	
	Qc Code	FD		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.17	U	0.2	U	0.15	U	0.2	U	0.19	U	0.2	U
Moisture/Solids	Percent Solids	82		83		88		92		91		90	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-706		SB-706		SB-706		SB-706		SB-706		SB-706	
	Lab SDG	TM1921		TM1921		TM1921		TM1921		TM1921		TM1921	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-706-2.0/4.0-XXX		OC-SB-706-4.0/6.0-XXX		OC-SB-706-6.0/8.0-XXX		OC-SB-706-10/12-XXX		OC-SB-706-20/22-XXX		OC-SB-706-26/27-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.16	U	0.17	U	0.23	U	0.16	U	0.17	U
Moisture/Solids	Percent Solids	91		90		90		73		92		93	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-707		SB-707		SB-707		SB-707		SB-707		SB-707	
	Lab SDG	TM1921		TM1921		TM1921		TM1921		TM1921		TM1921	
	Sample Date	11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Sample ID	OC-SB-707-0.0/2.0-XXX		OC-SB-707-2.0/4.0-XXX		OC-SB-707-4.0/6.0-XXX		OC-SB-707-6.0/8.0-DUP		OC-SB-707-6.0/8.0-XXX		OC-SB-707-8.0/10-XXX	
	Qc Code	FS		FS		FS		FD		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.17	U	0.22	U	0.16	U	0.16	U	0.15	U	0.14	U
Moisture/Solids	Percent Solids	79		86		92		93		94		92	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-707		SB-707		SB-708		SB-708		SB-708		SB-708	
	Lab SDG	TM1921		TM1921		TM1711		TM1711		TM1711		TM1711	
	Sample Date	11/7/2019		11/7/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-707-12/13-XXX		OC-SB-707-15/17-XXX		OC-SB-708-16/18-XXX		OC-SB-708-28/30-XXX		OC-SB-708-33/34-XXX		OC-SB-708-22/24-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.19	U	0.18	U	0.19	U	0.23	U	0.19	U	0.22	U
Moisture/Solids	Percent Solids	90		94		95		86		92		91	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-709		SB-709		SB-709		SB-709		SB-709		SB-709	
	Lab SDG	TM1922		TM1922		TM1922		TM1922		TM1922		TM1922	
	Sample Date	11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019		11/6/2019	
	Sample ID	OC-SB-709-0.0/2.0-XXX		OC-SB-709-2.0/4.0-XXX		OC-SB-709-4.0/6.0-XXX		OC-SB-709-6.0/8.0-XXX		OC-SB-709-8.0/10-DUP		OC-SB-709-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FD		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.2	U	0.21	U	0.2	U	0.19	U	0.18	U	0.18	U
Moisture/Solids	Percent Solids	84		84		86		85		89		90	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
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	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-709		SB-709		SB-710		SB-710		SB-710		SB-710	
	Lab SDG	TM1922		TM1922		TM1711		TM1711		TM1711		TM1711	
	Sample Date	11/6/2019		11/6/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Sample ID	OC-SB-709-16/17-XXX		OC-SB-709-32/33-XXX		OC-SB-710-2.0/4.0-XXX		OC-SB-710-4.0/6.0-XXX		OC-SB-710-6.0/8.0-XXX		OC-SB-710-8.0/10-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.18	U	0.2	U	0.23	U	0.21	U	0.2	U	0.22	U
Moisture/Solids	Percent Solids	92		91		85		87		88		92	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
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	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-710		SB-710		SB-711		SB-711		SB-711		SB-711	
	Lab SDG	TM1711		TM1711		TM2016		TM2016		TM2016		TM2016	
	Sample Date	11/5/2019		11/5/2019		11/12/2019		11/12/2019		11/12/2019		11/12/2019	
	Sample ID	OC-SB-710-23/24-XXX		OC-SB-710-36/37-XXX		OC-SB-711-0.0/2.0-XXX		OC-SB-711-4.0/6.0-XXX		OC-SB-711-2.0/4.0-XXX		OC-SB-711-6.0/8.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.23	U	0.2	U	0.2	U	0.17	U	0.19	U	0.17	U
Moisture/Solids	Percent Solids	83		93		82		87		90		85	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-711		SB-711		SB-711		SB-712		SB-712		SB-712	
	Lab SDG	TM2016		TM2016		TM2016		TM2016		TM2016		TM2016	
	Sample Date	11/12/2019		11/12/2019		11/12/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-711-8.0/10-XXX		OC-SB-711-35/36-XXX		OC-SB-711-18/19-XXX		OC-SB-712-0.0/2.0-XXX		OC-SB-712-2.0/4.0-XXX		OC-SB-712-4.0/6.0-XXX	
	Qc Code	FS		FS		FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.16	U	0.13	U	0.16	U	0.19	U	0.19	U	0.18	U
Moisture/Solids	Percent Solids	76		94		93		84		90		91	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 2.9 - Final Results Summary - Dimethylformamide
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

	Lab ID	Katahdin		Katahdin		Katahdin		Katahdin	
	Location	SB-712		SB-712		SB-712		SB-712	
	Lab SDG	TM2016		TM2016		TM2016		TM2016	
	Sample Date	11/11/2019		11/11/2019		11/11/2019		11/11/2019	
	Sample ID	OC-SB-712-6.0/8.0-XXX		OC-SB-712-8.0/10-XXX		OC-SB-712-37/38-XXX		OC-SB-712-23/24-XXX	
	Qc Code	FS		FS		FS		FS	
	Units	mg/kg		mg/kg		mg/kg		mg/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
DMF	Dimethylformamide	0.21	U	0.22	U	0.15	U	0.78	
Moisture/Solids	Percent Solids	89		89		92		92	

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable
FS= field sample
FD = field duplicate

Table 3.1 - Data Validation Action Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162140-1	SW8260C	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	2-Butanone	11	J *	11	J+	LCS-H	ug/kg	TALBFLO
480-162140-1	SW8260C	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Chloroform	0.51	J B	6.4	U	BL1	ug/kg	TALBFLO
480-162140-1	SW8260C	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Chloroform	0.24	J B	3.9	U	Bl1	ug/kg	TALBFLO
480-162140-1	SW8260C	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Chloroform	0.29	J B	4.3	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-708	480-162199-1	OC-SB-708-16/18-XXX	2-Butanone	4.1	J *	4.1	J+	LCS-H	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-708	480-162199-4	OC-SB-708-33/34-XXX	2-Butanone	5.5	J *	5.5	J+	LCS-H	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	2-Butanone	7	J *	7	J+	LCS-H	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	2-Butanone	18	J *	18	J+	LCS-H	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Chloroform	0.25	J B	3.6	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Chloroform	0.55	J B	3.4	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Chloroform	0.34	J B	4.8	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Chloroform	0.45	J B	4.6	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Chloroform	0.92	J B	3.7	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Chloroform	0.23	J B	3.7	U	BL1	ug/kg	TALBFLO
480-162199-1	SW8260C	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Chloroform	0.25	J B	3.7	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1,1,2-Tetrachloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1,1,2-Tetrachloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1,1-Trichloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1,1-Trichloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1,2,2-Tetrachloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1,2,2-Tetrachloroethane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,1,2,2-Tetrachloroethane	4.9	U	4.9	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,1,2,2-Tetrachloroethane	3.7	U F1	3.7	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1,2-Trichloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1,2-Trichloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1-Dichloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1-Dichloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1-Dichloroethene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1-Dichloroethene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,1-Dichloropropene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,1-Dichloropropene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2,3-Trichlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2,3-Trichlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO

Table 3.1 - Data Validation Action Summary - VOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2,3-Trichloropropane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2,3-Trichloropropane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,2,3-Trichloropropane	4.9	U	4.9	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,2,3-Trichloropropane	3.7	U F1	3.7	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2,4-Trichlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2,4-Trichlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2,4-Trimethylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2,4-Trimethylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2-Dibromo-3-chloropropane	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2-Dibromo-3-chloropropane	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,2-Dibromo-3-chloropropane	25	U	25	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,2-Dibromo-3-chloropropane	18	U F1	18	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2-Dibromoethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2-Dibromoethane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,2-Dibromoethane	4.9	U	4.9	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,2-Dibromoethane	3.7	U F1	3.7	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2-Dichlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2-Dichlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2-Dichloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2-Dichloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,2-Dichloropropane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,2-Dichloropropane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,3,5-Trimethylbenzene	0.27	J	0.27	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,3,5-Trimethylbenzene	0.37	J F1	0.37	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,3-Dichlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,3-Dichlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,3-Dichloropropane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,3-Dichloropropane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,3-Dichloropropane	4.9	U	4.9	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,3-Dichloropropane	3.7	U F1	3.7	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,4-Dichlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,4-Dichlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	1,4-Dioxane	200	U	200	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	1,4-Dioxane	220	U	220	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	1,4-Dioxane	250	U	250	UJ	MS-L	ug/kg	TALBFLO

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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	1,4-Dioxane	180	U F1	180	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2,2-Dichloropropane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2,2-Dichloropropane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2,4,4-Trimethyl-1-pentene	1.4	J	1.4	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2,4,4-Trimethyl-1-pentene	1.7	J F1	1.7	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2,4,4-Trimethyl-2-pentene	0.46	J	0.46	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2,4,4-Trimethyl-2-pentene	0.67	J F1	0.67	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2-Butanone	9.5	J *	9.5	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2-Butanone	10	J *	10	J	LCS-H, MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	2-Butanone	16	J *	16	J+	LCS-H	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2-Chlorotoluene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2-Chlorotoluene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2-Hexanone	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2-Hexanone	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	2-Hexanone	25	U	25	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	2-Hexanone	18	U F1	18	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	4-Chlorotoluene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	4-Chlorotoluene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	4-iso-Propyltoluene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	4-iso-Propyltoluene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	4-Methyl-2-pentanone	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	4-Methyl-2-pentanone	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	4-Methyl-2-pentanone	25	U	25	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	4-Methyl-2-pentanone	18	U F1	18	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Acetic acid, methyl ester	40	U	40	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Acetic acid, methyl ester	44	U	44	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Acetic acid, methyl ester	49	U	49	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Acetic acid, methyl ester	37	U F1	37	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Acetone	43	J	43	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Acetone	37	J	37	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Acetone	10	J	10	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Acetone	11	J F1	11	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Benzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Benzene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO

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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bromobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bromobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bromochloromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bromochloromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bromodichloromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bromodichloromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bromoform	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bromoform	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bromomethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bromomethane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Butane, 2-methoxy-2-methyl-	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Butane, 2-methoxy-2-methyl-	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Carbon disulfide	6.5		6.5	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Carbon disulfide	4.4		4.4	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Carbon tetrachloride	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Carbon tetrachloride	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Chlorobenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Chlorobenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Chloroethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Chloroethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-10	OC-SB-703-0.0/2.0-XXX	Chloroform	0.35	J B	4.7	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Chloroform	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Chloroform	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-14	OC-SB-703-30/32-XXX	Chloroform	1.4	J B	3	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-4	OC-SB-709-32/33-XXX	Chloroform	0.33	J B	4.2	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Chloroform	0.3	J B	4.4	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Chloromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Chloromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	cis-1,2-Dichloroethene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	cis-1,2-Dichloroethene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	cis-1,3-Dichloropropene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	cis-1,3-Dichloropropene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Cyclohexane	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Cyclohexane	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Dibromochloromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO

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480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Dibromochloromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Dibromomethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Dibromomethane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Dichlorodifluoromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Dichlorodifluoromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Diethyl ether	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Diethyl ether	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Ethylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Ethylbenzene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Ethyl-t-Butyl Ether	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Ethyl-t-Butyl Ether	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Hexachlorobutadiene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Hexachlorobutadiene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Isopropyl ether	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Isopropyl ether	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Isopropylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Isopropylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Methyl cyclohexane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Methyl cyclohexane	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Methyl Tertbutyl Ether	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Methyl Tertbutyl Ether	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Methylene chloride	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Methylene chloride	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Naphthalene	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Naphthalene	1	J F1 B	22	UJ	BL1, MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-14	OC-SB-703-30/32-XXX	Naphthalene	0.42	J B	15	U	BL1	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Naphthalene	25	U	25	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Naphthalene	18	U F1	18	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	n-Butylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	n-Butylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Propylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Propylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	sec-Butylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	sec-Butylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Styrene	4	U	4	UJ	MS-L	ug/kg	TALBFLO

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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Styrene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	tert-Butylbenzene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	tert-Butylbenzene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Tetrachloroethene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Tetrachloroethene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Tetrahydrofuran	40	U	40	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Tetrahydrofuran	44	U F1	44	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Tetrahydrofuran	49	U	49	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Tetrahydrofuran	37	U F1	37	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Toluene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Toluene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	trans-1,2-Dichloroethene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	trans-1,2-Dichloroethene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	trans-1,3-Dichloropropene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	trans-1,3-Dichloropropene	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Trichloroethene	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Trichloroethene	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Trichlorofluoromethane	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Trichlorofluoromethane	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Vinyl chloride	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Vinyl chloride	4.4	U	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Xylene, o	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Xylene, o	4.4	U F1	4.4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Xylenes (m&p)	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Xylenes (m&p)	0.77	J F1	0.77	J-	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Xylenes, Total	4	U	4	UJ	MS-L	ug/kg	TALBFLO
480-162315-1	SW8260C	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Xylenes, Total	0.77	J	0.77	J-	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,1,2,2-Tetrachloroethane	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,1,2,2-Tetrachloroethane	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,2,3-Trichlorobenzene	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,2,3-Trichlorobenzene	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,2,3-Trichloropropane	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,2,3-Trichloropropane	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,2-Dibromo-3-chloropropane	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,2-Dibromo-3-chloropropane	19	U F1	19	UJ	MS-L	ug/kg	TALBFLO

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480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,2-Dibromoethane	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,2-Dibromoethane	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,3-Dichloropropane	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,3-Dichloropropane	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	1,4-Dioxane	200	U	200	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	1,4-Dioxane	190	U F1	190	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-3	OC-SB-706-10/12-XXX	2-Butanone	17	J *	17	J+	LCS-H	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	2-Butanone	15	J *	15	J+	LCS-H	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	2-Butanone	21	*	21	J+	LCS-H	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	2-Hexanone	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	2-Hexanone	19	U F1	19	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	4-Methyl-2-pentanone	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	4-Methyl-2-pentanone	19	U F1	19	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Acetic acid, methyl ester	41	U	41	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Acetic acid, methyl ester	38	U F1	38	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Acetone	71	J	210	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Acetone	59	J	210	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Acetone	22	J	250	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Acetone	10	J	150	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Acetone	30	J	190	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Acetone	14	J	190	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Acetone	64	J	260	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-14	OC-SB-707-12/13-XXX	Acetone	16	J	250	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-15	OC-SB-707-15/17-XXX	Acetone	7.4	J	220	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Acetone	74	J	200	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Acetone	17	J	210	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Acetone	27	J	200	UJ	BL2, MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Acetone	11	J F1	190	UJ	BL2, MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-17	OC-SB-707-8.0/10-XXX	Acetone	13	J	190	U	BL2	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Hexachlorobutadiene	4.1	U	4.1	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Hexachlorobutadiene	3.8	U F1	3.8	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Naphthalene	0.95	J B	21	U	BL1	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Naphthalene	20	U	20	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Naphthalene	19	U F1	19	UJ	MS-L	ug/kg	TALBFLO
480-162353-1	SW8260C	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Tetrahydrofuran	41	U	41	UJ	MS-L	ug/kg	TALBFLO

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480-162353-1	SW8260C	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Tetrahydrofuran	38	U F1	38	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,1,2,2-Tetrachloroethane	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,1,2,2-Tetrachloroethane	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2,3-Trichlorobenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2,3-Trichlorobenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2,3-Trichloropropane	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2,3-Trichloropropane	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2,4-Trichlorobenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2,4-Trichlorobenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2,4-Trimethylbenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2,4-Trimethylbenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2-Dibromo-3-chloropropane	23	U	23	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2-Dibromo-3-chloropropane	24	U F1	24	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,2-Dichlorobenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,2-Dichlorobenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,3-Dichlorobenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,3-Dichlorobenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	1,4-Dichlorobenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	1,4-Dichlorobenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	2,4,4-Trimethyl-1-pentene	11		11	J-	MS-L, MS-RPD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	2,4,4-Trimethyl-1-pentene	7.4	F1 F2	7.4	J-	MS-L, MS-RPD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	2,4,4-Trimethyl-2-pentene	3.8	J	3.8	J-	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	2,4,4-Trimethyl-2-pentene	2.3	J F1	2.3	J-	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	2-Butanone	14	J *	14	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	2-Butanone	29	*	29	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	2-Butanone	4.4	J *	4.4	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	2-Butanone	17	J *	17	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	2-Butanone	23	J *	23	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	2-Butanone	64	*	64	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	2-Butanone	9.6	J *	9.6	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	2-Butanone	29	*	29	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	2-Butanone	14	J *	14	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	2-Butanone	32	*	32	J+	LCS-H	ug/kg	TALBFLO

