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Automated Report

Technical Report for

WSP USA

Orchard School Soil Remediation, Ridgewood, NJ

31402200.001

SGS Job Number: JD11554R

Sampling Date: 08/11/20



Report to:

**WSP USA
600 East Crescent Avenue Suite 200
Upper Saddle River, NJ 07458
MAyers@lbgnj.com**

ATTN: Matt Ayers

Total number of pages in report: 65



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

**Caitlin Brice, M.S.
General Manager**

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

WSP USA

Job No: JD11554R

**Orchard School Soil Remediation, Ridgewood, NJ
Project No: 31402200.001**

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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**This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL**

JD11554-2R	08/11/20	11:01	MA	08/11/20	SO	Soil	I13 (12)
JD11554-3R	08/11/20	11:07	MA	08/11/20	SO	Soil	I13 (13)
JD11554-6R	08/11/20	11:23	MA	08/11/20	SO	Soil	I13 (16)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: WSP USA

Job No JD11554R

Site: Orchard School Soil Remediation, Ridgewood, NJ

Report Date 8/31/2020 9:16:19 AM

On 08/11/2020, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD11554R was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: LEACHATE

Batch ID: VL9628

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD11554-2RLS, JD11776-2AMS, JD11776-2AMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JD11554-6R: Dilution required due to sample matrix (turbidity).

General Chemistry By Method SW846 1312 VOA

Matrix: ALL

Batch ID: GN10887

- The data for SW846 1312 VOA meets quality control requirements.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Monday, August 31, 2020

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Summary of Hits

Job Number: JD11554R
Account: WSP USA
Project: Orchard School Soil Remediation, Ridgewood, NJ
Collected: 08/11/20



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JD11554-2R I13 (12)

pH, SPLP Leachate	9.28				su	SW846 1312 VOA
Volume, SPLP Leachate	0.2010				l	SW846 1312 VOA
Weight, SPLP Leachate	0.01003				kg	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009699				kg	SW846 1312 VOA
Methylene chloride	0.69 J	2.0		0.61	ug/l	SW846 8260C

JD11554-3R I13 (13)

pH, SPLP Leachate	9.24				su	SW846 1312 VOA
Volume, SPLP Leachate	0.2000				l	SW846 1312 VOA
Weight, SPLP Leachate	0.01002				kg	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009629				kg	SW846 1312 VOA

JD11554-6R I13 (16)

pH, SPLP Leachate	8.60				su	SW846 1312 VOA
Volume, SPLP Leachate	0.2010				l	SW846 1312 VOA
Weight, SPLP Leachate	0.01005				kg	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009638				kg	SW846 1312 VOA

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID: I13 (12)		
Lab Sample ID: JD11554-2R		Date Sampled: 08/11/20
Matrix: SO - Soil		Date Received: 08/11/20
Method: SW846 8260C SW846 1311		Percent Solids: 96.7
Project: Orchard School Soil Remediation, Ridgewood, NJ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L324301.D	1	08/28/20 16:38	ED	08/26/20 18:00	GP29644	VL9628
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

SPLP Leachate method SW846 1312

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
75-09-2	Methylene chloride	0.69		2.0	0.61	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		76-120%
17060-07-0	1,2-Dichloroethane-D4	91%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	93%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 MCL = Maximum Contamination Level (not available) B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: I13 (12)		Date Sampled: 08/11/20
Lab Sample ID: JD11554-2R		Date Received: 08/11/20
Matrix: SO - Soil		Percent Solids: 96.7
Project: Orchard School Soil Remediation, Ridgewood, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
SPLP Ratio for Volatiles							
pH, SPLP Leachate	9.28		su	1	08/27/20 11:00	HP	SW846 1312 VOA
Volume, SPLP Leachate	0.2010		l	1	08/27/20 11:00	HP	SW846 1312 VOA
Weight, SPLP Leachate	0.01003		kg	1	08/27/20 11:00	HP	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009699		kg	1	08/27/20 11:00	HP	SW846 1312 VOA

RL = Reporting Limit

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SGS North America Inc.

Report of Analysis

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Client Sample ID: I13 (13)		
Lab Sample ID: JD11554-3R		Date Sampled: 08/11/20
Matrix: SO - Soil		Date Received: 08/11/20
Method: SW846 8260C SW846 1311		Percent Solids: 96.1
Project: Orchard School Soil Remediation, Ridgewood, NJ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L324302.D	1	08/28/20 17:05	ED	08/26/20 18:00	GP29644	VL9628
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

SPLP Leachate method SW846 1312

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND		2.0	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		76-120%
17060-07-0	1,2-Dichloroethane-D4	93%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	93%		72-122%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: I13 (13)	
Lab Sample ID: JD11554-3R	Date Sampled: 08/11/20
Matrix: SO - Soil	Date Received: 08/11/20
	Percent Solids: 96.1
Project: Orchard School Soil Remediation, Ridgewood, NJ	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
SPLP Ratio for Volatiles							
pH, SPLP Leachate	9.24		su	1	08/27/20 11:00	HP	SW846 1312 VOA
Volume, SPLP Leachate	0.2000		l	1	08/27/20 11:00	HP	SW846 1312 VOA
Weight, SPLP Leachate	0.01002		kg	1	08/27/20 11:00	HP	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009629		kg	1	08/27/20 11:00	HP	SW846 1312 VOA

RL = Reporting Limit

4.2
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SGS North America Inc.