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480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	2-Butanone	20	J *	20	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-20	OC-SB-705-6.0/8.0-XXX	2-Butanone	560	*	560	J+	LCS-H	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	2-Hexanone	23	U	23	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	2-Hexanone	24	U F1	24	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	4-iso-Propyltoluene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	4-iso-Propyltoluene	0.52	J F1	0.52	J-	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	4-Methyl-2-pentanone	23	U	23	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	4-Methyl-2-pentanone	24	U F1	24	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Acetic acid, methyl ester	150		150	J+	MS-H, FD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Acetic acid, methyl ester	48	U F1	48	UJ	FD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Acetone	69	J	69	J-	MS-L, MS-RPD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Acetone	74	J F1 F2	74	J-	MS-L, MS-RPD	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Chloroform	0.37	J B	4.7	U	BL1	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Chloroform	0.34	J B	4.3	U	BL1	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Hexachlorobutadiene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Hexachlorobutadiene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Methyl cyclohexane	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Methyl cyclohexane	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Methylene chloride	6.5	B	6.5	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	Methylene chloride	5.6	B	5.6	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-24	OC-SB-702-28/29-XXX	Methylene chloride	21	B	21	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-25	OC-SB-702-34/35-XXX	Methylene chloride	57	B	57	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Methylene chloride	8.4	B	8.4	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Methylene chloride	4.5	B	4.5	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-702	480-162426-26	OC-SB-702-8.0/10-XXX	Methylene chloride	20	B	20	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Methylene chloride	14	B	14	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-3	OC-SB-704-12/13-XXX	Methylene chloride	7.8	B	7.8	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Methylene chloride	6.7	B	6.7	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	Methylene chloride	11	B	11	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Methylene chloride	7.2	B	7.2	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	Methylene chloride	6.1	B	6.1	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	Methylene chloride	4.7	B	4.7	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	Methylene chloride	8.8	B	8.8	U	BL1, BL2	ug/kg	TALBFLO

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480-162426-1	SW8260C	SB-705	480-162426-11	OC-SB-705-0.0/2.0-XXX	Methylene chloride	9.7	B	9.7	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Methylene chloride	9.1	B	9.1	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	Methylene chloride	6.2	B	6.2	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Methylene chloride	6.9	B	6.9	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Methylene chloride	7.3	B	7.3	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-20	OC-SB-705-6.0/8.0-XXX	Methylene chloride	29	B	29	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-21	OC-SB-705-8.0/10-XXX	Methylene chloride	26	B	26	U	BL1, BL2	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Naphthalene	23	U	23	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Naphthalene	24	U F1	24	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	n-Butylbenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	n-Butylbenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Propylbenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Propylbenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	sec-Butylbenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	sec-Butylbenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Styrene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Styrene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	tert-Butylbenzene	4.7	U	4.7	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	tert-Butylbenzene	4.8	U F1	4.8	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Tetrahydrofuran	47	U	47	UJ	MS-L	ug/kg	TALBFLO
480-162426-1	SW8260C	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Tetrahydrofuran	48	U F1	48	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,1,2,2-Tetrachloroethane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,1,2,2-Tetrachloroethane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,1,2-Trichloroethane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,1,2-Trichloroethane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2,3-Trichlorobenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2,3-Trichlorobenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2,3-Trichloropropane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2,3-Trichloropropane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2,4-Trichlorobenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2,4-Trichlorobenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2-Dibromo-3-chloropropane	29	U	29	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2-Dibromo-3-chloropropane	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2-Dibromoethane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2-Dibromoethane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO

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480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,2-Dichlorobenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,2-Dichlorobenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,3-Dichloropropane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,3-Dichloropropane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,4-Dichlorobenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,4-Dichlorobenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	1,4-Dioxane	290	U	290	UJ	MS-L, MS-RPD	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	1,4-Dioxane	220	U F1 F2	220	UJ	MS-L, MS-RPD	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	2,4,4-Trimethyl-1-pentene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	2,4,4-Trimethyl-1-pentene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	2,4,4-Trimethyl-2-pentene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	2,4,4-Trimethyl-2-pentene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	2-Butanone	21	J *	21	J+	LCS-H	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	2-Butanone	23	J *	23	J+	LCS-H	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	2-Hexanone	29	U	29	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	2-Hexanone	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	4-iso-Propyltoluene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	4-iso-Propyltoluene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Acetic acid, methyl ester	58	U	58	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Acetic acid, methyl ester	43	U F1	43	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Acetone	7.4	J	7.4	J-	MS-L, MS-RPD, FD	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Acetone	14	J F1 F2	14	J-	MS-L, MS-RPD, FD	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Bromoform	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Bromoform	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Hexachlorobutadiene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Hexachlorobutadiene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Methyl cyclohexane	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Methyl cyclohexane	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Methylene chloride	18	B	18	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Methylene chloride	19	B	19	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	Methylene chloride	26	B	26	U	BL1, BL2	ug/kg	TALBFLO

Table 3.1 - Data Validation Action Summary - VOCs
Data Validation Report
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Olin Chemical Superfund Site
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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162513-1	SW8260C	SB-701	480-162513-9	OC-SB-701-20/21-XXX	Methylene chloride	26	B	26	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-5	OC-SB-701-31/32-XXX	Methylene chloride	15	B	15	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	Methylene chloride	17	B	17	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Methylene chloride	25	B	25	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Methylene chloride	26	B	26	U	BL1, BL2	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Naphthalene	29	U	29	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Naphthalene	22	U F1	22	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	n-Butylbenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	n-Butylbenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	sec-Butylbenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	sec-Butylbenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	tert-Butylbenzene	5.8	U	5.8	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	tert-Butylbenzene	4.3	U F1	4.3	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Tetrahydrofuran	58	U	58	UJ	MS-L	ug/kg	TALBFLO
480-162513-1	SW8260C	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Tetrahydrofuran	43	U F1	43	UJ	MS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	2-Butanone	5.7	J *	5.7	J+	LCS-H	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	2-Butanone	6.9	J *	6.9	J+	LCS-H	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Acetone	14	J	300	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Acetone	7.3	J	200	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Acetone	16	J	190	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Acetone	23	J *	240	UJ	BL2, LCS-RPD	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Acetone	21	J	230	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Acetone	42	J	220	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Acetone	16	J	210	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Acetone	14	J	210	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Acetone	27	J	260	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Acetone	57	J	220	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Acetone	14	J	210	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Bromomethane	1900	U *	1900	UJ	LCS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Bromomethane	1000	U *	1000	UJ	LCS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Bromomethane	1200	U *	1200	UJ	LCS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Chloroethane	1900	U *	1900	UJ	LCS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Chloroethane	1000	U *	1000	UJ	LCS-L	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Chloroethane	1200	U *	1200	UJ	LCS-L	ug/kg	TALBFLO

Table 3.1 - Data Validation Action Summary - VOCs
Data Validation Report
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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162572-1	SW8260C	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Chloroform	0.6	J B	4.7	U	BL1	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Dichlorodifluoromethane	4.7	U *	4.7	UJ	LCS-RPD	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Methylene chloride	26	* B	26	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Methylene chloride	30	* B	30	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Methylene chloride	17	* B	17	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Methylene chloride	10	B	10	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Methylene chloride	27	* B	27	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Methylene chloride	20	* B	20	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Methylene chloride	23	* B	23	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Methylene chloride	20	* B	20	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Methylene chloride	22	* B	22	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Methylene chloride	21	* B	21	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Methylene chloride	24	* B	24	U	BL1, BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Toluene	0.75	J	4.2	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Toluene	0.35	J	4.3	U	BL2	ug/kg	TALBFLO
480-162572-1	SW8260C	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Toluene	0.42	J	5.3	U	BL2	ug/kg	TALBFLO

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

BL1	method BLank qualifier
BL2	field BLank qualifier
FD	Field Duplicate precision goal exceeded
LCSH	Lab Control Sample recovery High
LCSL	Lab Control Sample recovery Low
LCSRPD	Lab Control Sample/Lab Control Sample Duplicate Relative Percent Difference precision goal exceeded
MSH	Matrix Spike and/or Matrix Spike duplicate recovery High
MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low
MSRPD	Matrix Spike and/or Matrix Spike duplicate Relative Percent Difference precision goal exceeded

Table 3.2 - Data Validation Action Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162140-1	SW8270D	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162140-1	SW8270D	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162140-1	SW8270D	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	Benzaldehyde	77	U *	77	R	LCSL	ug/kg	TA-PIT
480-162140-1	SW8270D	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162140-1	SW8270D	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Benzaldehyde	74	U *	74	R	LCSL	ug/kg	TA-PIT
480-162140-1	SW8270D	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162140-1	SW8270D	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Benzaldehyde	71	U *	71	R	LCSL	ug/kg	TA-PIT
480-162140-1	SW8270D	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162140-1	SW8270D	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Benzaldehyde	70	U *	70	R	LCSL	ug/kg	TA-PIT
480-162140-1	SW8270D	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	2-Nitroaniline	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Benzaldehyde	69	U *	69	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-708	480-162199-2	OC-SB-708-22/24-XXX	2-Nitroaniline	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-2	OC-SB-708-22/24-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-708	480-162199-3	OC-SB-708-28/30-XXX	4-Nitrophenol	200	U	200	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-3	OC-SB-708-28/30-XXX	Benzaldehyde	78	U *	78	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-3	OC-SB-708-28/30-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-708	480-162199-4	OC-SB-708-33/34-XXX	2-Nitroaniline	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-4	OC-SB-708-33/34-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	2-Nitroaniline	220	U	220	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	4-Nitrophenol	220	U	220	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Benzaldehyde	85	U *	85	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Phthalic anhydride	13000	U	13000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-7	OC-SB-710-23/24-XXX	2-Nitroaniline	210	U	210	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-7	OC-SB-710-23/24-XXX	4-Nitrophenol	210	U	210	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Benzaldehyde	82	U *	82	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-8	OC-SB-710-36/37-XXX	2-Nitroaniline	180	U	180	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-8	OC-SB-710-36/37-XXX	4-Nitrophenol	180	U	180	UJ	CCV%D	ug/kg	TA-PIT

Table 3.2 - Data Validation Action Summary - SVOCs
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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162199-1	SW8270D	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	2-Nitroaniline	190	U	190	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Benzaldehyde	75	U *	75	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	2-Nitroaniline	190	U	190	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Benzaldehyde	75	U *	75	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162199-1	SW8270D	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	4-Nitrophenol	190	U	190	UJ	CCV%D	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	Benzaldehyde	73	U *	73	R	LCSL	ug/kg	TA-PIT
480-162199-1	SW8270D	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-10	OC-SB-703-0.0/2.0-XXX	Phthalic anhydride	13000	U	13000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-11	OC-SB-703-17/18-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	2,4-Dinitrophenol	380	U	380	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	4,6-Dinitro-2-methylphenol	200	U	200	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Benzaldehyde	5.8	J	5.8	J-	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Benzoic Acid	50	J	50	J-	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Bis(2-Ethylhexyl)phthalate	1400		1400	J	FD	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Hexachlorocyclopentadiene	38	U	38	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	N-Nitrosodiphenylamine	350		350	J	FD	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Pentachlorophenol	200	U	200	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	2,4-Dinitrophenol	390	U F1	390	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	4,6-Dinitro-2-methylphenol	200	U F1	200	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Benzaldehyde	79	U F1	79	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Benzoic Acid	200	U F1	200	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Bis(2-Ethylhexyl)phthalate	650	F1	650	J	FD	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Hexachlorocyclopentadiene	39	U F1	39	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	N-Nitrosodiphenylamine	130		130	J	FD	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Pentachlorophenol	200	U F1 F2	200	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-14	OC-SB-703-30/32-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-15	OC-SB-703-4.0/6.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO

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Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW8270D	SB-703	480-162315-16	OC-SB-703-6.0/8.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	1,2,4,5-Tetrachlorobenzene	36	U	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	2,4-Dinitrophenol	360	U F1	360	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	4-Chloroaniline	36	U F1	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Acetophenone	73	U F1	73	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Aniline	36	U F1	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Benzaldehyde	73	U F1	73	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Benzoic Acid	180	U F1	180	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Bis(2-Chloroethyl)ether	7.3	U F1	7.3	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Hexachlorocyclopentadiene	36	U	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Hexachloroethane	36	U F1	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Nitrobenzene	72	U F1	72	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	N-Nitrosodimethylamine	36	U F1	36	UJ	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-18	OC-SB-709-0.0/2.0-XXX	Benzaldehyde	80	U *	80	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-18	OC-SB-709-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-2	OC-SB-709-16/17-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-2	OC-SB-709-16/17-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Benzaldehyde	230	U *	230	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-4	OC-SB-709-32/33-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-4	OC-SB-709-32/33-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Benzaldehyde	77	U *	77	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-6	OC-SB-709-6.0/8.0-XXX	Benzaldehyde	77	U *	77	R	LCSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-6	OC-SB-709-6.0/8.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Benzaldehyde	77	U *	77	R	LCSL, MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Benzoic Acid	200	U	200	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162315-1	SW8270D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Benzaldehyde	78	U *	78	R	LCSL, MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Benzoic Acid	200	U F1	200	R	MSL	ug/kg	TA-PIT
480-162315-1	SW8270D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-2	OC-SB-706-0.0/2.0-XXX	Benzaldehyde	150	U *	150	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-2	OC-SB-706-0.0/2.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Benzaldehyde	81	U *	81	R	LCSL	ug/kg	TA-PIT

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480-162353-1	SW8270D	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Phthalic anhydride	60000	U	60000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Benzaldehyde	720	U *	720	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Phthalic anhydride	110000	U	110000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Benzaldehyde	71	U *	71	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Benzaldehyde	150	U *	150	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Benzaldehyde	330	U *	330	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-14	OC-SB-707-12/13-XXX	Benzaldehyde	75	U *	75	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-14	OC-SB-707-12/13-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-15	OC-SB-707-15/17-XXX	Benzaldehyde	71	U *	71	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-15	OC-SB-707-15/17-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Benzaldehyde	73	U *	73	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Benzaldehyde	71	U *	71	R	LCSL, MSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Benzoic Acid	180	U	180	R	MSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Benzaldehyde	69	U * F1	69	R	LCSL, MSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Benzoic Acid	180	U F1	180	R	MSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162353-1	SW8270D	SB-707	480-162353-17	OC-SB-707-8.0/10-XXX	Benzaldehyde	72	U	72	R	LCSL	ug/kg	TA-PIT
480-162353-1	SW8270D	SB-707	480-162353-17	OC-SB-707-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Benzaldehyde	77	U *	77	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	Benzaldehyde	71	U *	71	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-24	OC-SB-702-28/29-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-25	OC-SB-702-34/35-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO

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Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162426-1	SW8270D	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Benzaldehyde	75	U *	75	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Benzaldehyde	150	U *	150	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-702	480-162426-26	OC-SB-702-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	2,3,4,6-Tetrachlorophenol	84	U F1 F2	84	UJ	MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	2,4,6-Trichlorophenol	84	U F1 F2	84	UJ	MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	4,6-Dinitro-2-methylphenol	430	U F1 F2	430	UJ	MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	4-Nitrophenol	430	U F2	430	UJ	MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Benzaldehyde	170	U * F2	170	R	LCSL, MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Benzoic Acid	430	U F1	430	R	MSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Pentachlorophenol	430	U F1 F2	430	UJ	MSL, MSRPD	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-3	OC-SB-704-12/13-XXX	Benzaldehyde	74	U *	74	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-3	OC-SB-704-12/13-XXX	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Benzaldehyde	74	U *	74	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	Benzaldehyde	10	J *	10	J-	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,3,4,6-Tetrachlorophenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,4,5-Trichlorophenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,4,6-Trichlorophenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,4-Dichlorophenol	7.4	U	7.4	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,4-Dimethylphenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2,4-Dinitrophenol	360	U	360	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2-Chlorophenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2-Methylphenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	2-Nitrophenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	4,6-Dinitro-2-methylphenol	190	U	190	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	4-Chloro-3-methylphenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	3&4-Methylphenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	4-Nitrophenol	190	U	190	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Benzaldehyde	74	U *	74	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Benzoic Acid	190	U	190	UJ	SSL	ug/kg	TA-PIT

Table 3.2 - Data Validation Action Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Benzyl alcohol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Pentachlorophenol	190	U	190	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Phenol	36	U	36	UJ	SSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	Benzaldehyde	73	U *	73	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	Benzaldehyde	72	U *	72	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	Benzaldehyde	74	U *	74	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	Phthalic anhydride	10000	U	10000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-11	OC-SB-705-0.0/2.0-XXX	Benzaldehyde	78	U *	78	R	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-705	480-162426-11	OC-SB-705-0.0/2.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	Benzaldehyde	230	U *	230	J-	LCSL	ug/kg	TA-PIT
480-162426-1	SW8270D	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	Phthalic anhydride	56000	U	56000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Phthalic anhydride	61000	U	61000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Phthalic anhydride	65000	U	65000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-20	OC-SB-705-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162426-1	SW8270D	SB-705	480-162426-21	OC-SB-705-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Benzaldehyde	83	U	83	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Benzoic Acid	210	U	210	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Hexachlorocyclopentadiene	41	U	41	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Benzaldehyde	82	U	82	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Benzoic Acid	210	U	210	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Hexachlorocyclopentadiene	40	U	40	UJ	MSL	ug/kg	TA-PIT
480-162513-1	SW8270D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	Phthalic anhydride	56000	U	56000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-9	OC-SB-701-20/21-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-5	OC-SB-701-31/32-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162513-1	SW8270D	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	2,4-Dinitrophenol	400	U F1	400	UJ	MSL	ug/kg	TA-PIT
480-162572-1	SW8270D	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Benzaldehyde	80	U F1	80	R	MSL	ug/kg	TA-PIT

Table 3.2 - Data Validation Action Summary - SVOCs
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162572-1	SW8270D	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Benzoic Acid	200	U F1	200	R	MSL	ug/kg	TA-PIT
480-162572-1	SW8270D	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Pentachlorophenol	200	U F1	200	UJ	MSL	ug/kg	TA-PIT
480-162572-1	SW8270D	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Phthalic anhydride	54000	U	54000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Phthalic anhydride	230000	U	230000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Phthalic anhydride	57000	U	57000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Phthalic anhydride	13000	U	13000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Phthalic anhydride	12000	U	12000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Phthalic anhydride	54000	U	54000	UJ	LCSM	ug/kg	TALBFLO
480-162572-1	SW8270D	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Phthalic anhydride	11000	U	11000	UJ	LCSM	ug/kg	TALBFLO

Notes:

U = undetected	CCVRRF	Continuing Calibration Relative Response Factor low
J = estimated value	FD	Field Duplicate precision goal exceeded
J+ = estimated biased high	LCSL	Lab Control Sample recovery Low
J- = estimated biased low	LCSM	Lab Control Sample Missing
R = rejected/unusable	MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low
	MSRPD	Matrix Spike and/or Matrix Spike duplicate Relative Percent Difference precision goal exceeded
	SSL	Surrogate recovery Low

Table 3.3 - Data Validation Action Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Barium	15	F2 F1	15	J+	MSH	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Calcium	1,200	F2 F1 B	1,200	J+	MSH, MSRPD	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Chromium	150	F1	150	J-	MSL	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Copper	15	F1	15	J-	MSL	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Magnesium	5,200	F1	5,200	J-	MSL	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Manganese	100	F1	100	J-	MSL	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Potassium	1000	F1	1000	J+	MSH	mg/kg	TALBFLO
480-162199-1	SW6010D	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Vanadium	31	F1	31	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-10	OC-SB-703-0.0/2.0-XXX	Barium	89		89	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-10	OC-SB-703-0.0/2.0-XXX	Cadmium	0.3		0.3	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-11	OC-SB-703-17/18-XXX	Barium	20		20	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-11	OC-SB-703-17/18-XXX	Cadmium	0.044	J	0.044	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-11	OC-SB-703-17/18-XXX	Sodium	110	J B	160	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Aluminum	6700		6700	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Barium	15		15	J-	MSL, MSRPD, LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Cadmium	0.11	J	0.11	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Calcium	6300	B	6300	J+	MSH, MSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Chromium	20		20	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Copper	5.3		5.3	J	FD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Iron	6400		6400	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Magnesium	1300		1300	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Manganese	76	B	76	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Sodium	84	J B	170	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Aluminum	6500		6500	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Barium	12		12	J-	MSL, MSRPD, LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Cadmium	0.06	J	0.06	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Calcium	5900	B	5900	J+	MSH, MSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Chromium	14		14	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Copper	2.9		2.9	J	FD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Iron	5000		5000	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Magnesium	1100		1100	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Manganese	63	B	63	J+	MSH	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Sodium	85	J B	170	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-14	OC-SB-703-30/32-XXX	Barium	14		14	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-15	OC-SB-703-4.0/6.0-XXX	Barium	11		11	J	LCSRPD	mg/kg	TALBFLO

Table 3.3 - Data Validation Action Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW6010D	SB-703	480-162315-15	OC-SB-703-4.0/6.0-XXX	Sodium	71	J B	180	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-16	OC-SB-703-6.0/8.0-XXX	Barium	10		10	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-16	OC-SB-703-6.0/8.0-XXX	Sodium	90	J B	170	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Barium	15		15	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-703	480-162315-17	OC-SB-703-8.0/10-XXX	Sodium	100	J B	150	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-18	OC-SB-709-0.0/2.0-XXX	Barium	49		49	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-18	OC-SB-709-0.0/2.0-XXX	Cadmium	0.13	J	0.13	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-18	OC-SB-709-0.0/2.0-XXX	Sodium	110	J B	170	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-2	OC-SB-709-16/17-XXX	Barium	81		81	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Barium	13		13	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Cadmium	0.6		0.6	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Sodium	58	J B	160	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-4	OC-SB-709-32/33-XXX	Barium	53		53	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Barium	21		21	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Cadmium	0.29		0.29	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Sodium	100	J B	160	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-6	OC-SB-709-6.0/8.0-XXX	Barium	12		12	J	LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-6	OC-SB-709-6.0/8.0-XXX	Sodium	72	J B	170	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Barium	46		46	J-	MSL, LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Magnesium	3000		3000	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Manganese	120	B	120	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Sodium	110	J B	150	U	BL1	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Zinc	24		24	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Barium	49		49	J-	MSL, LCSRPD	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Magnesium	3300		3300	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Manganese	130	B	130	J-	MSL	mg/kg	TALBFLO
480-162315-1	SW6010D	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Zinc	28		28	J-	MSL	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Aluminum	8200		8200	J+	MSH	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Antimony	0.62	J	0.62	J-	MSL	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Chromium	84		84	J-	MSL	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Manganese	180	B	180	J+	MSH	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Vanadium	19		19	J	SD	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Aluminum	7400	F1	7400	J+	MSH	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Antimony	0.65	J F1	0.65	J-	MSL	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Chromium	83	F1	83	J-	MSL	mg/kg	TALBFLO

Table 3.3 - Data Validation Action Summary - Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162353-1	SW6010D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Manganese	160	F1 B	160	J+	MSH	mg/kg	TALBFLO
480-162353-1	SW6010D	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Vanadium	17		17	J	SD	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-702	480-162426-24	OC-SB-702-28/29-XXX	Antimony	0.56	J B	18	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-702	480-162426-25	OC-SB-702-34/35-XXX	Selenium	0.98	J B	4.4	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Antimony	0.56	J B	17	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Antimony	0.45	J B	16	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Antimony	0.63	J B	17	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Antimony	0.73	J B	17	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Aluminum	5700		5700	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Calcium	3500	B	3500	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Chromium	130		130	J	MSL, MSH, MSRPD, FD	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Iron	7100	B	7100	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Manganese	88	B	88	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Aluminum	5900	F1	5900	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Antimony	0.71	J B	20	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Calcium	3600	F1 B	3600	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Chromium	77	F2 F1	77	J	MSL, MSH, MSRPD, FD	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Iron	7700	F2 F1 B	7700	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Manganese	98	F2 F1 B	98	J+	MSH	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-20	OC-SB-705-6.0/8.0-XXX	Antimony	0.79	J B	17	U	BL1	mg/kg	TALBFLO
480-162426-1	SW6010D	SB-705	480-162426-21	OC-SB-705-8.0/10-XXX	Antimony	0.62	J B	16	U	BL1	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Antimony	0.53	J	0.53	J-	MSL	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Barium	49		49	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Chromium	120		120	J+	MSH, FD	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Magnesium	2900		2900	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Manganese	150		150	J	MSH, PDSL	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Potassium	1100		1100	J+	MSH, MSRPD	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Vanadium	18		18	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Zinc	28		28	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Antimony	0.63	J F1	0.63	J-	MSL	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Barium	71	F1	71	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Chromium	72	F1	72	J+	MSH, FD	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Magnesium	3700	F2 F1	3700	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Manganese	180	F2 F1	180	J	MSH, PDSL	mg/kg	TALBFLO
480-162513-1	SW7471A	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Mercury	0.031	H	0.031	J	HT	mg/kg	TALBFLO

Table 3.3 - Data Validation Action Summary - Metals
Data Validation Report
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Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Potassium	1200	F2 F1	1200	J+	MSH, MSRPD	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Vanadium	19	F1	19	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Zinc	26	F1	26	J+	MSH	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Selenium	0.49	J B	4.4	U	BL1	mg/kg	TALBFLO
480-162513-1	SW6010D	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Selenium	0.56	J B	5	U	BL1	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Aluminum	8100	F1	8100	J	MSH, PDSL	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Antimony	0.45	J F1	0.45	J-	MSL	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Calcium	4100	F1 B	4100	J-	MSL	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Chromium	63	F1	63	J+	MSH	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Manganese	140	F1 B	140	J+	MSH	mg/kg	TALBFLO
480-162572-1	SW6010D	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Zinc	78	F2 F1	78	J+	MSH, MSRPD	mg/kg	TALBFLO

Notes:

U = undetected	BL1	method BLank qualifier
J = estimated value	FD	Field Duplicate precision goal exceeded
J+ = estimated biased high	HT	Holding Time for prep or analysis exceeded
J- = estimated biased low	LCSRPD	Lab Control Sample/Lab Control Sample Duplicate Relative Percent Difference precision goal exceeded
R = rejected/unusable	LD	Lab Duplicate precision goal exceeded
	MSH	Matrix Spike and/or Matrix Spike duplicate recovery High
	MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low
	MSRPD	Matrix Spike and/or Matrix Spike duplicate Relative Percent Difference precision goal exceeded
	PDSL	Post Digestion Spike recovery Low
	SD	Serial Dilution result exceeds percent difference limit

Table 3.4 - Data Validation Action Summary - TCLP Metals
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162315-1	SW6010C	SB-709	480-162315-1	OC-SB-709-0.0/10-XXX	Arsenic	0.012	J B	0.015	U	BL1	mg/l	TALBFLO
480-162315-1	SW6010C	SB-703	480-162315-9	OC-SB-703-0.0/10-XXX	Arsenic	0.0074	J B	0.015	U	BL1	mg/l	TALBFLO
480-162353-1	SW6010C	SB-706	480-162353-1	OC-SB-706-0.0/10-XXX	Arsenic	0.0088	J B	0.015	U	BL1	mg/l	TALBFLO
480-162353-1	SW7470A	SB-706	480-162353-1	OC-SB-706-0.0/10-XXX	Mercury	0.0002	U F1	0.0002	UJ	MSL	mg/l	TALBFLO
480-162353-1	SW6010C	SB-707	480-162353-13	OC-SB-707-0.0/10-XXX	Arsenic	0.035	B	0.035	J+	BL1	mg/l	TALBFLO
480-162572-1	SW6010C	SB-712	480-162572-4	OC-SB-712-0.0/10-DUP	Lead	0.022		0.022	J	FD	mg/l	TALBFLO
480-162572-1	SW6010C	SB-712	480-162572-5	OC-SB-712-0.0/10-XXX	Lead	0.059		0.059	J	FD	mg/l	TALBFLO

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

BL1	method BLank qualifier
FD	Field Duplicate precision goal exceeded
MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low

Table 3.5 - Data Validation Action Summary - Hexavalent Chromium
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
2073905	SW7199	SB-703	1198367	OC-SB-703-2.0/4.0-DUP	Chromium, Hexavalent	2.3		2.3	J	FD	mg/kg	LANCAST
2073905	SW7199	SB-703	1198360	OC-SB-703-2.0/4.0-XXX	Chromium, Hexavalent	0.7		0.7	J	FD	mg/kg	LANCAST
2073916	SW7199	SB-702	1198477	OC-SB-702-8.0/10-XXX	Chromium, Hexavalent	0.3	J	0.44	U	BL1	mg/kg	LANCAST
2073916	SW7199	SB-705	1198458	OC-SB-705-0.0/2.0-XXX	Chromium, Hexavalent	0.35	J	0.46	U	BL1	mg/kg	LANCAST
2073916	SW7199	SB-705	1198472	OC-SB-705-4.0/6.0-DUP	Chromium, Hexavalent	2.7		2.7	J	FD	mg/kg	LANCAST
2073916	SW7199	SB-705	1198465	OC-SB-705-4.0/6.0-XXX	Chromium, Hexavalent	1.5		1.5	J	FD	mg/kg	LANCAST

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

BL1 method BLank qualifier
FD Field Duplicate precision goal exceeded

Table 3.6 - Data Validation Action Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162140-1	E300	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Sulfate	430		430	J	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	Sulfate	590		590	J	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Sulfate	190		190	J	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Chloride	10	U	10	UJ	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Sulfate	1800		1800	J	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Chloride	10	U	10	UJ	HT	mg/kg	TA-PIT
480-162140-1	E300	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Sulfate	57		57	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Sulfate	35		35	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Chloride	7.2	J	7.2	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Sulfate	100		100	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-3	OC-SB-708-28/30-XXX	Chloride	70		70	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-3	OC-SB-708-28/30-XXX	Sulfate	460		460	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Chloride	210		210	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Sulfate	1200		1200	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Chloride	19		19	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Sulfate	3900		3900	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Chloride	57		57	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Sulfate	1100		1100	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Chloride	670		670	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Sulfate	3700		3700	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Chloride	6.9	J	6.9	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Sulfate	6400		6400	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Sulfate	170		170	J	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162199-1	E300	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	Sulfate	71		71	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-2	OC-SB-706-0.0/2.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-2	OC-SB-706-0.0/2.0-XXX	Sulfate	1000	F1	1000	J-	HT, MSL	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Sulfate	290		290	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Sulfate	410		410	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Sulfate	66		66	J	HT	mg/kg	TA-PIT

Table 3.6 - Data Validation Action Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162353-1	E300	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Chloride	15		15	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Sulfate	140		140	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Chloride	7	J	7	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Sulfate	120		120	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Chloride	4.8	J	4.8	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Sulfate	160		160	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Chloride	5.2	J	5.2	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Sulfate	170		170	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Sulfate	2100		2100	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Sulfate	7100		7100	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Chloride	4.1	J	4.1	J	HT	mg/kg	TA-PIT
480-162353-1	E300	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Sulfate	130		130	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Chloride	9.3	J	9.3	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-13	OC-SB-702-0.0/2.0-XXX	Sulfate	610		610	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	Chloride	10	U	10	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-14	OC-SB-702-2.0/4.0-XXX	Sulfate	3000		3000	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Sulfate	6100		6100	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Sulfate	730		730	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Chloride	4.7	J	4.7	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-2	OC-SB-704-0.0/2.0-XXX	Sulfate	18000		18000	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-3	OC-SB-704-12/13-XXX	Chloride	10	U	10	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-3	OC-SB-704-12/13-XXX	Sulfate	68		68	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-4	OC-SB-704-19/20-XXX	Sulfate	270		270	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-5	OC-SB-704-2.0/4.0-XXX	Sulfate	16000		16000	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Chloride	1300		1300	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-6	OC-SB-704-33/34-XXX	Sulfate	6100		6100	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-7	OC-SB-704-4.0/6.0-XXX	Sulfate	760		760	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-8	OC-SB-704-6.0/8.0-XXX	Sulfate	530		530	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	Chloride	4.8	J	4.8	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-704	480-162426-9	OC-SB-704-8.0/10-XXX	Sulfate	150		150	J	HT	mg/kg	TA-PIT

Table 3.6 - Data Validation Action Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162426-1	E300	SB-705	480-162426-11	OC-SB-705-0.0/2.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-11	OC-SB-705-0.0/2.0-XXX	Sulfate	77		77	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Chloride	5.4	J	5.4	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Sulfate	200		200	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-12	OC-SB-705-2.0/4.0-XXX	Sulfate	1400		1400	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Sulfate	3400		3400	J	HT	mg/kg	TA-PIT
480-162426-1	E300	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Sulfate	3400	F2	3400	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Sulfate	13000		13000	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Sulfate	12000	F2	12000	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	Sulfate	15000		15000	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-9	OC-SB-701-20/21-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-9	OC-SB-701-20/21-XXX	Sulfate	190		190	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-5	OC-SB-701-31/32-XXX	Chloride	390		390	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-5	OC-SB-701-31/32-XXX	Sulfate	3900		3900	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	Sulfate	230		230	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Sulfate	130		130	J	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162513-1	E300	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Sulfate	250		250	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Sulfate	1800		1800	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Sulfate	13		13	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Sulfate	2400		2400	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Chloride	42		42	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Sulfate	500		500	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Sulfate	290		290	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Sulfate	12		12	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Chloride	7.2	J	7.2	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Sulfate	43		43	J	HT	mg/kg	TA-PIT

Table 3.6 - Data Validation Action Summary - General Chemistry
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162572-1	E300	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Chloride	12	U	12	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Sulfate	4000		4000	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Chloride	6.8	J	6.8	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Sulfate	520		520	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Sulfate	43		43	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Chloride	250		250	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Sulfate	3700		3700	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Chloride	11	U	11	UJ	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Sulfate	12000		12000	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Chloride	12		12	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Sulfate	1500		1500	J	HT	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Chloride	6.7	J F2 F1	6.7	J	HT, MSL, MSRPD	mg/kg	TA-PIT
480-162572-1	E300	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Sulfate	180	F2 F1	180	J	HT, MSL, MSRPD	mg/kg	TA-PIT
480-162140-1	E350.1	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Ammonia	7.3	B	7.3	U	BL1	mg/kg	TALBFLO
480-162140-1	E350.1	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Ammonia	6.6	B	6.6	U	BL1	mg/kg	TALBFLO
480-162140-1	E350.1	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Ammonia	9.9	B	9.9	U	BL1	mg/kg	TALBFLO
480-162315-1	E350.1	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Ammonia	14		14	J	FD	mg/kg	TALBFLO
480-162315-1	E350.1	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Ammonia	6.7	B F1	6.7	J	FD	mg/kg	TALBFLO
480-162353-1	E350.1	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Ammonia	5.5	B	5.5	J-	MSL	mg/kg	TALBFLO
480-162353-1	E350.1	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Ammonia	5.6	B F1	5.6	J-	MSL	mg/kg	TALBFLO
480-162140-1	SW9034	SB-708	480-162140-1	OC-SB-708-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162199-1	SW9034	SB-710	480-162199-5	OC-SB-710-0.0/10XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162315-1	SW9034	SB-703	480-162315-9	OC-SB-703-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162353-1	SW9034	SB-707	480-162353-13	OC-SB-707-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162426-1	SW9034	SB-704	480-162426-1	OC-SB-704-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162513-1	SW9034	SB-701	480-162513-1	OC-SB-701-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162572-1	SW9034	SB-712	480-162572-4	OC-SB-712-0.0/10-DUP	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO
480-162572-1	SW9034	SB-712	480-162572-5	OC-SB-712-0.0/10-XXX	Sulfide, Reactive	10	U	10	UJ	HT	mg/kg	TALBFLO