Report of Analysis

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Client Sample ID: I13 (16)		
Lab Sample ID: JD11554-6R		Date Sampled: 08/11/20
Matrix: SO - Soil		Date Received: 08/11/20
Method: SW846 8260C SW846 1311		Percent Solids: 95.9
Project: Orchard School Soil Remediation, Ridgewood, NJ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L324303.D	2.5	08/28/20 17:33	ED	08/26/20 18:00	GP29644	VL9628
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

SPLP Leachate method SW846 1312

CAS No.	Compound	Result	MCL	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND		5.0	1.5	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
1868-53-7	Dibromofluoromethane	83%		76-120%			
17060-07-0	1,2-Dichloroethane-D4	93%		64-135%			
2037-26-5	Toluene-D8	101%		76-117%			
460-00-4	4-Bromofluorobenzene	94%		72-122%			

(a) Dilution required due to sample matrix (turbidity).

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 MCL = Maximum Contamination Level (not available) B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
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Report of Analysis

Client Sample ID: I13 (16)		Date Sampled: 08/11/20
Lab Sample ID: JD11554-6R		Date Received: 08/11/20
Matrix: SO - Soil		Percent Solids: 95.9
Project: Orchard School Soil Remediation, Ridgewood, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
SPLP Ratio for Volatiles							
pH, SPLP Leachate	8.60		su	1	08/27/20 11:00	HP	SW846 1312 VOA
Volume, SPLP Leachate	0.2010		l	1	08/27/20 11:00	HP	SW846 1312 VOA
Weight, SPLP Leachate	0.01005		kg	1	08/27/20 11:00	HP	SW846 1312 VOA
Dry Weight, SPLP Leachate	0.009638		kg	1	08/27/20 11:00	HP	SW846 1312 VOA

RL = Reporting Limit

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS Sample Receipt Summary

Job Number: JD11554

Client: WSP USA

Project: ORCHARD SCHOOL SOIL REMEDIATION, NJ

Date / Time Received: 8/11/2020 5:10:00 PM

Delivery Method:

Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (3.3);

Cooler Security

- | | Y or N | | | Y or N | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

- | | Y or N | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

Quality Control Preservation

- | | Y | N | N/A |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

- | | Y or N | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

- | | Y or N | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

- | | Y | N | N/A |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Test Strip Lot #s: pH 1-12: 229517 pH 12+: 208717 Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JD11554R: Chain of Custody

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5.1
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Job Change Order: JD11554

Requested Date: 8/21/2020 **Received Date:** 8/11/2020
Account Name: WSP USA **Due Date:** 8/25/2020
Project Description: Orchard School Soil Remediation, Ridgewood, NJ **Deliverable:** REDT2
C/O Initiated By: SW **PM:** VP **TAT (Days):** 7

=====
Sample #: JD11554-2, 3, 6 **Change:**
Please RELOG- V8260SPLPMECL,SPLPRATIOV, ZHESPLP

Dept:

TAT: 7

=====

JD11554R: Chain of Custody
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Above Changes Per: Matt **Date/Time:** 8/21/2020 1:31:10 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Internal Sample Tracking Chronicle

WSP USA

Job No: JD11554R

**Orchard School Soil Remediation, Ridgewood, NJ
Project No: 31402200.001**

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD11554-2R Collected: 11-AUG-20 11:01 By: MA Received: 11-AUG-20 By: DDH I13 (12)						
JD11554-2RSW846 1312	VOA	27-AUG-20 11:00	HP			SPLPRATIOV
JD11554-2RSW846 8260C		28-AUG-20 16:38	ED	26-AUG-20 JOO		V8260SPLPMECL
JD11554-3R Collected: 11-AUG-20 11:07 By: MA Received: 11-AUG-20 By: DDH I13 (13)						
JD11554-3RSW846 1312	VOA	27-AUG-20 11:00	HP			SPLPRATIOV
JD11554-3RSW846 8260C		28-AUG-20 17:05	ED	26-AUG-20 JOO		V8260SPLPMECL
JD11554-6R Collected: 11-AUG-20 11:23 By: MA Received: 11-AUG-20 By: DDH I13 (16)						
JD11554-6RSW846 1312	VOA	27-AUG-20 11:00	HP			SPLPRATIOV
JD11554-6RSW846 8260C		28-AUG-20 17:33	ED	26-AUG-20 JOO		V8260SPLPMECL

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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-2.1	Omar Khalid	Secured Storage	08/12/20 17:17	Return to Storage
JD11554-2.1	Secured Storage	Omar Khalid	08/12/20 19:52	Retrieve from Storage
JD11554-2.1	Omar Khalid	Secured Staging Area	08/12/20 19:52	Return to Storage
JD11554-2.1	Secured Staging Area	Taylor Gorman	08/13/20 06:57	Retrieve from Storage
JD11554-2.1	Taylor Gorman	Secured Storage	08/13/20 09:26	Return to Storage
JD11554-2.1	Secured Storage	Benjamin Gaines	08/13/20 15:40	Retrieve from Storage
JD11554-2.1	Benjamin Gaines	Secured Staging Area	08/13/20 15:40	Return to Storage
JD11554-2.1	Secured Staging Area	Lindsey Lee	08/14/20 06:38	Retrieve from Storage
JD11554-2.1	Lindsey Lee	Secured Storage	08/14/20 10:11	Return to Storage
JD11554-2.1	Secured Storage	Natasha Torres	08/14/20 14:09	Retrieve from Storage
JD11554-2.1	Natasha Torres	Secured Storage	08/14/20 15:04	Return to Storage
JD11554-2.1	Secured Storage	Benjamin Gaines	08/18/20 09:41	Retrieve from Storage
JD11554-2.1	Benjamin Gaines	Secured Staging Area	08/18/20 09:41	Return to Storage
JD11554-2.1	Secured Staging Area	Benjamin Gaines	08/18/20 14:55	Retrieve from Storage
JD11554-2.1	Benjamin Gaines	Secured Storage	08/18/20 14:56	Return to Storage
JD11554-2.1	Secured Storage	Todd Shoemaker	08/18/20 15:18	Retrieve from Storage
JD11554-2.1	Todd Shoemaker	Secured Staging Area	08/18/20 15:18	Return to Storage
JD11554-2.1	Secured Staging Area	Kyle McKeon	08/18/20 15:22	Retrieve from Storage
JD11554-2.1	Secured Storage	Matthew Robbins	08/18/20 19:48	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JD11554-2.1	Matthew Robbins	Secured Staging Area	08/18/20 19:48	Return to Storage
JD11554-2.1	Secured Staging Area	William Crusier	08/19/20 06:09	Retrieve from Storage
JD11554-2.1	William Crusier	Luis Jimenez	08/19/20 14:06	Custody Transfer
JD11554-2.1	Luis Jimenez	Kyle McKeon	08/19/20 14:51	Custody Transfer
JD11554-2.1	Kyle McKeon	Secured Storage	08/19/20 17:30	Return to Storage
JD11554-2.1	Secured Storage	Todd Shoemaker	08/21/20 14:53	Retrieve from Storage
JD11554-2.1	Todd Shoemaker	Secured Staging Area	08/21/20 14:54	Return to Storage
JD11554-2.1	Secured Staging Area	Luis Jimenez	08/21/20 15:01	Retrieve from Storage
JD11554-2.1	Luis Jimenez	Secured Storage	08/21/20 22:52	Return to Storage
JD11554-2.1	Secured Storage	Todd Shoemaker	08/26/20 10:46	Retrieve from Storage
JD11554-2.1	Todd Shoemaker	Secured Staging Area	08/26/20 10:46	Return to Storage
JD11554-2.1	Secured Staging Area	Jared O. Onindo	08/26/20 15:43	Retrieve from Storage
JD11554-2.1	Jared O. Onindo	Secured Storage	08/26/20 19:13	Return to Storage
JD11554-2.1.1	Taylor Gorman	Metals Digestion	08/13/20 09:22	Digestate from JD11554-2.1
JD11554-2.1.1	Metals Digestion	Taylor Gorman	08/13/20 09:23	Digestate from JD11554-2.1
JD11554-2.1.1	Taylor Gorman	Metals Digestate Storage	08/13/20 09:23	Return to Storage
JD11554-2.1.2	Natasha Torres	Organics Prep	08/14/20 14:09	Extract from JD11554-2.1
JD11554-2.1.3	Natasha Torres	Organics Prep	08/14/20 14:16	Extract from JD11554-2.1
JD11554-2.1.3	Organics Prep	William Crusier	08/15/20 12:33	Extract from JD11554-2.1
JD11554-2.1.3	William Crusier	Extract Storage	08/15/20 12:33	Return to Storage
JD11554-2.1.3	Extract Storage	Kristi Schollenberger	08/16/20 09:30	Retrieve from Storage

5.3
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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-2.1.3	Kristi Schollenberger	GCMS2P	08/16/20 09:30	Load on Instrument
JD11554-2.1.3	GCMS2P	Henny Salim	08/18/20 09:44	Unload from Instrument
JD11554-2.1.3	Henny Salim	Extract Freezer	08/18/20 09:44	Return to Storage
JD11554-2.1.4	Kyle McKeon	Organics Prep	08/18/20 15:25	Extract from JD11554-2.1
JD11554-2.1.4	Organics Prep	William Cruser	08/19/20 14:02	Extract from JD11554-2.1
JD11554-2.1.4	William Cruser	Extract Storage	08/19/20 14:02	Return to Storage
JD11554-2.1.4	Extract Storage	John Nieradka	08/19/20 15:07	Retrieve from Storage
JD11554-2.1.4	John Nieradka	GC5G	08/19/20 15:07	Load on Instrument
JD11554-2.1.5	Kyle McKeon	Organics Prep	08/18/20 15:26	Extract from JD11554-2.1
JD11554-2.1.5	Organics Prep	William Cruser	08/19/20 14:03	Extract from JD11554-2.1
JD11554-2.1.5	William Cruser	Extract Storage	08/19/20 14:03	Return to Storage
JD11554-2.1.6	Luis Jimenez	Organics Prep	08/21/20 15:03	Extract from JD11554-2.1
JD11554-2.1.6	Organics Prep	Luis Jimenez	08/21/20 22:52	Extract from JD11554-2.1
JD11554-2.1.6	Luis Jimenez	Extract Storage	08/21/20 22:52	Return to Storage
JD11554-2.1.6	Extract Storage	Christine Phillips	08/22/20 23:58	Retrieve from Storage
JD11554-2.1.6	Christine Phillips	GC5Y	08/22/20 23:59	Load on Instrument
JD11554-2.1.7	Jared O. Onindo	TCLP	08/26/20 15:43	Leachate from JD11554-2.1
JD11554-2.1.7	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-2.1
JD11554-2.1.7	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-2.1.8	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-2.1
JD11554-2.1.8	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-2.1.9	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-2.1
JD11554-2.1.9	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-2.2	Omar Khalid	Secured Storage	08/12/20 14:49	Return to Storage
JD11554-2.2	Secured Storage	Omar Khalid	08/12/20 15:55	Retrieve from Storage
JD11554-2.2	Omar Khalid	Secured Staging Area	08/12/20 15:55	Return to Storage
JD11554-2.2	Secured Staging Area	Kehinde Hamed	08/13/20 09:45	Retrieve from Storage
JD11554-2.2	Kehinde Hamed	Secured Storage	08/13/20 16:42	Return to Storage
JD11554-2.4	Secured Storage	Prashant Shukla	08/17/20 11:54	Retrieve from Storage
JD11554-2.4	Prashant Shukla	GCMS3C	08/17/20 11:54	Load on Instrument
JD11554-2.4	GCMS3C	Prashant Shukla	08/18/20 08:31	Unload from Instrument
JD11554-2.4	Prashant Shukla		08/18/20 08:33	Depleted
JD11554-2.5	Secured Storage	Prashant Shukla	08/17/20 14:39	Retrieve from Storage
JD11554-2.5	Prashant Shukla	GCMS3C	08/17/20 14:39	Load on Instrument
JD11554-2.5	GCMS3C	Prashant Shukla	08/18/20 08:31	Unload from Instrument