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

BL1	method BLank qualifier
FD	Field Duplicate precision goal exceeded
HT	Holding Time for prep or analysis exceeded
MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low
MSRPD	Matrix Spike and/or Matrix Spike duplicate Relative Percent Difference precision goal exceeded

Table 3.7 - Data Validation Action Summary - Aldehydes
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162140-1	SW8315A	SB-708	480-162140-2	OC-SB-708-0.0/2.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162140-1	SW8315A	SB-708	480-162140-3	OC-SB-708-2.0/4.0-XXX	Formaldehyde	2400	U	2400	UJ	LCS-L	ug/kg	TA-NC
480-162140-1	SW8315A	SB-708	480-162140-4	OC-SB-708-4.0/6.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162140-1	SW8315A	SB-708	480-162140-5	OC-SB-708-6.0/8.0-XXX	Formaldehyde	2100	U	2100	UJ	LCS-L	ug/kg	TA-NC
480-162140-1	SW8315A	SB-708	480-162140-6	OC-SB-708-8.0/10-XXX	Formaldehyde	2100	U	2100	UJ	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-708	480-162199-1	OC-SB-708-16/18-XXX	Formaldehyde	2100	U	2100	UJ	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-708	480-162199-2	OC-SB-708-22/24-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-708	480-162199-3	OC-SB-708-28/30-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-708	480-162199-4	OC-SB-708-33/34-XXX	Formaldehyde	1900	J	1900	J	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-6	OC-SB-710-2.0/4.0-XXX	Formaldehyde	2000	J	2000	J	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-7	OC-SB-710-23/24-XXX	Formaldehyde	2500	U	2500	UJ	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-8	OC-SB-710-36/37-XXX	Formaldehyde	3700		3700	J	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-9	OC-SB-710-4.0/6.0-XXX	Formaldehyde	4000		4000	J	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-10	OC-SB-710-6.0/8.0-XXX	Formaldehyde	11000		11000	J	LCS-L	ug/kg	TA-NC
480-162199-1	SW8315A	SB-710	480-162199-11	OC-SB-710-8.0/10-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-703	480-162315-10	OC-SB-703-0.0/2.0-XXX	Formaldehyde	1800	J	1800	J	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-703	480-162315-12	OC-SB-703-2.0/4.0-DUP	Formaldehyde	4900		4900	J	FD, MS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-703	480-162315-13	OC-SB-703-2.0/4.0-XXX	Formaldehyde	2900		2900	J	FD, MS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-2	OC-SB-709-16/17-XXX	Formaldehyde	3300		3300	J	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-3	OC-SB-709-2.0/4.0-XXX	Formaldehyde	2100	J	2100	J	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-4	OC-SB-709-32/33-XXX	Formaldehyde	2300		2300	J	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-5	OC-SB-709-4.0/6.0-XXX	Formaldehyde	2900		2900	J	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-6	OC-SB-709-6.0/8.0-XXX	Formaldehyde	2400	U	2400	UJ	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-7	OC-SB-709-8.0/10-DUP	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162315-1	SW8315A	SB-709	480-162315-8	OC-SB-709-8.0/10-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-2	OC-SB-706-0.0/2.0-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-3	OC-SB-706-10/12-XXX	Formaldehyde	2400	J	2400	J	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-4	OC-SB-706-2.0/4.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-5	OC-SB-706-20/22-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-6	OC-SB-706-26/27-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-7	OC-SB-706-4.0/6.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-706	480-162353-8	OC-SB-706-6.0/8.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-9	OC-SB-707-0.0/2.0-XXX	Formaldehyde	3200		3200	J	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-14	OC-SB-707-12/13-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC

Table 3.7 - Data Validation Action Summary - Aldehydes
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162353-1	SW8315A	SB-707	480-162353-15	OC-SB-707-15/17-XXX	Formaldehyde	2100	U	2100	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-10	OC-SB-707-2.0/4.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-11	OC-SB-707-4.0/6.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-16	OC-SB-707-6.0/8.0-DUP	Formaldehyde	2100	U	2100	UJ	LCS-L, MS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-12	OC-SB-707-6.0/8.0-XXX	Formaldehyde	1300	J	1300	J	LCS-L, MS-L	ug/kg	TA-NC
480-162353-1	SW8315A	SB-707	480-162353-17	OC-SB-707-8.0/10-XXX	Formaldehyde	1500	J	1500	J	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-702	480-162426-24	OC-SB-702-28/29-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-702	480-162426-25	OC-SB-702-34/35-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-702	480-162426-15	OC-SB-702-4.0/6.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-702	480-162426-16	OC-SB-702-6.0/8.0-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-702	480-162426-26	OC-SB-702-8.0/10-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-705	480-162426-17	OC-SB-705-17/18-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-705	480-162426-18	OC-SB-705-4.0/6.0-DUP	Formaldehyde	7200		7200	J	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-705	480-162426-19	OC-SB-705-4.0/6.0-XXX	Formaldehyde	5400		5400	J	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-705	480-162426-20	OC-SB-705-6.0/8.0-XXX	Formaldehyde	1500	J	1500	J	LCS-L	ug/kg	TA-NC
480-162426-1	SW8315A	SB-705	480-162426-21	OC-SB-705-8.0/10-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-2	OC-SB-701-0.0/2.0-DUP	Formaldehyde	2500	U	2500	UJ	LCS-L, MS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-3	OC-SB-701-0.0/2.0-XXX	Formaldehyde	2500	U	2500	UJ	LCS-L, MS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-4	OC-SB-701-2.0/4.0-XXX	Formaldehyde	1600	J	1600	J	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-9	OC-SB-701-20/21-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-5	OC-SB-701-31/32-XXX	Formaldehyde	5300		5300	J	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-6	OC-SB-701-4.0/6.0-XXX	Formaldehyde	1500	J	1500	J	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-7	OC-SB-701-6.0/8.0-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162513-1	SW8315A	SB-701	480-162513-8	OC-SB-701-8.0/10-XXX	Formaldehyde	2400	U	2400	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-1	OC-SB-711-0.0/2.0-XXX	Formaldehyde	2500	U	2500	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-13	OC-SB-711-18/19-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-2	OC-SB-711-2.0/4.0-XXX	Formaldehyde	1500	J	1500	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-14	OC-SB-711-35/36-XXX	Formaldehyde	4700		4700	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-3	OC-SB-711-4.0/6.0-XXX	Formaldehyde	2900		2900	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-16	OC-SB-711-6.0/8.0-XXX	Formaldehyde	2300	U	2300	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-711	480-162572-17	OC-SB-711-8.0/10-XXX	Formaldehyde	2600	U	2600	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-6	OC-SB-712-0.0/2.0-XXX	Formaldehyde	2400	U	2400	UJ	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-7	OC-SB-712-2.0/4.0-XXX	Formaldehyde	2100	J	2100	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-8	OC-SB-712-23/24-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC

Table 3.7 - Data Validation Action Summary - Aldehydes
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
480-162572-1	SW8315A	SB-712	480-162572-9	OC-SB-712-37/38-XXX	Formaldehyde	6100		6100	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-10	OC-SB-712-4.0/6.0-XXX	Formaldehyde	2000	J	2000	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-11	OC-SB-712-6.0/8.0-XXX	Formaldehyde	2600		2600	J	LCS-L	ug/kg	TA-NC
480-162572-1	SW8315A	SB-712	480-162572-12	OC-SB-712-8.0/10-XXX	Formaldehyde	2200	U	2200	UJ	LCS-L	ug/kg	TA-NC

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

FD	Field Duplicate precision goal exceeded
MSL	Matrix Spike and/or Matrix Spike duplicate recovery Low
LCSL	Lab Control Sample recovery Low

Table 3.8 - Data Validation Action Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
2072711	SW8315A MOD	SB-708	1192772	OC-SB-708-0.0/2.0-XXX	Monomethylhydrazine (MMH)	6.2	U	6.2	UJ	CCV%D	ng/g	LANCAST
2072711	SW8315A MOD	SB-708	1192773	OC-SB-708-2.0/4.0-XXX	Monomethylhydrazine (MMH)	5.9	U	5.9	UJ	CCV%D	ng/g	LANCAST
2072711	SW8315A MOD	SB-708	1192774	OC-SB-708-4.0/6.0-XXX	Monomethylhydrazine (MMH)	5.5	U	5.5	UJ	CCV%D	ng/g	LANCAST
2072711	SW8315A MOD	SB-708	1192775	OC-SB-708-6.0/8.0-XXX	Monomethylhydrazine (MMH)	5.5	U	5.5	UJ	CCV%D	ng/g	LANCAST
2072711	SW8315A MOD	SB-708	1192776	OC-SB-708-8.0/10-XXX	Hydrazine	5.3	U	5.3	UJ	CCV%D	ng/g	LANCAST
2072711	SW8315A MOD	SB-708	1192776	OC-SB-708-8.0/10-XXX	Monomethylhydrazine (MMH)	5.3	U	5.3	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194018	OC-SB-708-16/18-XXX	Hydrazine	5.6	U	5.6	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194018	OC-SB-708-16/18-XXX	Monomethylhydrazine (MMH)	5.6	U	5.6	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194019	OC-SB-708-22/24-XXX	Hydrazine	2.4	J	2.4	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194019	OC-SB-708-22/24-XXX	Monomethylhydrazine (MMH)	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194020	OC-SB-708-28/30-XXX	Hydrazine	1.5	J	1.5	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194020	OC-SB-708-28/30-XXX	Monomethylhydrazine (MMH)	6	U	6	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194021	OC-SB-708-33/34-XXX	Hydrazine	5.9	U	5.9	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-708	1194021	OC-SB-708-33/34-XXX	Monomethylhydrazine (MMH)	5.9	U	5.9	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194022	OC-SB-710-2.0/4.0-XXX	Hydrazine	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194022	OC-SB-710-2.0/4.0-XXX	Monomethylhydrazine (MMH)	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194023	OC-SB-710-23/24-XXX	Hydrazine	1.7	J	1.7	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194023	OC-SB-710-23/24-XXX	Monomethylhydrazine (MMH)	6.3	U	6.3	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194024	OC-SB-710-36/37-XXX	Hydrazine	1.9	J	1.9	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194024	OC-SB-710-36/37-XXX	Monomethylhydrazine (MMH)	5.4	U	5.4	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194025	OC-SB-710-4.0/6.0-XXX	Hydrazine	1.8	J	1.8	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194025	OC-SB-710-4.0/6.0-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194026	OC-SB-710-6.0/8.0-XXX	Hydrazine	1.6	J	1.6	J	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194026	OC-SB-710-6.0/8.0-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	CCV%D	ng/g	LANCAST
2072990	SW8315A MOD	SB-710	1194027	OC-SB-710-8.0/10-XXX	Monomethylhydrazine (MMH)	5.4	U	5.4	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-703	1198367	OC-SB-703-2.0/4.0-DUP	Hydrazine	4.2	J	4.2	J	MS-L	ng/g	LANCAST
2073905	SW8315A MOD	SB-703	1198360	OC-SB-703-2.0/4.0-XXX	Hydrazine	7.4		7.4	J	MS-L	ng/g	LANCAST
2073905	SW8315A MOD	SB-703	1198370	OC-SB-703-6.0/8.0-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-703	1198371	OC-SB-703-8.0/10-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198372	OC-SB-709-0.0/2.0-XXX	Monomethylhydrazine (MMH)	6.1	U	6.1	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198373	OC-SB-709-16/17-XXX	Monomethylhydrazine (MMH)	5.6	U	5.6	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198374	OC-SB-709-2.0/4.0-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198375	OC-SB-709-32/33-XXX	Monomethylhydrazine (MMH)	5.4	U	5.4	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198376	OC-SB-709-4.0/6.0-XXX	Monomethylhydrazine (MMH)	6.9	U	6.9	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198377	OC-SB-709-6.0/8.0-XXX	Monomethylhydrazine (MMH)	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198385	OC-SB-709-8.0/10-DUP	Hydrazine	5.6	U	5.6	UJ	MS-L	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198385	OC-SB-709-8.0/10-DUP	Monomethylhydrazine (MMH)	5.6	U	5.6	UJ	CCV%D	ng/g	LANCAST
2073905	SW8315A MOD	SB-709	1198378	OC-SB-709-8.0/10-XXX	Hydrazine	5.7	U	5.7	UJ	MS-L	ng/g	LANCAST

Table 3.8 - Data Validation Action Summary - Hydrazines
Data Validation Report
November 2019 Containment Area Soil Sampling Event
Olin Chemical Superfund Site
Wilmington, Massachusetts

Lab SDG	Analysis Method	Location	Lab Sample ID	Field Sample ID	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units	Lab ID
2073905	SW8315A MOD	SB-709	1198378	OC-SB-709-8.0/10-XXX	Monomethylhydrazine (MMH)	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2073916	SW8315A MOD	SB-704	1198450	OC-SB-704-0.0/2.0-XXX	Monomethylhydrazine (MMH)	7	U	7	UJ	CCV%D	ng/g	LANCAST
2073916	SW8315A MOD	SB-704	1198451	OC-SB-704-12/13-XXX	Monomethylhydrazine (MMH)	5.3	U	5.3	UJ	CCV%D	ng/g	LANCAST
2073916	SW8315A MOD	SB-704	1198452	OC-SB-704-19/20-XXX	Monomethylhydrazine (MMH)	5.7	U	5.7	UJ	CCV%D	ng/g	LANCAST
2073916	SW8315A MOD	SB-704	1198453	OC-SB-704-2.0/4.0-XXX	Monomethylhydrazine (MMH)	6	U	6	UJ	CCV%D	ng/g	LANCAST
2073916	SW8315A MOD	SB-705	1198472	OC-SB-705-4.0/6.0-DUP	Hydrazine	5.8	U	5.8	UJ	MS-L	ng/g	LANCAST
2073916	SW8315A MOD	SB-705	1198472	OC-SB-705-4.0/6.0-DUP	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	MS-L	ng/g	LANCAST
2073916	SW8315A MOD	SB-705	1198465	OC-SB-705-4.0/6.0-XXX	Hydrazine	1.7	J	1.7	J	MS-L	ng/g	LANCAST
2073916	SW8315A MOD	SB-705	1198465	OC-SB-705-4.0/6.0-XXX	Monomethylhydrazine (MMH)	5.8	U	5.8	UJ	MS-L	ng/g	LANCAST
2074150	SW8315A MOD	SB-701	1199764	OC-SB-701-0.0/2.0-DUP	Hydrazine	5.7	J	5.7	J	MS-L	ng/g	LANCAST
2074150	SW8315A MOD	SB-701	1199757	OC-SB-701-0.0/2.0-XXX	Hydrazine	5.3	J	5.3	J	MS-L	ng/g	LANCAST

Notes:
U = undetected
J = estimated value
J+ = estimated biased high
J- = estimated biased low
R = rejected/unusable

CCV%D Continuing Calibration Verification percent Difference exceeds goal
MSL Matrix Spike and/or Matrix Spike duplicate recovery Low

Table 4
Final Results Summary - Tentatively Identified Compounds
Data Validation Report
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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	301-02-0	9-Octadecenamide, (Z)-	13.16	280	T J N	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	80-05-7	Phenol, 4,4'-(1-methylethylidene)bis-	12.29	3900	T J N	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC01	Unknown	9.78	1500	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC02	Unknown	10.15	260	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC03	Unknown	12.90	4800	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC04	Unknown	14.99	1100	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC05	Unknown	15.13	320	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC06	Unknown	17.35	35000	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC07	Unknown	17.82	530	T J	NJ	ug/kg	1
480-162513-1	480-162513-2	SW8270D	SB-701	OC-SB-701-0.0/2.0-DUP	TIC08	Unknown	18.79	580	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	80-05-7	Phenol, 4,4'-(1-methylethylidene)bis-	12.29	1200	T J N	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC01	Unknown	8.30	220	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC02	Unknown	9.78	650	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC03	Unknown	10.15	270	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC04	Unknown	10.32	230	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC05	Unknown	12.90	1800	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC06	Unknown	15.00	670	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC07	Unknown	17.35	28000	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC08	Unknown	17.82	300	T J	NJ	ug/kg	1
480-162513-1	480-162513-3	SW8270D	SB-701	OC-SB-701-0.0/2.0-XXX	TIC09	Unknown	18.80	400	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8260C	SB-701	OC-SB-701-2.0/4.0-XXX	590-50-1	2-Pentanone, 4,4-dimethyl-	7.52	4.8	T J N	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8260C	SB-701	OC-SB-701-2.0/4.0-XXX	598-96-9	2-Pentene, 3,4,4-trimethyl-	6.56	7.0	T J N	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8260C	SB-701	OC-SB-701-2.0/4.0-XXX	TIC01	Unknown	13.31	44	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8260C	SB-701	OC-SB-701-2.0/4.0-XXX	TIC02	Unknown	13.44	32	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8260C	SB-701	OC-SB-701-2.0/4.0-XXX	TIC03	Unknown	13.52	21	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC01	Unknown	9.79	2700	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC02	Unknown	11.63	3300	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC03	Unknown	12.92	15000	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC04	Unknown	15.01	4500	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC05	Unknown	17.09	4100	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC06	Unknown	17.37	340000	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC07	Unknown	17.86	10000	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC08	Unknown	18.46	2900	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC09	Unknown	18.82	13000	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC10	Unknown	19.45	3300	T J	NJ	ug/kg	1
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	18435-45-5	1-Nonadecene	15.50	660	T J N	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC01	Unknown	8.36	890	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC02	Unknown	9.86	2700	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC03	Unknown	10.23	720	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC04	Unknown	13.08	14000	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC05	Unknown	15.26	4000	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC06	Unknown	17.66	110000	T J	NJ	ug/kg	10