5.3
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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-2.5	Prashant Shukla		08/18/20 08:33	Depleted
JD11554-2.6	Secured Storage	Jayna Patel	08/12/20 14:06	Retrieve from Storage
JD11554-2.6	Jayna Patel	Secured Storage	08/12/20 14:06	Return to Storage
JD11554-3.1	Omar Khalid	Secured Storage	08/12/20 17:17	Return to Storage
JD11554-3.1	Secured Storage	Omar Khalid	08/12/20 19:52	Retrieve from Storage
JD11554-3.1	Omar Khalid	Secured Staging Area	08/12/20 19:52	Return to Storage
JD11554-3.1	Secured Staging Area	Taylor Gorman	08/13/20 06:57	Retrieve from Storage
JD11554-3.1	Taylor Gorman	Secured Storage	08/13/20 09:26	Return to Storage
JD11554-3.1	Secured Storage	Benjamin Gaines	08/13/20 15:40	Retrieve from Storage
JD11554-3.1	Benjamin Gaines	Secured Staging Area	08/13/20 15:40	Return to Storage
JD11554-3.1	Secured Staging Area	Lindsey Lee	08/14/20 06:38	Retrieve from Storage
JD11554-3.1	Lindsey Lee	Secured Storage	08/14/20 10:11	Return to Storage
JD11554-3.1	Secured Storage	Natasha Torres	08/14/20 14:09	Retrieve from Storage
JD11554-3.1	Natasha Torres	Secured Storage	08/14/20 15:04	Return to Storage
JD11554-3.1	Secured Storage	Benjamin Gaines	08/18/20 09:41	Retrieve from Storage
JD11554-3.1	Benjamin Gaines	Secured Staging Area	08/18/20 09:41	Return to Storage
JD11554-3.1	Secured Staging Area	Benjamin Gaines	08/18/20 14:55	Retrieve from Storage
JD11554-3.1	Benjamin Gaines	Secured Storage	08/18/20 14:56	Return to Storage
JD11554-3.1	Secured Storage	Todd Shoemaker	08/18/20 15:18	Retrieve from Storage
JD11554-3.1	Todd Shoemaker	Secured Staging Area	08/18/20 15:18	Return to Storage
JD11554-3.1	Secured Staging Area	Kyle McKeon	08/18/20 15:22	Retrieve from Storage
JD11554-3.1	Secured Storage	Matthew Robbins	08/18/20 19:48	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JD11554-3.1	Matthew Robbins	Secured Staging Area	08/18/20 19:48	Return to Storage
JD11554-3.1	Secured Staging Area	William Crusier	08/19/20 06:09	Retrieve from Storage
JD11554-3.1	William Crusier	Luis Jimenez	08/19/20 14:06	Custody Transfer
JD11554-3.1	Luis Jimenez	Kyle McKeon	08/19/20 14:51	Custody Transfer
JD11554-3.1	Kyle McKeon	Secured Storage	08/19/20 17:30	Return to Storage
JD11554-3.1	Secured Storage	Todd Shoemaker	08/21/20 14:53	Retrieve from Storage
JD11554-3.1	Todd Shoemaker	Secured Staging Area	08/21/20 14:54	Return to Storage
JD11554-3.1	Secured Staging Area	Luis Jimenez	08/21/20 15:01	Retrieve from Storage
JD11554-3.1	Luis Jimenez	Secured Storage	08/21/20 22:52	Return to Storage
JD11554-3.1	Secured Storage	Todd Shoemaker	08/26/20 10:46	Retrieve from Storage
JD11554-3.1	Todd Shoemaker	Secured Staging Area	08/26/20 10:46	Return to Storage
JD11554-3.1	Secured Staging Area	Jared O. Onindo	08/26/20 15:43	Retrieve from Storage
JD11554-3.1	Jared O. Onindo	Secured Storage	08/26/20 19:13	Return to Storage
JD11554-3.1.1	Taylor Gorman	Metals Digestion	08/13/20 09:22	Digestate from JD11554-3.1
JD11554-3.1.1	Metals Digestion	Taylor Gorman	08/13/20 09:23	Digestate from JD11554-3.1
JD11554-3.1.1	Taylor Gorman	Metals Digestate Storage	08/13/20 09:23	Return to Storage
JD11554-3.1.2	Natasha Torres	Organics Prep	08/14/20 14:09	Extract from JD11554-3.1

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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-3.1.3	Natasha Torres	Organics Prep	08/14/20 14:16	Extract from JD11554-3.1
JD11554-3.1.3	Organics Prep	William Crusier	08/15/20 12:33	Extract from JD11554-3.1
JD11554-3.1.3	William Crusier	Extract Storage	08/15/20 12:33	Return to Storage
JD11554-3.1.3	Extract Storage	Kristi Schollenberger	08/16/20 09:30	Retrieve from Storage
JD11554-3.1.3	Kristi Schollenberger	GCMS2P	08/16/20 09:30	Load on Instrument
JD11554-3.1.3	GCMS2P	Henny Salim	08/18/20 09:44	Unload from Instrument
JD11554-3.1.3	Henny Salim	Extract Freezer	08/18/20 09:44	Return to Storage
JD11554-3.1.4	Kyle McKeon	Organics Prep	08/18/20 15:25	Extract from JD11554-3.1
JD11554-3.1.4	Organics Prep	William Crusier	08/19/20 14:02	Extract from JD11554-3.1
JD11554-3.1.4	William Crusier	Extract Storage	08/19/20 14:02	Return to Storage
JD11554-3.1.4	Extract Storage	John Nieradka	08/19/20 15:07	Retrieve from Storage
JD11554-3.1.4	John Nieradka	GC5G	08/19/20 15:07	Load on Instrument
JD11554-3.1.5	Kyle McKeon	Organics Prep	08/18/20 15:26	Extract from JD11554-3.1
JD11554-3.1.5	Organics Prep	William Crusier	08/19/20 14:03	Extract from JD11554-3.1
JD11554-3.1.5	William Crusier	Extract Storage	08/19/20 14:03	Return to Storage
JD11554-3.1.6	Luis Jimenez	Organics Prep	08/21/20 15:03	Extract from JD11554-3.1
JD11554-3.1.6	Organics Prep	Luis Jimenez	08/21/20 22:52	Extract from JD11554-3.1
JD11554-3.1.6	Luis Jimenez	Extract Storage	08/21/20 22:52	Return to Storage
JD11554-3.1.6	Extract Storage	Christine Phillips	08/22/20 23:58	Retrieve from Storage
JD11554-3.1.6	Christine Phillips	GC5Y	08/22/20 23:59	Load on Instrument
JD11554-3.1.7	Jared O. Onindo	TCLP	08/26/20 15:43	Leachate from JD11554-3.1
JD11554-3.1.7	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-3.1
JD11554-3.1.7	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-3.1.8	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-3.1
JD11554-3.1.8	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-3.2	Omar Khalid	Secured Storage	08/12/20 14:49	Return to Storage
JD11554-3.2	Secured Storage	Omar Khalid	08/12/20 15:55	Retrieve from Storage
JD11554-3.2	Omar Khalid	Secured Staging Area	08/12/20 15:55	Return to Storage
JD11554-3.2	Secured Staging Area	Kehinde Hamed	08/13/20 09:45	Retrieve from Storage
JD11554-3.2	Kehinde Hamed	Secured Storage	08/13/20 16:42	Return to Storage
JD11554-3.4	Secured Storage	Prashant Shukla	08/17/20 11:54	Retrieve from Storage
JD11554-3.4	Prashant Shukla	GCMS3C	08/17/20 11:54	Load on Instrument
JD11554-3.4	GCMS3C	Prashant Shukla	08/18/20 08:31	Unload from Instrument
JD11554-3.4	Prashant Shukla		08/18/20 08:33	Depleted
JD11554-3.6	Secured Storage	Jayna Patel	08/12/20 14:06	Retrieve from Storage