Table 4
Final Results Summary - Tentatively Identified Compounds
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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC07	Unknown	18.16	1500	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC08	Unknown	19.18	1800	T J	NJ	ug/kg	10
480-162513-1	480-162513-4	SW8270D	SB-701	OC-SB-701-2.0/4.0-XXX	TIC09	Unknown	19.85	690	T J	NJ	ug/kg	10
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	119-61-9	Benzophenone	9.90	25	T J N	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	25154-52-3	Phenol, nonyl-	10.19	24	T J N	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	TIC01	Unknown	10.13	23	T J	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	TIC02	Unknown	10.15	23	T J	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	TIC03	Unknown	10.69	30	T J	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	TIC04	Unknown	11.10	35	T J	NJ	ug/kg	1
480-162513-1	480-162513-9	SW8270D	SB-701	OC-SB-701-20/21-XXX	TIC05	Unknown	11.61	56	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	87295-26-9	16-Methyloxacyclohexadeca-3,5-dien-2-one	18.47	210	T J N	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	301-02-0	9-Octadecenamide, (Z)-	13.16	130	T J N	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	80-05-7	Phenol, 4,4'-(1-methylethylidene)bis-	12.29	290	T J N	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC01	Unknown	8.13	31	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC02	Unknown	11.90	29	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC03	Unknown	12.74	35	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC04	Unknown	12.90	29	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC05	Unknown	14.99	41	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC06	Unknown	16.61	1000	T J	NJ	ug/kg	1
480-162513-1	480-162513-5	SW8270D	SB-701	OC-SB-701-31/32-XXX	TIC07	Unknown	17.30	170	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8260C	SB-701	OC-SB-701-4.0/6.0-XXX	565-77-5	2-Pentene, 2,3,4-trimethyl-	6.56	10	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8260C	SB-701	OC-SB-701-4.0/6.0-XXX	526-73-8	Benzene, 1,2,3-trimethyl-	10.28	12	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8260C	SB-701	OC-SB-701-4.0/6.0-XXX	611-14-3	Benzene, 1-ethyl-2-methyl-	10.01	8.7	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8260C	SB-701	OC-SB-701-4.0/6.0-XXX	14172-83-9	Cyclopropane, pentamethyl-	6.90	5.4	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8260C	SB-701	OC-SB-701-4.0/6.0-XXX	TIC01	Unknown	10.54	6.0	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	1599-67-3	1-Docosene	13.93	490	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	103-82-2	Benzeneacetic acid	7.87	1100	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	297-03-0	Cyclotetracosane	15.27	700	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	98-54-4	Phenol, p-tert-butyl-	8.13	440	T J N	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC01	Unknown	11.60	1500	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC02	Unknown	12.91	860	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC03	Unknown	15.01	300	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC04	Unknown	17.34	13000	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC05	Unknown	20.00	300	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC06	Unknown	20.48	990	T J	NJ	ug/kg	1
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	1599-67-3	1-Docosene	14.12	1100	T J N	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	103-82-2	Benzeneacetic acid	7.88	1600	T J N	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	297-03-0	Cyclotetracosane	15.51	1500	T J N	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.63	11000	T J N	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	98-54-4	Phenol, p-tert-butyl-	8.18	540	T J N	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC01	Unknown	13.07	970	T J	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC02	Unknown	15.25	370	T J	NJ	ug/kg	4

Table 4
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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC03	Unknown	16.94	460	T J	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC04	Unknown	17.00	290	T J	NJ	ug/kg	4
480-162513-1	480-162513-6	SW8270D	SB-701	OC-SB-701-4.0/6.0-XXX	TIC05	Unknown	20.93	790	T J	NJ	ug/kg	4
480-162513-1	480-162513-7	SW8260C	SB-701	OC-SB-701-6.0/8.0-XXX	141-78-6	Ethyl Acetate	4.71	6.1	T J N	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC01	Unknown	11.91	39	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC02	Unknown	12.30	61	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC03	Unknown	12.67	39	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC04	Unknown	14.98	65	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC05	Unknown	15.03	170	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC06	Unknown	15.07	100	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC07	Unknown	15.08	170	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC08	Unknown	16.65	2400	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC09	Unknown	17.70	83	T J	NJ	ug/kg	1
480-162513-1	480-162513-7	SW8270D	SB-701	OC-SB-701-6.0/8.0-XXX	TIC10	Unknown	18.49	890	T J	NJ	ug/kg	1
480-162513-1	480-162513-8	SW8270D	SB-701	OC-SB-701-8.0/10-XXX	TIC01	Unknown	10.70	32	T J	NJ	ug/kg	1
480-162513-1	480-162513-8	SW8270D	SB-701	OC-SB-701-8.0/10-XXX	TIC02	Unknown	12.31	20	T J	NJ	ug/kg	1
480-162513-1	480-162513-8	SW8270D	SB-701	OC-SB-701-8.0/10-XXX	TIC03	Unknown	17.08	27	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.49	4300	T J N	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC01	Unknown	12.15	700	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC02	Unknown	12.68	870	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC03	Unknown	12.73	1500	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC04	Unknown	13.66	890	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC05	Unknown	14.25	570	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC06	Unknown	14.35	630	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC07	Unknown	15.44	1000	T J	NJ	ug/kg	1
480-162426-1	480-162426-13	SW8270D	SB-702	OC-SB-702-0.0/2.0-XXX	TIC08	Unknown	17.34	590	T J	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	1599-67-3	1-Docosene	14.50	420	T J N	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	74685-33-9	3-Eicosene, (E)-	13.22	580	T J N	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	301-02-0	9-Octadecenamide, (Z)-	12.53	420	T J N	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.49	3700	T J N	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	TIC01	Unknown	12.14	440	T J	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	TIC02	Unknown	12.25	400	T J	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	TIC03	Unknown	12.67	410	T J	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	TIC04	Unknown	12.72	680	T J	NJ	ug/kg	1
480-162426-1	480-162426-14	SW8270D	SB-702	OC-SB-702-2.0/4.0-XXX	TIC05	Unknown	15.43	440	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	593-45-3	Octadecane	14.03	120	T J N	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	593-45-3	Octadecane	18.10	85	T J N	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC01	Unknown	11.60	120	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC02	Unknown	12.82	200	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC03	Unknown	13.41	310	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC04	Unknown	13.45	88	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC05	Unknown	13.47	350	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC06	Unknown	14.46	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC07	Unknown	15.12	260	T J	NJ	ug/kg	1

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480-162426-1	480-162426-24	SW8270D	SB-702	OC-SB-702-28/29-XXX	TIC08	Unknown	16.26	200	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC01	Unknown	1.40	22	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC02	Unknown	10.58	22	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC03	Unknown	11.91	28	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC04	Unknown	12.76	24	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC05	Unknown	14.39	29	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC06	Unknown	16.14	27	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC07	Unknown	16.18	39	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC08	Unknown	17.28	36	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC09	Unknown	17.46	49	T J	NJ	ug/kg	1
480-162426-1	480-162426-25	SW8270D	SB-702	OC-SB-702-34/35-XXX	TIC10	Unknown	17.52	37	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.51	4600	T J N	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC01	Unknown	12.15	590	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC02	Unknown	12.69	1100	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC03	Unknown	12.74	1100	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC04	Unknown	13.67	680	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC05	Unknown	14.25	430	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC06	Unknown	17.35	900	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC01	Unknown Hydrocarbon	13.24	670	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC02	Unknown Hydrocarbon	14.52	630	T J	NJ	ug/kg	1
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	18835-32-0	1-Tricosene	13.38	630	T J N	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	6311-48-4	Dibenzylidene 4,4'-biphenylenediamine	20.12	760	T J N	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.70	4900	T J N	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC01	Unknown	12.83	770	T J	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC02	Unknown	12.88	990	T J	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC03	Unknown	13.83	550	T J	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC04	Unknown	15.63	600	T J	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC05	Unknown	17.56	720	T J	NJ	ug/kg	5
480-162426-1	480-162426-15	SW8270D	SB-702	OC-SB-702-4.0/6.0-XXX	TIC01	Unknown Hydrocarbon	14.69	560	T J	NJ	ug/kg	5
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.49	1200	T J N	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC01	Unknown	9.69	170	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC02	Unknown	9.71	160	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC03	Unknown	9.85	140	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC04	Unknown	12.15	180	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC05	Unknown	12.27	280	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC06	Unknown	14.84	180	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC01	Unknown Hydrocarbon	13.25	170	T J	NJ	ug/kg	2
480-162426-1	480-162426-16	SW8270D	SB-702	OC-SB-702-6.0/8.0-XXX	TIC02	Unknown Hydrocarbon	14.52	230	T J	NJ	ug/kg	2
480-162426-1	480-162426-26	SW8260C	SB-702	OC-SB-702-8.0/10-XXX	TIC01	Unknown	13.31	8.2	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8260C	SB-702	OC-SB-702-8.0/10-XXX	TIC02	Unknown	13.45	5.0	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.33	4100	T J N	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	25154-52-3	Phenol, nonyl-	10.12	260	T J N	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC01	Unknown	10.06	240	T J	NJ	ug/kg	1

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480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC02	Unknown	10.08	390	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC03	Unknown	10.14	160	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC04	Unknown	10.19	170	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC05	Unknown	10.23	310	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC06	Unknown	10.26	290	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC07	Unknown	12.97	630	T J	NJ	ug/kg	1
480-162426-1	480-162426-26	SW8270D	SB-702	OC-SB-702-8.0/10-XXX	TIC08	Unknown	13.47	180	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8260C	SB-703	OC-SB-703-0.0/2.0-XXX	TIC01	Unknown	9.59	7.9	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8260C	SB-703	OC-SB-703-0.0/2.0-XXX	TIC02	Unknown	10.32	6.4	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8260C	SB-703	OC-SB-703-0.0/2.0-XXX	TIC03	Unknown	10.57	11	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	83-47-6	.gamma.-Sitosterol	20.86	1300	T J N	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	74685-30-6	5-Eicosene, (E)-	14.13	1400	T J N	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	297-03-0	Cyclotetracosane	15.53	1900	T J N	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC01	Unknown	12.93	990	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC02	Unknown	13.53	1100	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC03	Unknown	14.60	1100	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC04	Unknown	15.28	1100	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC05	Unknown	16.52	1400	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC06	Unknown	17.69	15000	T J	NJ	ug/kg	1
480-162315-1	480-162315-10	SW8270D	SB-703	OC-SB-703-0.0/2.0-XXX	TIC07	Unknown	18.50	1500	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	112-84-5	Erucylamide	16.15	280	T J N	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC01	Unknown	13.48	350	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC02	Unknown	14.58	370	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC03	Unknown	16.49	460	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC04	Unknown	16.96	560	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC05	Unknown	17.04	1200	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC06	Unknown	17.97	360	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC07	Unknown	18.15	530	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC08	Unknown	18.47	670	T J	NJ	ug/kg	1
480-162315-1	480-162315-11	SW8270D	SB-703	OC-SB-703-17/18-XXX	TIC09	Unknown	20.82	870	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8260C	SB-703	OC-SB-703-2.0/4.0-DUP	TIC01	Unknown	9.59	4.3	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8260C	SB-703	OC-SB-703-2.0/4.0-DUP	TIC02	Unknown	10.31	4.1	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8260C	SB-703	OC-SB-703-2.0/4.0-DUP	TIC03	Unknown	10.57	7.0	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	74685-30-6	5-Eicosene, (E)-	14.13	760	T J N	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	297-03-0	Cyclotetracosane	15.52	830	T J N	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC01	Unknown	12.08	810	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC02	Unknown	13.09	960	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC03	Unknown	13.52	850	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC04	Unknown	13.58	990	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC05	Unknown	14.60	760	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC06	Unknown	16.51	820	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC07	Unknown	17.69	13000	T J	NJ	ug/kg	1
480-162315-1	480-162315-12	SW8270D	SB-703	OC-SB-703-2.0/4.0-DUP	TIC08	Unknown	20.85	810	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8260C	SB-703	OC-SB-703-2.0/4.0-XXX	TIC01	Unknown	9.59	5.3	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162315-1	480-162315-13	SW8260C	SB-703	OC-SB-703-2.0/4.0-XXX	TIC02	Unknown	10.32	5.5	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8260C	SB-703	OC-SB-703-2.0/4.0-XXX	TIC03	Unknown	10.57	8.5	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	1599-67-3	1-Docosene	14.14	750	T J N	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	10544-50-0	Cyclic octaatomic sulfur	11.93	11000	T J N	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.69	9200	T J N	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC01	Unknown	10.38	940	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC02	Unknown	13.10	770	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC03	Unknown	13.53	960	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC04	Unknown	13.59	1100	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC05	Unknown	15.29	1200	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC06	Unknown	16.52	790	T J	NJ	ug/kg	1
480-162315-1	480-162315-13	SW8270D	SB-703	OC-SB-703-2.0/4.0-XXX	TIC07	Unknown	18.51	1300	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC01	Unknown	9.99	190	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC02	Unknown	12.93	120	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC03	Unknown	13.53	300	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC04	Unknown	13.59	350	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC05	Unknown	14.62	220	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC06	Unknown	15.29	170	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC07	Unknown	15.35	140	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC08	Unknown	16.52	230	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC09	Unknown	17.11	430	T J	NJ	ug/kg	1
480-162315-1	480-162315-14	SW8270D	SB-703	OC-SB-703-30/32-XXX	TIC10	Unknown	17.16	360	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC01	Unknown	4.49	100	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC02	Unknown	10.79	62	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC03	Unknown	11.55	52	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC04	Unknown	12.93	150	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC05	Unknown	13.53	270	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC06	Unknown	13.59	330	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC07	Unknown	14.16	71	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC08	Unknown	14.62	220	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC09	Unknown	16.52	260	T J	NJ	ug/kg	1
480-162315-1	480-162315-15	SW8270D	SB-703	OC-SB-703-4.0/6.0-XXX	TIC10	Unknown	18.48	100	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC01	Unknown	12.09	1000	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC02	Unknown	12.94	340	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC03	Unknown	13.54	670	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC04	Unknown	13.59	870	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC05	Unknown	14.17	140	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC06	Unknown	14.62	600	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC07	Unknown	15.30	510	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC08	Unknown	16.48	220	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC09	Unknown	16.53	610	T J	NJ	ug/kg	1
480-162315-1	480-162315-16	SW8270D	SB-703	OC-SB-703-6.0/8.0-XXX	TIC10	Unknown	18.52	500	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC01	Unknown	12.14	3000	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC02	Unknown	12.99	1100	T J	NJ	ug/kg	1

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480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC03	Unknown	13.60	2100	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC04	Unknown	13.65	2200	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC05	Unknown	14.68	1800	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC06	Unknown	16.58	3300	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC07	Unknown	17.27	1400	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC08	Unknown	18.58	3600	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC09	Unknown	20.90	1300	T J	NJ	ug/kg	1
480-162315-1	480-162315-17	SW8270D	SB-703	OC-SB-703-8.0/10-XXX	TIC10	Unknown	20.97	1700	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	80-56-8	.alpha.-Pinene	9.48	23	T J N	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown	9.59	120	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC02	Unknown	9.79	58	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC03	Unknown	10.32	130	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC04	Unknown	10.57	200	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC05	Unknown	10.91	150	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC06	Unknown	10.97	73	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC07	Unknown	11.12	20	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC08	Unknown	11.18	22	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8260C	SB-704	OC-SB-704-0.0/2.0-XXX	TIC09	Unknown	12.40	20	T J	NJ	ug/kg	1
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	15594-90-8	1-Heneicosanol	15.93	2700	T J N	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	104-40-5	4-Nonylphenol	9.76	3400	T J N	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	1000130-97-9	E-15-Heptadecenal	13.24	4900	T J N	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.53	16000	T J N	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	25154-52-3	Phenol, nonyl-	9.73	4600	T J N	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown	9.69	3100	T J	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC02	Unknown	9.78	1900	T J	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC03	Unknown	9.86	3400	T J	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC04	Unknown	9.89	3100	T J	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown Hydrocarbon	14.53	6000	T J	NJ	ug/kg	2
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	112-88-9	1-Octadecene	13.24	7000	T J N	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.50	23000	T J N	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown	9.69	5000	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC02	Unknown	9.77	3100	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC03	Unknown	9.81	3100	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC04	Unknown	9.86	5200	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC05	Unknown	9.89	4600	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown Hydrocarbon	14.53	7100	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC01	Unknown phenol	9.72	7400	T J	NJ	ug/kg	10
480-162426-1	480-162426-2	SW8270D	SB-704	OC-SB-704-0.0/2.0-XXX	TIC02	Unknown phenol	9.75	4900	T J	NJ	ug/kg	10
480-162426-1	480-162426-3	SW8260C	SB-704	OC-SB-704-12/13-XXX	101-84-8	Diphenyl ether	9.35	67	T J N	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	473-98-3	Betulin	18.77	1100	T J N	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	559-74-0	Friedelin	14.83	370	T J N	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC01	Unknown	11.40	500	T J	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC02	Unknown	13.67	330	T J	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC03	Unknown	14.29	310	T J	NJ	ug/kg	1