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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-3.6	Jayna Patel	Secured Storage	08/12/20 14:06	Return to Storage
JD11554-6.1	Omar Khalid	Secured Storage	08/12/20 17:17	Return to Storage
JD11554-6.1	Secured Storage	Omar Khalid	08/12/20 19:52	Retrieve from Storage
JD11554-6.1	Omar Khalid	Secured Staging Area	08/12/20 19:52	Return to Storage
JD11554-6.1	Secured Staging Area	Taylor Gorman	08/13/20 06:57	Retrieve from Storage
JD11554-6.1	Taylor Gorman	Secured Storage	08/13/20 09:26	Return to Storage
JD11554-6.1	Secured Storage	Benjamin Gaines	08/13/20 15:40	Retrieve from Storage
JD11554-6.1	Benjamin Gaines	Secured Staging Area	08/13/20 15:40	Return to Storage
JD11554-6.1	Secured Staging Area	Lindsey Lee	08/14/20 06:38	Retrieve from Storage
JD11554-6.1	Lindsey Lee	Secured Storage	08/14/20 10:11	Return to Storage
JD11554-6.1	Secured Storage	Natasha Torres	08/14/20 14:09	Retrieve from Storage
JD11554-6.1	Natasha Torres	Secured Storage	08/14/20 15:04	Return to Storage
JD11554-6.1	Secured Storage	Benjamin Gaines	08/18/20 09:41	Retrieve from Storage
JD11554-6.1	Benjamin Gaines	Secured Staging Area	08/18/20 09:41	Return to Storage
JD11554-6.1	Secured Staging Area	Benjamin Gaines	08/18/20 14:55	Retrieve from Storage
JD11554-6.1	Benjamin Gaines	Secured Storage	08/18/20 14:56	Return to Storage
JD11554-6.1	Secured Storage	Todd Shoemaker	08/18/20 15:18	Retrieve from Storage
JD11554-6.1	Todd Shoemaker	Secured Staging Area	08/18/20 15:18	Return to Storage
JD11554-6.1	Secured Staging Area	Kyle McKeon	08/18/20 15:22	Retrieve from Storage
JD11554-6.1	Secured Storage	Matthew Robbins	08/18/20 19:48	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JD11554-6.1	Matthew Robbins	Secured Staging Area	08/18/20 19:48	Return to Storage
JD11554-6.1	Secured Staging Area	William Crusier	08/19/20 06:09	Retrieve from Storage
JD11554-6.1	William Crusier	Luis Jimenez	08/19/20 14:06	Custody Transfer
JD11554-6.1	Luis Jimenez	Kyle McKeon	08/19/20 14:51	Custody Transfer
JD11554-6.1	Kyle McKeon	Secured Storage	08/19/20 17:30	Return to Storage
JD11554-6.1	Secured Storage	Todd Shoemaker	08/21/20 14:53	Retrieve from Storage
JD11554-6.1	Todd Shoemaker	Secured Staging Area	08/21/20 14:54	Return to Storage
JD11554-6.1	Secured Staging Area	Luis Jimenez	08/21/20 15:01	Retrieve from Storage
JD11554-6.1	Luis Jimenez	Secured Storage	08/21/20 22:52	Return to Storage
JD11554-6.1	Secured Storage	Todd Shoemaker	08/26/20 10:46	Retrieve from Storage
JD11554-6.1	Todd Shoemaker	Secured Staging Area	08/26/20 10:46	Return to Storage
JD11554-6.1	Secured Staging Area	Jared O. Onindo	08/26/20 15:43	Retrieve from Storage
JD11554-6.1	Jared O. Onindo	Secured Storage	08/26/20 19:13	Return to Storage
JD11554-6.1.1	Taylor Gorman	Metals Digestion	08/13/20 09:22	Digestate from JD11554-6.1
JD11554-6.1.1	Metals Digestion	Taylor Gorman	08/13/20 09:23	Digestate from JD11554-6.1
JD11554-6.1.1	Taylor Gorman	Metals Digestate Storage	08/13/20 09:23	Return to Storage
JD11554-6.1.2	Natasha Torres	Organics Prep	08/14/20 14:09	Extract from JD11554-6.1
JD11554-6.1.3	Natasha Torres	Organics Prep	08/14/20 14:16	Extract from JD11554-6.1
JD11554-6.1.3	Organics Prep	William Crusier	08/15/20 12:33	Extract from JD11554-6.1

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SGS Internal Chain of Custody

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ
 Received: 08/11/20

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD11554-6.1.3	William Cruser	Extract Storage	08/15/20 12:33	Return to Storage
JD11554-6.1.3	Extract Storage	Kristi Schollenberger	08/16/20 09:30	Retrieve from Storage
JD11554-6.1.3	Kristi Schollenberger	GCMS2P	08/16/20 09:30	Load on Instrument
JD11554-6.1.3	GCMS2P	Henny Salim	08/18/20 09:44	Unload from Instrument
JD11554-6.1.3	Henny Salim	Extract Freezer	08/18/20 09:44	Return to Storage
JD11554-6.1.4	Kyle McKeon	Organics Prep	08/18/20 15:25	Extract from JD11554-6.1
JD11554-6.1.4	Organics Prep	William Cruser	08/19/20 14:02	Extract from JD11554-6.1
JD11554-6.1.4	William Cruser	Extract Storage	08/19/20 14:02	Return to Storage
JD11554-6.1.4	Extract Storage	John Nieradka	08/19/20 15:07	Retrieve from Storage
JD11554-6.1.4	John Nieradka	GC5G	08/19/20 15:07	Load on Instrument
JD11554-6.1.5	Kyle McKeon	Organics Prep	08/18/20 15:26	Extract from JD11554-6.1
JD11554-6.1.5	Organics Prep	William Cruser	08/19/20 14:03	Extract from JD11554-6.1
JD11554-6.1.5	William Cruser	Extract Storage	08/19/20 14:03	Return to Storage
JD11554-6.1.6	Luis Jimenez	Organics Prep	08/21/20 15:03	Extract from JD11554-6.1
JD11554-6.1.6	Organics Prep	Luis Jimenez	08/21/20 22:52	Extract from JD11554-6.1
JD11554-6.1.6	Luis Jimenez	Extract Storage	08/21/20 22:52	Return to Storage
JD11554-6.1.6	Extract Storage	Christine Phillips	08/22/20 23:58	Retrieve from Storage
JD11554-6.1.6	Christine Phillips	GC5Y	08/22/20 23:59	Load on Instrument
JD11554-6.1.7	Jared O. Onindo	TCLP	08/26/20 15:43	Leachate from JD11554-6.1
JD11554-6.1.7	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-6.1
JD11554-6.1.7	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-6.1.8	TCLP	Jared O. Onindo	08/28/20 10:06	Leachate from JD11554-6.1
JD11554-6.1.8	Jared O. Onindo	Secured Storage	08/28/20 10:06	Return to Storage
JD11554-6.2	Omar Khalid	Secured Storage	08/12/20 14:49	Return to Storage
JD11554-6.2	Secured Storage	Omar Khalid	08/12/20 15:55	Retrieve from Storage
JD11554-6.2	Omar Khalid	Secured Staging Area	08/12/20 15:55	Return to Storage
JD11554-6.2	Secured Staging Area	Kehinde Hamed	08/13/20 09:45	Retrieve from Storage
JD11554-6.2	Kehinde Hamed	Secured Storage	08/13/20 16:42	Return to Storage
JD11554-6.4	Secured Storage	Prashant Shukla	08/17/20 11:54	Retrieve from Storage
JD11554-6.4	Prashant Shukla	GCMS3C	08/17/20 11:54	Load on Instrument
JD11554-6.4	GCMS3C	Prashant Shukla	08/18/20 08:31	Unload from Instrument
JD11554-6.4	Prashant Shukla		08/18/20 08:33	Depleted
JD11554-6.6	Secured Storage	Jayna Patel	08/12/20 14:06	Retrieve from Storage
JD11554-6.6	Jayna Patel	Secured Storage	08/12/20 14:06	Return to Storage

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MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL9628-MB	L324287.D	1	08/28/20	ED	n/a	n/a	VL9628

The QC reported here applies to the following samples:

Method: SW846 8260C

JD11554-2R, JD11554-3R, JD11554-6R

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	0.61	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	82%	76-120%
17060-07-0	1,2-Dichloroethane-D4	93%	64-135%
2037-26-5	Toluene-D8	101%	76-117%
460-00-4	4-Bromofluorobenzene	94%	72-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Leachate Blank Summary

Job Number: JD11554R
Account: LBGNJ WSP USA
Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP29644-LB10	L324297.D	1	08/28/20	ED	08/26/20	GP29644	VL9628

The QC reported here applies to the following samples:

Method: SW846 8260C

JD11554-2R, JD11554-3R, JD11554-6R

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	0.61	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	83%	76-120%
17060-07-0	1,2-Dichloroethane-D4	91%	64-135%
2037-26-5	Toluene-D8	103%	76-117%
460-00-4	4-Bromofluorobenzene	93%	72-122%

Blank Spike Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL9628-BS	L324285.D	1	08/28/20	ED	n/a	n/a	VL9628

The QC reported here applies to the following samples:

Method: SW846 8260C

JD11554-2R, JD11554-3R, JD11554-6R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-09-2	Methylene chloride	50	46.3	93	69-122

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	76-120%
17060-07-0	1,2-Dichloroethane-D4	84%	64-135%
2037-26-5	Toluene-D8	91%	76-117%
460-00-4	4-Bromofluorobenzene	98%	72-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD11776-2AMS	L324293.D	5	08/28/20	ED	n/a	n/a	VL9628
JD11776-2AMSD	L324294.D	5	08/28/20	ED	n/a	n/a	VL9628
JD11776-2A	L324290.D	5	08/28/20	ED	08/21/20	GP29594	VL9628

The QC reported here applies to the following samples:

Method: SW846 8260C

JD11554-2R, JD11554-3R, JD11554-6R

CAS No.	Compound	JD11776-2A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	ND	250	222	89	250	224	90	1	59-129/12

CAS No.	Surrogate Recoveries	MS	MSD	JD11776-2A	Limits
1868-53-7	Dibromofluoromethane	84%	85%	83%	76-120%
17060-07-0	1,2-Dichloroethane-D4	86%	86%	98%	64-135%
2037-26-5	Toluene-D8	92%	91%	100%	76-117%
460-00-4	4-Bromofluorobenzene	97%	97%	93%	72-122%

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP29644-LS10	L324304.D	1	08/28/20	ED	08/26/20	GP29644	VL9628
JD11554-2R	L324301.D	1	08/28/20	ED	08/26/20	GP29644	VL9628

The QC reported here applies to the following samples:

Method: SW846 8260C

JD11554-2R, JD11554-3R, JD11554-6R

CAS No.	Compound	JD11554-2R ug/l	Spike Q	ug/l	LS ug/l	LS %	Limits
75-09-2	Methylene chloride	0.69	J	50	46.3	91	59-129