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480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC04	Unknown	14.35	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC05	Unknown	15.45	330	T J	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC06	Unknown	17.36	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-3	SW8270D	SB-704	OC-SB-704-12/13-XXX	TIC07	Unknown	19.35	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	112-84-5	Erucylamide	15.12	39	T J N	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC01	Unknown	1.08	92	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC02	Unknown	1.59	110	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC03	Unknown	4.11	42	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC04	Unknown	10.31	39	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC05	Unknown	11.40	120	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC06	Unknown	13.67	62	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC07	Unknown	15.44	51	T J	NJ	ug/kg	1
480-162426-1	480-162426-4	SW8270D	SB-704	OC-SB-704-19/20-XXX	TIC08	Unknown	17.36	42	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC01	Unknown	9.59	98	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC02	Unknown	9.79	46	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC03	Unknown	10.32	96	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC04	Unknown	10.57	160	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC05	Unknown	10.91	51	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC06	Unknown	10.97	56	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC07	Unknown	11.05	17	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC08	Unknown	11.12	20	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC09	Unknown	11.18	22	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8260C	SB-704	OC-SB-704-2.0/4.0-XXX	TIC10	Unknown	11.76	15	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	1599-67-3	1-Docosene	14.54	1100	T J N	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	77899-03-7	1-Heneicosyl formate	13.25	940	T J N	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	104-40-5	4-Nonylphenol	9.76	2100	T J N	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC01	Unknown	9.70	1700	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC02	Unknown	9.73	3200	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC03	Unknown	9.78	960	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC04	Unknown	9.83	1300	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC05	Unknown	9.87	2000	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC06	Unknown	9.90	1500	T J	NJ	ug/kg	1
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	1599-67-3	1-Docosene	14.52	1500	T J N	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	112-88-9	1-Octadecene	13.23	1500	T J N	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.69	2300	T J N	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	25154-52-3	Phenol, nonyl-	9.75	2800	T J N	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC01	Unknown	9.71	4400	T J	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC02	Unknown	9.77	1200	T J	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC03	Unknown	9.85	2500	T J	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC04	Unknown	9.88	2000	T J	NJ	ug/kg	4
480-162426-1	480-162426-5	SW8270D	SB-704	OC-SB-704-2.0/4.0-XXX	TIC05	Unknown	9.92	1200	T J	NJ	ug/kg	4
480-162426-1	480-162426-6	SW8260C	SB-704	OC-SB-704-33/34-XXX	101-84-8	Diphenyl ether	9.34	62	T J N	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC01	Unknown	1.55	140	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC02	Unknown	11.41	280	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC03	Unknown	12.15	130	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC04	Unknown	12.69	170	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC05	Unknown	12.74	370	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC06	Unknown	13.67	190	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC07	Unknown	14.35	130	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC08	Unknown	15.45	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC09	Unknown	17.36	190	T J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	56803-37-3	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester	15.01	1400	T H J N	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	115-86-6	Triphenyl phosphate	12.93	1100	T H J N	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC01	Unknown	11.46	510	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC02	Unknown	12.82	350	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC03	Unknown	13.76	350	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC04	Unknown	14.40	260	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC05	Unknown	14.46	430	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC06	Unknown	15.55	350	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC07	Unknown	17.30	480	T H J	NJ	ug/kg	1
480-162426-1	480-162426-6	SW8270D	SB-704	OC-SB-704-33/34-XXX	TIC08	Unknown	17.46	330	T H J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8260C	SB-704	OC-SB-704-4.0/6.0-XXX	TIC01	Unknown	10.31	4.3	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8260C	SB-704	OC-SB-704-4.0/6.0-XXX	TIC02	Unknown	10.54	7.2	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8260C	SB-704	OC-SB-704-4.0/6.0-XXX	TIC03	Unknown	10.91	34	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	104-40-5	4-Nonylphenol	9.76	4100	T J N	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC01	Unknown	3.72	2900	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC02	Unknown	9.69	3000	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC03	Unknown	9.73	6200	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC04	Unknown	9.78	1900	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC05	Unknown	9.83	2600	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC06	Unknown	9.86	3800	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC07	Unknown	9.89	2700	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC08	Unknown	9.91	1500	T J	NJ	ug/kg	1
480-162426-1	480-162426-7	SW8270D	SB-704	OC-SB-704-4.0/6.0-XXX	TIC09	Unknown	9.93	1600	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8260C	SB-704	OC-SB-704-6.0/8.0-XXX	104-76-7	1-Hexanol, 2-ethyl-	10.91	11	T J N	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8260C	SB-704	OC-SB-704-6.0/8.0-XXX	101-84-8	Diphenyl ether	9.34	24	T J N	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC01	Unknown	9.48	250	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC02	Unknown	9.71	1900	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC03	Unknown	9.74	1000	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC04	Unknown	9.81	770	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC05	Unknown	9.85	860	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC06	Unknown	9.90	260	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC07	Unknown	9.92	270	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC01	Unknown phenol	9.69	650	T J	NJ	ug/kg	1
480-162426-1	480-162426-8	SW8270D	SB-704	OC-SB-704-6.0/8.0-XXX	TIC02	Unknown phenol	9.88	600	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8260C	SB-704	OC-SB-704-8.0/10-XXX	104-76-7	1-Hexanol, 2-ethyl-	10.91	7.6	T J N	NJ	ug/kg	1

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480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC01	Unknown	9.71	470	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC02	Unknown	9.74	220	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC03	Unknown	9.85	180	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC04	Unknown	11.40	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC05	Unknown	12.69	220	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC06	Unknown	12.73	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC07	Unknown	15.45	170	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC08	Unknown	17.36	180	T J	NJ	ug/kg	1
480-162426-1	480-162426-9	SW8270D	SB-704	OC-SB-704-8.0/10-XXX	TIC09	Unknown	17.50	240	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	26603-23-6	p,p'-Dioctyldiphenylamine	16.49	2600	T J N	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC01	Unknown	12.14	260	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC02	Unknown	12.68	330	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC03	Unknown	12.73	480	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC04	Unknown	13.66	340	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC05	Unknown	14.25	220	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC06	Unknown	17.35	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC07	Unknown	17.58	220	T J	NJ	ug/kg	1
480-162426-1	480-162426-11	SW8270D	SB-705	OC-SB-705-0.0/2.0-XX	TIC08	Unknown	19.34	190	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC01	Unknown	11.92	780	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC02	Unknown	12.73	350	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC03	Unknown	13.31	360	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC04	Unknown	14.34	640	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC05	Unknown	15.01	370	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC06	Unknown	16.21	710	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC07	Unknown	17.68	200	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC08	Unknown	18.16	680	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC09	Unknown	20.33	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-17	SW8270D	SB-705	OC-SB-705-17/18-XXX	TIC10	Unknown	20.38	360	T J	NJ	ug/kg	1
480-162426-1	480-162426-12	SW8260C	SB-705	OC-SB-705-2.0/4.0-XXX	TIC01	Unknown	13.31	150	T J	NJ	ug/kg	1
480-162426-1	480-162426-12	SW8260C	SB-705	OC-SB-705-2.0/4.0-XXX	TIC02	Unknown	13.44	130	T J	NJ	ug/kg	1
480-162426-1	480-162426-12	SW8260C	SB-705	OC-SB-705-2.0/4.0-XXX	TIC03	Unknown	13.52	88	T J	NJ	ug/kg	1
480-162426-1	480-162426-12	SW8260C	SB-705	OC-SB-705-2.0/4.0-XXX	TIC04	Unknown	13.63	4.7	T J	NJ	ug/kg	1
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.71	260000	T J N	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC01	Unknown	7.88	2300	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC02	Unknown	7.95	1700	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC03	Unknown	9.34	1800	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC04	Unknown	12.29	12000	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC05	Unknown	14.27	2600	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC06	Unknown	14.76	1200	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC07	Unknown	17.06	3500	T J	NJ	ug/kg	3
480-162426-1	480-162426-12	SW8270D	SB-705	OC-SB-705-2.0/4.0-XXX	TIC08	Unknown	18.00	4800	T J	NJ	ug/kg	3
480-162426-1	480-162426-18	SW8260C	SB-705	OC-SB-705-4.0/6.0-DUP	TIC01	Unknown	13.31	38	T J	NJ	ug/kg	1
480-162426-1	480-162426-18	SW8260C	SB-705	OC-SB-705-4.0/6.0-DUP	TIC02	Unknown	13.44	29	T J	NJ	ug/kg	1
480-162426-1	480-162426-18	SW8260C	SB-705	OC-SB-705-4.0/6.0-DUP	TIC03	Unknown	13.53	20	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	112-95-8	Eicosane	18.07	590	T J N	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC01	Unknown	1.48	630	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC02	Unknown	8.15	1500	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC03	Unknown	8.47	520	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC04	Unknown	12.50	630	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC05	Unknown	12.96	5300	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC06	Unknown	15.08	1300	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC07	Unknown	16.67	640	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC08	Unknown	17.30	41000	T J	NJ	ug/kg	25
480-162426-1	480-162426-18	SW8270D	SB-705	OC-SB-705-4.0/6.0-DUP	TIC09	Unknown	17.81	550	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8260C	SB-705	OC-SB-705-4.0/6.0-XXX	TIC01	Unknown	13.31	47	T J	NJ	ug/kg	1
480-162426-1	480-162426-19	SW8260C	SB-705	OC-SB-705-4.0/6.0-XXX	TIC02	Unknown	13.44	43	T J	NJ	ug/kg	1
480-162426-1	480-162426-19	SW8260C	SB-705	OC-SB-705-4.0/6.0-XXX	TIC03	Unknown	13.52	32	T J	NJ	ug/kg	1
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	324-74-3	1,1'-Biphenyl, 4-fluoro-	8.47	730	T J N	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC01	Unknown	5.78	700	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC02	Unknown	8.16	1200	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC03	Unknown	12.51	870	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC04	Unknown	12.97	7700	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC05	Unknown	15.09	1600	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC06	Unknown	16.69	790	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC07	Unknown	17.31	54000	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC08	Unknown	17.81	800	T J	NJ	ug/kg	25
480-162426-1	480-162426-19	SW8270D	SB-705	OC-SB-705-4.0/6.0-XXX	TIC09	Unknown	18.84	870	T J	NJ	ug/kg	25
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	112-95-8	Eicosane	16.96	210	T J N	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	593-45-3	Octadecane	15.51	64	T J N	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC01	Unknown	12.09	300	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC02	Unknown	12.93	230	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC03	Unknown	13.52	290	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC04	Unknown	14.15	120	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC05	Unknown	14.61	300	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC06	Unknown	15.29	110	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC07	Unknown	16.50	340	T J	NJ	ug/kg	1
480-162426-1	480-162426-20	SW8270D	SB-705	OC-SB-705-6.0/8.0-XXX	TIC08	Unknown	18.45	99	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC01	Unknown	11.90	490	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC02	Unknown	12.75	200	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC03	Unknown	13.34	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC04	Unknown	13.39	470	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC05	Unknown	13.96	91	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC06	Unknown	14.39	390	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC07	Unknown	15.03	280	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC08	Unknown	16.18	410	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC09	Unknown	17.56	100	T J	NJ	ug/kg	1
480-162426-1	480-162426-21	SW8270D	SB-705	OC-SB-705-8.0/10-XXX	TIC10	Unknown	18.04	390	T J	NJ	ug/kg	1
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	559-74-0	Friedelin	14.91	1700	T J N	NJ	ug/kg	2

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.58	12000	T J N	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	119-47-1	Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	12.90	620	T J N	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC01	Unknown	12.20	690	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC02	Unknown	12.32	530	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC03	Unknown	13.72	990	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC04	Unknown	14.31	660	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC05	Unknown	15.50	1100	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC06	Unknown	17.41	1000	T J	NJ	ug/kg	2
480-162353-1	480-162353-2	SW8270D	SB-706	OC-SB-706-0.0/2.0-XXX	TIC07	Unknown	19.40	650	T J	NJ	ug/kg	2
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	1000139-90-4	1-Butoxy-2-ethylhexane	12.06	11	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	10.24	9.6	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	611-14-3	Benzene, 1-ethyl-2-methyl-	10.29	10	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	622-96-8	Benzene, 1-ethyl-4-methyl-	10.01	7.1	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC01	Unknown	12.34	9.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC02	Unknown	13.18	8.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC03	Unknown	13.31	520	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC04	Unknown	13.44	380	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC05	Unknown	13.53	300	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8260C	SB-706	OC-SB-706-010/12-XXX	TIC06	Unknown	13.63	8.8	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	629-96-9	1-Eicosanol	14.58	1700	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	101-84-8	Diphenyl ether	8.41	1600	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.65	43000	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.09	1300	T J N	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC01	Unknown	12.35	5800	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC02	Unknown	14.34	1700	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC03	Unknown	17.40	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC04	Unknown	18.04	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC05	Unknown	18.83	1200	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC06	Unknown	18.90	1100	T J	NJ	ug/kg	1
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	6311-48-4	Dibenzylidene 4,4'-biphenylenediamine	19.64	92000	T J N	NJ	ug/kg	200
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.54	48000	T J N	NJ	ug/kg	200
480-162353-1	480-162353-3	SW8270D	SB-706	OC-SB-706-010/12-XXX	TIC01	Unknown	12.31	17000	T J	NJ	ug/kg	200
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	92-52-4	Biphenyl	8.24	120	T J N	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	101-84-8	Diphenyl ether	9.36	260	T J N	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	TIC01	Unknown	10.45	6.7	T J	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	TIC02	Unknown	13.31	8.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	TIC03	Unknown	13.44	7.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8260C	SB-706	OC-SB-706-2.0/4.0-XXX	TIC04	Unknown	13.53	6.7	T J	NJ	ug/kg	1
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	85-69-8	1,2-Benzenedicarboxylic acid, butyl 2-ethylhexyl ester	12.02	4200	T J N	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	101-84-8	Diphenyl ether	8.40	11000	T J N	NJ	ug/kg	10

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480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	559-74-0	Friedelin	14.91	3800	T J N	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.61	130000	T J N	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC01	Unknown	7.92	6100	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC02	Unknown	7.99	4400	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC03	Unknown	12.34	36000	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC04	Unknown	14.32	4400	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC05	Unknown	17.39	3700	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC06	Unknown	18.89	3800	T J	NJ	ug/kg	10
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	101-84-8	Diphenyl ether	8.40	15000	T J N	NJ	ug/kg	1000
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.56	200000	T J N	NJ	ug/kg	1000
480-162353-1	480-162353-4	SW8270D	SB-706	OC-SB-706-2.0/4.0-XXX	TIC01	Unknown	12.32	72000	T J	NJ	ug/kg	1000
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC01	Unknown	11.44	1800	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC02	Unknown	12.20	930	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC03	Unknown	12.74	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC04	Unknown	12.78	690	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC05	Unknown	13.71	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC06	Unknown	15.45	480	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC07	Unknown	15.49	1200	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC08	Unknown	17.36	510	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC09	Unknown	17.40	1200	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8270D	SB-706	OC-SB-706-20/22-XXX	TIC10	Unknown	18.86	430	T J	NJ	ug/kg	1
480-162353-1	480-162353-5	SW8260C	SB-706	OC-SB-706-20/22-XXX	101-84-8	Diphenyl ether	9.33	20	T J N	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	102-76-1	Triacetin	7.92	140	T J N	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC01	Unknown	12.20	380	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC02	Unknown	12.73	460	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC03	Unknown	12.78	650	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC04	Unknown	13.71	480	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC05	Unknown	14.32	170	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC06	Unknown	15.49	430	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC07	Unknown	17.40	590	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC08	Unknown	19.35	230	T J	NJ	ug/kg	1
480-162353-1	480-162353-6	SW8270D	SB-706	OC-SB-706-26/27-XXX	TIC09	Unknown	19.40	290	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC01	Unknown	11.44	3700	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC02	Unknown	12.19	3000	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC03	Unknown	12.74	6000	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC04	Unknown	12.79	7500	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC05	Unknown	13.72	4000	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC06	Unknown	14.40	3000	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC07	Unknown	15.49	2800	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC08	Unknown	17.41	3500	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC09	Unknown	19.36	2400	T J	NJ	ug/kg	1
480-162353-1	480-162353-7	SW8270D	SB-706	OC-SB-706-4.0/6.0-XXX	TIC10	Unknown	19.41	3200	T J	NJ	ug/kg	1
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC01	Unknown	10.35	300	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC02	Unknown	12.21	810	T J	NJ	ug/kg	2

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480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC03	Unknown	12.75	1600	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC04	Unknown	12.79	1900	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC05	Unknown	13.73	1200	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC06	Unknown	14.31	610	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC07	Unknown	15.52	1100	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC08	Unknown	16.94	280	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC09	Unknown	17.43	1200	T J	NJ	ug/kg	2
480-162353-1	480-162353-8	SW8270D	SB-706	OC-SB-706-6.0/8.0-XXX	TIC10	Unknown	19.43	1000	T J	NJ	ug/kg	2
480-162353-1	480-162353-9	SW8260C	SB-707	OC-SB-707-0.0/2.0-XXX	TIC01	Unknown	8.01	5.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-9	SW8260C	SB-707	OC-SB-707-0.0/2.0-XXX	TIC02	Unknown	8.27	5.6	T J	NJ	ug/kg	1
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	1000130-97-9	E-15-Heptadecenal	13.29	2400	T J N	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.64	98000	T J N	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.07	3000	T J N	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	25154-52-3	Phenol, nonyl-	9.76	2000	T J N	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	646-31-1	Tetracosane	17.39	1800	T J N	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC01	Unknown	12.33	23000	T J	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC02	Unknown	14.32	8600	T J	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC03	Unknown	17.44	1900	T J	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC01	Unknown Hydrocarbon	14.58	3300	T J	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC02	Unknown Hydrocarbon	16.00	2700	T J	NJ	ug/kg	4
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	74685-33-9	3-Eicosene, (E)-	13.29	2500	T J N	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	1000151-22-6	Cyclodocosane, ethyl-	15.99	2100	T J N	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.08	2900	T J N	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC01	Unknown	9.75	2500	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC02	Unknown	9.89	2100	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC03	Unknown	12.33	30000	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC04	Unknown	14.32	8400	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC05	Unknown	16.60	120000	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC06	Unknown	17.46	1800	T J	NJ	ug/kg	10
480-162353-1	480-162353-9	SW8270D	SB-707	OC-SB-707-0.0/2.0-XXX	TIC01	Unknown Hydrocarbon	14.57	2900	T J	NJ	ug/kg	10
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.52	170	T J N	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC01	Unknown	11.43	250	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC02	Unknown	12.19	190	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC03	Unknown	12.72	220	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC04	Unknown	12.77	370	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC05	Unknown	13.71	270	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC06	Unknown	15.48	230	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC07	Unknown	17.35	100	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC08	Unknown	17.39	210	T J	NJ	ug/kg	1
480-162353-1	480-162353-14	SW8270D	SB-707	OC-SB-707-12/13-XXX	TIC09	Unknown	19.38	140	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC01	Unknown	12.21	570	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC02	Unknown	12.75	990	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC03	Unknown	12.81	1700	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC04	Unknown	13.74	890	T J	NJ	ug/kg	1

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480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC05	Unknown	14.31	350	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC06	Unknown	14.37	660	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC07	Unknown	14.44	660	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC08	Unknown	15.54	760	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC09	Unknown	17.44	1000	T J	NJ	ug/kg	1
480-162353-1	480-162353-15	SW8270D	SB-707	OC-SB-707-15/17-XXX	TIC10	Unknown	19.45	1000	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8260C	SB-707	OC-SB-707-2.0/4.0-XXX	473-19-8	Bicyclo[2.2.1]heptane, 2,2,3-trimethyl-	10.15	5.5	T J N	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.55	890	T J N	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC01	Unknown	9.50	530	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC02	Unknown	12.20	590	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC03	Unknown	12.75	1000	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC04	Unknown	12.79	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC05	Unknown	13.72	930	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC06	Unknown	15.51	880	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC07	Unknown	17.41	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC08	Unknown	19.34	510	T J	NJ	ug/kg	1
480-162353-1	480-162353-10	SW8270D	SB-707	OC-SB-707-2.0/4.0-XXX	TIC09	Unknown	19.40	700	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	104-40-5	4-Nonylphenol	9.79	650	T J N	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.55	1200	T J N	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.73	730	T J N	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC01	Unknown	9.76	950	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC02	Unknown	12.20	580	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC03	Unknown	12.74	780	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC04	Unknown	12.79	970	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC05	Unknown	13.72	840	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC06	Unknown	15.50	770	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC07	Unknown	17.41	1200	T J	NJ	ug/kg	1
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	104-40-5	4-Nonylphenol	9.79	760	T J N	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.57	1400	T J N	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC01	Unknown	9.73	790	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC02	Unknown	9.76	1100	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC03	Unknown	11.45	1200	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC04	Unknown	12.75	890	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC05	Unknown	12.80	1300	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC06	Unknown	13.73	1000	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC07	Unknown	14.37	930	T J	NJ	ug/kg	4
480-162353-1	480-162353-11	SW8270D	SB-707	OC-SB-707-4.0/6.0-XXX	TIC08	Unknown	15.53	1200	T J	NJ	ug/kg	4
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	104-40-5	4-Nonylphenol	9.79	680	T J N	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.73	630	T J N	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	25154-52-3	Phenol, nonyl-	9.76	990	T J N	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC01	Unknown	12.74	1000	T J	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC02	Unknown	12.79	1300	T J	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC03	Unknown	13.73	980	T J	NJ	ug/kg	1

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480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC04	Unknown	14.41	590	T J	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC05	Unknown	15.51	930	T J	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC06	Unknown	17.43	1200	T J	NJ	ug/kg	1
480-162353-1	480-162353-16	SW8270D	SB-707	OC-SB-707-6.0/8.0-DUP	TIC07	Unknown	19.44	1000	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC01	Unknown	11.45	2800	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC02	Unknown	12.20	910	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC03	Unknown	12.74	1500	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC04	Unknown	12.80	1900	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC05	Unknown	13.72	1600	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC06	Unknown	15.50	2500	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC07	Unknown	16.92	580	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC08	Unknown	17.41	2900	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC09	Unknown	18.87	550	T J	NJ	ug/kg	1
480-162353-1	480-162353-12	SW8270D	SB-707	OC-SB-707-6.0/8.0-XXX	TIC10	Unknown	19.41	2800	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	104-40-5	4-Nonylphenol	9.80	210	T J N	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	301-02-0	9-Octadecenamide, (Z)-	12.60	260	T J N	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.73	230	T J N	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	25154-52-3	Phenol, nonyl-	9.90	280	T J N	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC01	Unknown	9.93	220	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC02	Unknown	12.75	190	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC03	Unknown	12.80	180	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC04	Unknown	13.74	180	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC05	Unknown	17.43	210	T J	NJ	ug/kg	1
480-162353-1	480-162353-17	SW8270D	SB-707	OC-SB-707-8.0/10-XXX	TIC01	Unknown phenol	9.76	280	T J	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8260C	SB-708	OC-SB-708- 0.0/2.0-XXX	124-19-6	Nonanal	11.62	9.6	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	74685-33-9	3-Eicosene, (E)-	12.19	280	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	1000130-97-9	E-15-Heptadecenal	13.31	1100	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.59	4800	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	2467-02-9	Phenol, 2,2'-methylenebis-	10.99	210	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	620-92-8	Phenol, 4,4'-methylenebis-	11.28	250	T J N	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	TIC01	Unknown	12.35	340	T J	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	TIC02	Unknown	19.45	240	T J	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	TIC03	Unknown	20.04	240	T J	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	TIC01	Unknown Hydrocarbon	14.60	1100	T J	NJ	ug/kg	1
480-162140-1	480-162140-2	SW8270D	SB-708	OC-SB-708- 0.0/2.0-XXX	TIC02	Unknown Hydrocarbon	16.01	480	T J	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	301-02-0	9-Octadecenamide, (Z)-	12.61	230	T J N	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	295-48-7	Cyclopentadecane	14.60	340	T J N	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	1000130-97-9	E-15-Heptadecenal	13.31	310	T J N	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.58	690	T J N	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC01	Unknown	12.22	180	T J	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC02	Unknown	13.73	110	T J	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC03	Unknown	15.15	700	T J	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC04	Unknown	15.52	130	T J	NJ	ug/kg	1
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC05	Unknown	17.43	130	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162140-1	480-162140-3	SW8270D	SB-708	OC-SB-708- 2.0/4.0-XXX	TIC06	Unknown	19.44	110	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	559-74-0	Friedelin	15.09	120	T J N	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.58	170	T J N	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC01	Unknown	12.23	190	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC02	Unknown	12.77	250	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC03	Unknown	12.81	300	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC04	Unknown	13.75	240	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC05	Unknown	14.39	170	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC06	Unknown	15.14	120	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC07	Unknown	15.54	210	T J	NJ	ug/kg	1
480-162140-1	480-162140-4	SW8270D	SB-708	OC-SB-708- 4.0/6.0-XXX	TIC08	Unknown	17.43	220	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	104-40-5	4-Nonylphenol	9.81	420	T J N	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.75	380	T J N	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC01	Unknown	9.78	570	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC02	Unknown	9.92	490	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC03	Unknown	9.95	400	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC04	Unknown	12.37	5600	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC05	Unknown	14.36	460	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC06	Unknown	16.68	18000	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC07	Unknown	17.13	580	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC08	Unknown	18.08	440	T J	NJ	ug/kg	1
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	104-40-5	4-Nonylphenol	9.78	440	T J N	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.56	26000	T J N	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	27193-28-8	Phenol, (1,1,3,3-tetramethylbutyl)-	9.73	420	T J N	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC01	Unknown	9.75	600	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC02	Unknown	9.89	510	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC03	Unknown	9.92	410	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC04	Unknown	12.32	8300	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC05	Unknown	14.30	430	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC06	Unknown	17.05	560	T J	NJ	ug/kg	5
480-162140-1	480-162140-5	SW8270D	SB-708	OC-SB-708- 6.0/8.0-XXX	TIC07	Unknown	18.02	420	T J	NJ	ug/kg	5
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	531-91-9	[1,1'-Biphenyl]-4,4'-diamine, N,N'-diphenyl-	17.33	53	T J N	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC01	Unknown	4.16	69	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC02	Unknown	11.48	140	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC03	Unknown	12.24	120	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC04	Unknown	12.80	120	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC05	Unknown	12.84	120	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC06	Unknown	13.78	180	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC07	Unknown	15.57	190	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC08	Unknown	17.44	66	T J	NJ	ug/kg	1
480-162140-1	480-162140-6	SW8270D	SB-708	OC-SB-708- 8.0/10-XXX	TIC09	Unknown	17.47	130	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	630-06-8	Hexatriacontane	13.37	120	T J N	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC01	Unknown	11.48	280	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC02	Unknown	12.25	170	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC03	Unknown	12.79	330	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC04	Unknown	12.84	320	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC05	Unknown	13.79	260	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC06	Unknown	14.42	93	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC07	Unknown	14.47	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC08	Unknown	15.57	270	T J	NJ	ug/kg	1
480-162199-1	480-162199-1	SW8270D	SB-708	OC-SB-708-16/18-XXX	TIC09	Unknown	17.47	250	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	629-78-7	Heptadecane	13.36	110	T J N	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	630-03-5	Nonacosane	16.00	91	T J N	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC01	Unknown	11.48	220	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC02	Unknown	12.25	170	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC03	Unknown	12.78	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC04	Unknown	12.83	130	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC05	Unknown	13.78	230	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC06	Unknown	15.56	200	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC07	Unknown	17.45	210	T J	NJ	ug/kg	1
480-162199-1	480-162199-2	SW8270D	SB-708	OC-SB-708-22/24-XXX	TIC01	Unknown alkane	14.63	92	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	630-06-8	Hexatriacontane	14.56	62	T J N	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC01	Unknown	4.12	87	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC02	Unknown	11.44	170	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC03	Unknown	12.20	190	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC04	Unknown	12.73	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC05	Unknown	13.30	93	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC06	Unknown	13.71	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC07	Unknown	13.72	120	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC08	Unknown	15.49	200	T J	NJ	ug/kg	1
480-162199-1	480-162199-3	SW8270D	SB-708	OC-SB-708-28/30-XXX	TIC09	Unknown	17.38	260	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8260C	SB-708	OC-SB-708-33/34-XXX	124-19-6	Nonanal	11.61	5.4	T J N	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8260C	SB-708	OC-SB-708-33/34-XXX	TIC01	Unknown	10.91	5.6	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC01	Unknown	4.17	83	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC02	Unknown	11.50	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC03	Unknown	12.27	120	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC04	Unknown	12.80	77	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC05	Unknown	12.86	59	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC06	Unknown	13.80	160	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC07	Unknown	15.12	43	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC08	Unknown	15.58	120	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC09	Unknown	17.46	94	T J	NJ	ug/kg	1
480-162199-1	480-162199-4	SW8270D	SB-708	OC-SB-708-33/34-XXX	TIC01	Unknown alkane	13.38	64	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	297-03-0	Cyclotetracosane	14.57	1300	T J N	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC01	Unknown	12.20	1300	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC02	Unknown	12.74	1800	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC03	Unknown	12.79	2000	T J	NJ	ug/kg	1

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480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC04	Unknown	13.72	1800	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC05	Unknown	14.31	1200	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC06	Unknown	15.50	1500	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC07	Unknown	16.58	7500	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC08	Unknown	17.42	2600	T J	NJ	ug/kg	1
480-162315-1	480-162315-18	SW8270D	SB-709	OC-SB-709-0.0/2.0-XXX	TIC09	Unknown	19.42	1700	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	6311-48-4	Dibenzylidene 4,4'-biphenylenediamine	19.56	62	T J N	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC01	Unknown	4.12	63	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC02	Unknown	11.44	110	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC03	Unknown	12.20	96	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC04	Unknown	12.72	89	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC05	Unknown	12.77	100	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC06	Unknown	13.71	96	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC07	Unknown	15.49	86	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC08	Unknown	17.38	67	T J	NJ	ug/kg	1
480-162315-1	480-162315-2	SW8270D	SB-709	OC-SB-709-16/17-XXX	TIC09	Unknown	19.59	60	T J	NJ	ug/kg	1
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	112-92-5	1-Octadecanol	13.28	760	T J N	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	18835-32-0	1-Tricosene	14.56	1400	T J N	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	119-47-1	Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	12.90	530	T J N	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC01	Unknown	9.75	460	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC02	Unknown	12.32	6500	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC03	Unknown	14.30	1100	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC04	Unknown	15.97	480	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC05	Unknown	16.60	51000	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC06	Unknown	17.06	740	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC07	Unknown	18.01	820	T J	NJ	ug/kg	3
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	112-92-5	1-Octadecanol	13.29	560	T J N	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	6311-48-4	Dibenzylidene 4,4'-biphenylenediamine	19.63	4100	T J N	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.57	48000	T J N	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	119-47-1	Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	12.90	650	T J N	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	1000214-20-7	Stigmasterol, 22,23-dihydro-	19.34	630	T J N	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC01	Unknown	12.32	7700	T J	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC02	Unknown	14.32	1200	T J	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC03	Unknown	17.07	790	T J	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC04	Unknown	18.03	930	T J	NJ	ug/kg	10
480-162315-1	480-162315-3	SW8270D	SB-709	OC-SB-709-2.0/4.0-XXX	TIC01	Unknown Hydrocarbon	14.58	830	T J	NJ	ug/kg	10
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC01	Unknown	11.43	410	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC02	Unknown	12.19	330	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC03	Unknown	12.73	220	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC04	Unknown	13.70	510	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC05	Unknown	14.34	190	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC06	Unknown	15.49	410	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC07	Unknown	17.35	250	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC08	Unknown	17.40	320	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC09	Unknown	19.35	170	T J	NJ	ug/kg	1
480-162315-1	480-162315-4	SW8270D	SB-709	OC-SB-709-32/33-XXX	TIC10	Unknown	19.38	260	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	1599-67-3	1-Docosene	13.29	710	T J N	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.62	19000	T J N	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	2467-02-9	Phenol, 2,2'-methylenebis-	10.98	410	T J N	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	1000214-20-7	Stigmasterol, 22,23-dihydro-	19.34	840	T J N	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	646-31-1	Tetracosane	17.39	540	T J N	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC01	Unknown	12.32	2900	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC02	Unknown	13.72	550	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC03	Unknown	14.32	490	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC04	Unknown	15.51	780	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC01	Unknown Hydrocarbon	14.57	850	T J	NJ	ug/kg	1
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	1599-67-3	1-Docosene	13.27	760	T J N	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	77899-03-7	1-Heneicosyl formate	14.56	910	T J N	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	2136-70-1	Ethanol, 2-(tetradecyloxy)-	15.96	600	T J N	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.54	29000	T J N	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	1000214-20-7	Stigmasterol, 22,23-dihydro-	19.32	1000	T J N	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC01	Unknown	12.31	3700	T J	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC02	Unknown	14.29	600	T J	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC03	Unknown	14.89	630	T J	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC04	Unknown	17.38	600	T J	NJ	ug/kg	10
480-162315-1	480-162315-5	SW8270D	SB-709	OC-SB-709-4.0/6.0-XXX	TIC05	Unknown	19.38	930	T J	NJ	ug/kg	10
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.54	2500	T J N	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	2467-02-9	Phenol, 2,2'-methylenebis-	10.97	110	T J N	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC01	Unknown	12.32	710	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC02	Unknown	12.73	130	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC03	Unknown	12.77	120	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC04	Unknown	13.71	190	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC05	Unknown	14.90	110	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC06	Unknown	15.48	270	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC07	Unknown	17.39	160	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC08	Unknown	19.39	100	T J	NJ	ug/kg	1
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.54	3100	T J N	NJ	ug/kg	10
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC01	Unknown	12.32	830	T J	NJ	ug/kg	10
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC02	Unknown	12.79	200	T J	NJ	ug/kg	10
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC03	Unknown	14.31	170	T J	NJ	ug/kg	10
480-162315-1	480-162315-6	SW8270D	SB-709	OC-SB-709-6.0/8.0-XXX	TIC04	Unknown	14.88	280	T J	NJ	ug/kg	10
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	1000163-04-7	Docosa-2,6,10,14,18-pentaen-22-al, 2,6,10,15,18-pentamethyl-	15.38	55	T J N	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC01	Unknown	4.12	82	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC02	Unknown	12.20	85	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC03	Unknown	12.73	100	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC04	Unknown	12.78	36	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC05	Unknown	13.30	31	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC06	Unknown	13.71	110	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC07	Unknown	15.48	140	T J	NJ	ug/kg	1
480-162315-1	480-162315-7	SW8270D	SB-709	OC-SB-709-8.0/10-DUP	TIC08	Unknown	17.38	81	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC01	Unknown	11.45	1300	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC02	Unknown	12.18	1500	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC03	Unknown	12.72	1600	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC04	Unknown	12.74	860	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC05	Unknown	12.77	3300	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC06	Unknown	13.71	2100	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC07	Unknown	15.48	1900	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC08	Unknown	17.34	790	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC09	Unknown	17.39	2000	T J	NJ	ug/kg	1
480-162315-1	480-162315-8	SW8270D	SB-709	OC-SB-709-8.0/10-XXX	TIC10	Unknown	19.38	1200	T J	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	629-97-0	Docosane	13.38	630	T J N	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	630-04-6	Hentriacontane	17.46	720	T J N	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	630-03-5	Nonacosane	16.04	670	T J N	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	646-31-1	Tetracosane	18.91	590	T J N	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	638-67-5	Tricosane	18.18	510	T J N	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	TIC01	Unknown	12.38	1200	T J	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	TIC02	Unknown	12.80	690	T J	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	TIC03	Unknown	12.85	490	T J	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	TIC04	Unknown	16.67	13000	T J	NJ	ug/kg	1
480-162199-1	480-162199-6	SW8270D	SB-710	OC-SB-710-2.0/4.0-XXX	TIC01	Unknown alkane	14.66	960	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	559-74-0	Friedelin	15.18	180	T J N	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC01	Unknown	4.17	76	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC02	Unknown	11.49	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC03	Unknown	12.25	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC04	Unknown	12.81	110	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC05	Unknown	12.90	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC06	Unknown	13.79	240	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC07	Unknown	15.57	190	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC08	Unknown	17.46	220	T J	NJ	ug/kg	1
480-162199-1	480-162199-7	SW8270D	SB-710	OC-SB-710-23/24-XXX	TIC09	Unknown	17.94	79	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC01	Unknown	4.16	65	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC02	Unknown	11.48	230	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC03	Unknown	12.24	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC04	Unknown	12.78	88	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC05	Unknown	12.83	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC06	Unknown	13.77	210	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC07	Unknown	14.48	65	T J	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC08	Unknown	15.56	180	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC09	Unknown	17.46	150	T J	NJ	ug/kg	1
480-162199-1	480-162199-8	SW8270D	SB-710	OC-SB-710-36/37-XXX	TIC10	Unknown	19.45	84	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8260C	SB-710	OC-SB-710-4.0/6.0-XXX	565-77-5	2-Pentene, 2,3,4-trimethyl-	6.90	4.4	T J N	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8260C	SB-710	OC-SB-710-4.0/6.0-XXX	527-84-4	Benzene, 1-methyl-2-(1-methylethyl)-	10.91	7.6	T J N	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	16.64	9200	T J N	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC01	Unknown	12.24	250	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC02	Unknown	12.36	1000	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC03	Unknown	12.78	250	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC04	Unknown	13.77	220	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC05	Unknown	14.36	190	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC06	Unknown	15.55	270	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC01	Unknown Hydrocarbon	13.34	230	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC02	Unknown Hydrocarbon	14.62	260	T J	NJ	ug/kg	1
480-162199-1	480-162199-9	SW8270D	SB-710	OC-SB-710-4.0/6.0-XXX	TIC03	Unknown Hydrocarbon	16.03	160	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8260C	SB-710	OC-SB-710-6.0/8.0-XXX	TIC01	Unknown	9.35	7.9	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	10544-50-0	Cyclic octaatomic sulfur	11.41	11000	T J N	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	629-92-5	Nonadecane	18.15	34	T J N	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC01	Unknown	4.16	47	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC02	Unknown	10.29	40	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC03	Unknown	10.58	110	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC04	Unknown	10.87	47	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC05	Unknown	11.01	70	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC06	Unknown	13.34	45	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC07	Unknown	13.77	45	T J	NJ	ug/kg	1
480-162199-1	480-162199-10	SW8270D	SB-710	OC-SB-710-6.0/8.0-XXX	TIC08	Unknown	15.15	41	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8260C	SB-710	OC-SB-710-8.0/10-XXX	101-84-8	Diphenyl ether	9.36	13	T J N	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	192-65-4	1,2:4,5-Dibenzopyrene	17.00	91	T J N	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	5385-75-1	Dibenz(a,e)aceanthrylene	17.40	210	T J N	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC01	Unknown	10.09	71	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC02	Unknown	11.44	88	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC03	Unknown	12.20	140	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC04	Unknown	12.73	61	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC05	Unknown	12.78	100	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC06	Unknown	13.71	180	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC07	Unknown	15.45	69	T J	NJ	ug/kg	1
480-162199-1	480-162199-11	SW8270D	SB-710	OC-SB-710-8.0/10-XXX	TIC08	Unknown	15.49	180	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	1599-67-3	1-Docosene	15.34	1200	T J N	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	18435-45-5	1-Nonadecene	14.01	1000	T J N	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC01	Unknown	10.08	280	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC02	Unknown	10.23	350	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC03	Unknown	12.98	2100	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC04	Unknown	15.10	900	T J	NJ	ug/kg	1

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480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC05	Unknown	17.38	17000	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC06	Unknown	17.82	480	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC07	Unknown	18.86	480	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC08	Unknown	19.94	250	T J	NJ	ug/kg	1
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	661-19-8	1-Docosanol	14.12	600	T J N	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	112-92-5	1-Octadecanol	15.51	540	T J N	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC01	Unknown	8.35	360	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC02	Unknown	10.36	340	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC03	Unknown	13.07	3500	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC04	Unknown	15.26	1000	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC05	Unknown	17.63	35000	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC06	Unknown	18.16	510	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC07	Unknown	19.19	530	T J	NJ	ug/kg	10
480-162572-1	480-162572-1	SW8270D	SB-711	OC-SB-711-0.0/2.0-XXX	TIC08	Unknown	20.22	200	T J	NJ	ug/kg	10
480-162572-1	480-162572-13	SW8270D	SB-711	OC-SB-711-18/19-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.64	160	T J N	NJ	ug/kg	1
480-162572-1	480-162572-13	SW8270D	SB-711	OC-SB-711-18/19-XXX	TIC01	Unknown	4.45	32	T J	NJ	ug/kg	1
480-162572-1	480-162572-13	SW8270D	SB-711	OC-SB-711-18/19-XXX	TIC02	Unknown	13.09	49	T J	NJ	ug/kg	1
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	1000139-90-4	1-Butoxy-2-ethylhexane	10.24	2300	T H J N	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	8.46	1900	T H J N	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	101-84-8	Diphenyl ether	12.37	1300	T H J N	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC01	Unknown	7.14	1300	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC02	Unknown	8.39	1400	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC03	Unknown	8.52	1200	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC04	Unknown	10.53	2200	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC05	Unknown	11.33	13000	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC06	Unknown	11.43	8900	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8260C	SB-711	OC-SB-711-2.0/4.0-XXX	TIC07	Unknown	11.50	9000	T H J	NJ	ug/kg	8
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	149-57-5	Hexanoic acid, 2-ethyl-	6.87	1700	T J N	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	483-78-3	Naphthalene, 1,6-dimethyl-4-(1-methylethyl)-	10.56	1600	T J N	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	4237-44-9	Phenol, 2-(1-phenylethyl)-	10.20	2900	T J N	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	2467-02-9	Phenol, 2,2'-methylenebis-	11.52	7400	T J N	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	620-92-8	Phenol, 4,4'-methylenebis-	11.86	9500	T J N	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC01	Unknown	8.18	3900	T J	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC02	Unknown	8.25	2700	T J	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC03	Unknown	8.31	770	T J	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC04	Unknown	13.10	800	T J	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC05	Unknown	17.48	1000	T J	NJ	ug/kg	2
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	559-74-0	Friedelin	16.41	4800	T J N	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.33	310000	T J N	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	4237-44-9	Phenol, 2-(1-phenylethyl)-	10.16	4900	T J N	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	2467-02-9	Phenol, 2,2'-methylenebis-	11.44	12000	T J N	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	620-92-8	Phenol, 4,4'-methylenebis-	11.75	16000	T J N	NJ	ug/kg	40

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480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC01	Unknown	8.15	4600	T J	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC02	Unknown	12.96	110000	T J	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC03	Unknown	15.08	12000	T J	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC04	Unknown	16.47	13000	T J	NJ	ug/kg	40
480-162572-1	480-162572-2	SW8270D	SB-711	OC-SB-711-2.0/4.0-XXX	TIC05	Unknown	18.83	8200	T J	NJ	ug/kg	40
480-162572-1	480-162572-14	SW8270D	SB-711	OC-SB-711-35/36-XXX	TIC01	Unknown	4.45	24	T J	NJ	ug/kg	1
480-162572-1	480-162572-14	SW8270D	SB-711	OC-SB-711-35/36-XXX	TIC02	Unknown	13.36	67	T J	NJ	ug/kg	1
480-162572-1	480-162572-14	SW8270D	SB-711	OC-SB-711-35/36-XXX	TIC03	Unknown	16.18	17	T J	NJ	ug/kg	1
480-162572-1	480-162572-14	SW8270D	SB-711	OC-SB-711-35/36-XXX	TIC04	Unknown	17.64	33	T J	NJ	ug/kg	1
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	1000139-90-4	1-Butoxy-2-ethylhexane	10.24	8600	T H J N	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	8.46	4300	T H J N	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	92-52-4	Biphenyl	12.25	12000	T H J N	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	101-84-8	Diphenyl ether	12.36	26000	T H J N	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC01	Unknown	7.13	4100	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC02	Unknown	10.10	6000	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC03	Unknown	10.53	11000	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC04	Unknown	11.33	16000	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC05	Unknown	11.43	11000	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8260C	SB-711	OC-SB-711-4.0/6.0-XXX	TIC06	Unknown	11.50	10000	T H J	NJ	ug/kg	4
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	1000139-90-4	1-Butoxy-2-ethylhexane	7.41	8000	T J N	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	1000156-26-0	Cobalt, (.eta.-4-1,5-cyclooctadiene)(1-cyclohexylmethylinden	17.16	8600	T J N	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC01	Unknown	8.18	35000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC02	Unknown	8.30	15000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC03	Unknown	9.45	7500	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC04	Unknown	13.04	130000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC05	Unknown	15.17	98000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC06	Unknown	17.49	710000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC07	Unknown	17.90	33000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC08	Unknown	18.94	21000	T J	NJ	ug/kg	25
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	69009-90-1	1,1'-Biphenyl, bis(1-methylethyl)-	12.03	12000	T J N	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	101-84-8	Diphenyl ether	8.66	35000	T J N	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.31	1200000	T J N	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC01	Unknown	8.15	39000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC02	Unknown	8.22	23000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC03	Unknown	8.28	10000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC04	Unknown	12.96	220000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC05	Unknown	15.07	120000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC06	Unknown	17.80	35000	T J	NJ	ug/kg	400
480-162572-1	480-162572-3	SW8270D	SB-711	OC-SB-711-4.0/6.0-XXX	TIC07	Unknown	18.83	18000	T J	NJ	ug/kg	400
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	1000139-90-4	1-Butoxy-2-ethylhexane	12.06	7.6	T J N	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	590-50-1	2-Pentanone, 4,4-dimethyl-	7.52	9.7	T J N	NJ	ug/kg	1

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Lab SDG	Lab Sample ID	Analytical Method	Location	Sample ID	CAS Number	Chemical Name	TIC Retention Time	Result Value	Lab Qualifier	Validation Qualifier	Result Unit	Dilution Factor
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC01	Unknown	9.36	8.2	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC02	Unknown	10.88	5.9	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC03	Unknown	11.27	6.3	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC04	Unknown	11.34	8.4	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC05	Unknown	11.47	6.6	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC06	Unknown	11.92	8.1	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC07	Unknown	12.34	27	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8260C	SB-711	OC-SB-711-6.0/8.0-XXX	TIC08	Unknown	13.17	7.0	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC01	Unknown	4.44	25	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC02	Unknown	10.79	22	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC03	Unknown	12.09	19	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC04	Unknown	14.36	24	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC05	Unknown	16.98	140	T J	NJ	ug/kg	1
480-162572-1	480-162572-16	SW8270D	SB-711	OC-SB-711-6.0/8.0-XXX	TIC06	Unknown	17.64	37	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.64	810	T J N	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC01	Unknown	4.48	51	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC02	Unknown	5.83	30	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC03	Unknown	6.88	50	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC04	Unknown	7.80	32	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC05	Unknown	8.35	22	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC06	Unknown	13.08	130	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC07	Unknown	13.51	29	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC08	Unknown	15.27	35	T J	NJ	ug/kg	1
480-162572-1	480-162572-17	SW8270D	SB-711	OC-SB-711-8.0/10-XXX	TIC09	Unknown	16.40	30	T J	NJ	ug/kg	1
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	104-40-5	4-Nonylphenol	10.10	320	T J N	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	27519-02-4	9-Tricosene, (Z)-	14.00	610	T J N	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	25154-52-3	Phenol, nonyl-	10.07	450	T J N	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	1000216-79-4	Trifluoroacetic acid, n-octadecyl ester	15.33	700	T J N	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC01	Unknown	10.04	320	T J	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC02	Unknown	10.22	450	T J	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC03	Unknown	12.96	1200	T J	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC04	Unknown	15.08	520	T J	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC05	Unknown	17.30	12000	T J	NJ	ug/kg	5
480-162572-1	480-162572-6	SW8270D	SB-712	OC-SB-712-0.0/2.0-XXX	TIC06	Unknown	17.80	280	T J	NJ	ug/kg	5
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	77899-10-6	(Z)14-Tricosenyl formate	17.68	140	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	56554-86-0	17-Octadecenal	19.33	130	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	18835-33-1	1-Hexacosene	15.32	83	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	74685-33-9	3-Eicosene, (E)-	14.01	45	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	629-78-7	Heptadecane	18.08	120	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	630-03-5	Nonacosane	16.68	98	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	143-28-2	Oleyl Alcohol	16.28	77	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.29	290	T J N	NJ	ug/kg	1
480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	TIC01	Unknown	7.40	50	T J	NJ	ug/kg	1

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480-162572-1	480-162572-7	SW8270D	SB-712	OC-SB-712-2.0/4.0-XXX	TIC02	Unknown	13.25	51	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	559-74-0	Friedelin	16.47	160	T J N	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	7683-64-9	Squalene	16.16	38	T J N	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC01	Unknown	4.23	72	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC02	Unknown	10.64	38	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC03	Unknown	12.00	57	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC04	Unknown	12.82	58	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC05	Unknown	13.47	72	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC06	Unknown	14.47	86	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC07	Unknown	16.25	33	T J	NJ	ug/kg	1
480-162572-1	480-162572-8	SW8270D	SB-712	OC-SB-712-23/24-XXX	TIC08	Unknown	16.41	66	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC01	Unknown	4.21	110	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC02	Unknown	6.41	64	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC03	Unknown	6.47	78	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC04	Unknown	6.49	53	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC05	Unknown	6.54	68	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC06	Unknown	6.58	65	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC07	Unknown	6.60	110	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC08	Unknown	9.81	320	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC09	Unknown	14.46	58	T J	NJ	ug/kg	1
480-162572-1	480-162572-9	SW8270D	SB-712	OC-SB-712-37/38-XXX	TIC10	Unknown	16.25	52	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8260C	SB-712	OC-SB-712-4.0/6.0-XXX	TIC01	Unknown	9.59	16	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8260C	SB-712	OC-SB-712-4.0/6.0-XXX	TIC02	Unknown	10.32	12	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8260C	SB-712	OC-SB-712-4.0/6.0-XXX	TIC03	Unknown	10.57	19	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8260C	SB-712	OC-SB-712-4.0/6.0-XXX	TIC04	Unknown	10.91	31	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8260C	SB-712	OC-SB-712-4.0/6.0-XXX	TIC05	Unknown	10.97	6.4	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	1599-67-3	1-Docosene	14.00	610	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	7206-19-1	3-Octadecene, (E)-	12.78	380	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	104-40-5	4-Nonylphenol	10.11	240	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	297-03-0	Cyclotetracosane	15.33	680	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.32	4500	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	25154-52-3	Phenol, nonyl-	10.08	350	T J N	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	TIC01	Unknown	10.05	250	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	TIC02	Unknown	10.22	260	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	TIC03	Unknown	11.72	3700	T J	NJ	ug/kg	1
480-162572-1	480-162572-10	SW8270D	SB-712	OC-SB-712-4.0/6.0-XXX	TIC04	Unknown	12.97	470	T J	NJ	ug/kg	1
480-162572-1	480-162572-11	SW8260C	SB-712	OC-SB-712-6.0/8.0-XXX	TIC01	Unknown	9.34	15	T J	NJ	ug/kg	1
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.65	11000	T J N	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	25154-52-3	Phenol, nonyl-	10.27	350	T J N	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC01	Unknown	10.20	270	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC02	Unknown	10.23	530	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC03	Unknown	10.29	190	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC04	Unknown	10.35	250	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC05	Unknown	10.37	400	T J	NJ	ug/kg	3

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480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC06	Unknown	10.41	300	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC07	Unknown	13.09	3500	T J	NJ	ug/kg	3
480-162572-1	480-162572-11	SW8270D	SB-712	OC-SB-712-6.0/8.0-XXX	TIC08	Unknown	15.52	260	T J	NJ	ug/kg	3
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	26603-23-6	p,p'-Dioctyldiphenylamine	17.63	790	T J N	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	25154-52-3	Phenol, nonyl-	10.27	240	T J N	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC01	Unknown	10.20	180	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC02	Unknown	10.23	360	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC03	Unknown	10.29	130	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC04	Unknown	10.35	170	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC05	Unknown	10.38	280	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC06	Unknown	10.40	270	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC07	Unknown	10.45	110	T J	NJ	ug/kg	1
480-162572-1	480-162572-12	SW8270D	SB-712	OC-SB-712-8.0/10-XXX	TIC08	Unknown	13.08	250	T J	NJ	ug/kg	1
480-162572-1	480-162572-18	SW8260C	QC	OC-TB-11122019	TIC01	Unknown	3.22	6.5	T J	NJ	ug/kg	1
480-162572-1	480-162572-18	SW8260C	QC	OC-TB-11122019	540-97-6	Cyclohexasiloxane, dodecamethyl-	11.03	9100	T H J N	NJ	ug/kg	1
480-162572-1	480-162572-18	SW8260C	QC	OC-TB-11122019	541-02-6	Cyclopentasiloxane, decamethyl-	9.57	24000	T H J N	NJ	ug/kg	1

Notes:
T = Tentatively identified compound, the result is estimated
J = Value is estimated
N = Presumptively present
ug/l = micrograms per liter

Created by/date: KMS 1/6/2020
Checked by/date: MD 01/31/2