CAS No.	Surrogate Recoveries	LS	JD11554-2R	Limits
1868-53-7	Dibromofluoromethane	86%	83%	76-120%
17060-07-0	1,2-Dichloroethane-D4	86%	91%	64-135%
2037-26-5	Toluene-D8	90%	100%	76-117%
460-00-4	4-Bromofluorobenzene	96%	93%	72-122%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-BFB	Injection Date: 07/29/20
Lab File ID: L323414.D	Injection Time: 20:19
Instrument ID: GCMSL	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	18005	22.0	Pass
75	30.0 - 60.0% of mass 95	44488	54.3	Pass
95	Base peak, 100% relative abundance	81939	100.0	Pass
96	5.0 - 9.0% of mass 95	5392	6.58	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	64125	78.3	Pass
175	5.0 - 9.0% of mass 174	5101	6.23 (7.95) ^a	Pass
176	95.0 - 101.0% of mass 174	62347	76.1 (97.2) ^a	Pass
177	5.0 - 9.0% of mass 176	4086	4.99 (6.55) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL9594-IC9594	L323415.D	07/29/20	21:05	00:46	Initial cal 0.2
VL9594-IC9594	L323416.D	07/29/20	21:32	01:13	Initial cal 0.5
VL9594-IC9594	L323417.D	07/29/20	22:00	01:41	Initial cal 1
VL9594-IC9594	L323418.D	07/29/20	22:27	02:08	Initial cal 2
VL9594-IC9594	L323419.D	07/29/20	22:54	02:35	Initial cal 4
VL9594-IC9594	L323420.D	07/29/20	23:21	03:02	Initial cal 8
VL9594-IC9594	L323421.D	07/29/20	23:49	03:30	Initial cal 20
VL9594-ICC9594	L323422.D	07/30/20	00:16	03:57	Initial cal 50
VL9594-IC9594	L323423.D	07/30/20	00:43	04:24	Initial cal 100
VL9594-IC9594	L323424.D	07/30/20	01:10	04:51	Initial cal 200
VL9594-ICV9594	L323427.D	07/30/20	02:32	06:13	Initial cal verification 50
VL9594-ICV9594	L323428.D	07/30/20	02:59	06:40	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9628-BFB	Injection Date: 08/28/20
Lab File ID: L324284.D	Injection Time: 08:43
Instrument ID: GCMSL	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	15955	20.1	Pass
75	30.0 - 60.0% of mass 95	39547	49.8	Pass
95	Base peak, 100% relative abundance	79485	100.0	Pass
96	5.0 - 9.0% of mass 95	5747	7.23	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	64859	81.6	Pass
175	5.0 - 9.0% of mass 174	5116	6.44 (7.89) ^a	Pass
176	95.0 - 101.0% of mass 174	63008	79.3 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	4138	5.21 (6.57) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL9628-CC9594	L324284.D	08/28/20	08:43	00:00	Continuing cal 20
VL9628-BS	L324285.D	08/28/20	09:15	00:32	Blank Spike
VL9628-MB	L324287.D	08/28/20	10:10	01:27	Method Blank
GP29594-LB7	L324288.D	08/28/20	10:42	01:59	Leachate Blank
GP29505-LB13	L324289.D	08/28/20	11:09	02:26	Leachate Blank
JD11776-2A	L324290.D	08/28/20	11:36	02:53	(used for QC only; not part of job JD11554R)
ZZZZZZ	L324291.D	08/28/20	12:04	03:21	(unrelated sample)
ZZZZZZ	L324292.D	08/28/20	12:31	03:48	(unrelated sample)
JD11776-2AMS	L324293.D	08/28/20	12:58	04:15	Matrix Spike
JD11776-2AMSD	L324294.D	08/28/20	13:26	04:43	Matrix Spike Duplicate
GP29645-LB11	L324296.D	08/28/20	14:20	05:37	Leachate Blank
GP29644-LB10	L324297.D	08/28/20	14:48	06:05	Leachate Blank
ZZZZZZ	L324298.D	08/28/20	15:16	06:33	(unrelated sample)
ZZZZZZ	L324299.D	08/28/20	15:43	07:00	(unrelated sample)
JD11554-2R	L324301.D	08/28/20	16:38	07:55	I13 (12)
JD11554-3R	L324302.D	08/28/20	17:05	08:22	I13 (13)
JD11554-6R	L324303.D	08/28/20	17:33	08:50	I13 (16)
GP29644-LS10	L324304.D	08/28/20	18:00	09:17	Leachate Spike

Internal Standard Area Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Check Std:	VL9628-CC9594	Injection Date:	08/28/20
Lab File ID:	L324284.D	Injection Time:	08:43
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	203954	3.04	223938	4.25	320052	4.81	284603	7.21	123879	9.40
Upper Limit ^a	407908	3.54	447876	4.75	640104	5.31	569206	7.71	247758	9.90
Lower Limit ^b	101977	2.54	111969	3.75	160026	4.31	142302	6.71	61940	8.90

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VL9628-BS	192859	3.04	210964	4.25	308904	4.82	283029	7.21	118282	9.40
VL9628-MB	244901	3.04	269964	4.25	366013	4.82	314155	7.21	144072	9.40
GP29594-LB7	233930	3.04	269625	4.25	368444	4.81	314027	7.21	142689	9.39
GP29505-LB13	234677	3.04	272442	4.25	370397	4.82	321526	7.21	144178	9.40
JD11776-2A	238719	3.04	271836	4.25	359771	4.82	320709	7.21	146570	9.40
ZZZZZZ	226044	3.04	255887	4.25	350489	4.82	299856	7.21	136619	9.40
ZZZZZZ	232036	3.04	257213	4.25	349465	4.82	300568	7.21	138793	9.40
JD11776-2AMS	192432	3.04	212496	4.25	305952	4.82	285512	7.21	121403	9.40
JD11776-2AMSD	186199	3.04	212053	4.25	305753	4.82	285448	7.21	119891	9.40
GP29645-LB11	231445	3.04	268375	4.25	367311	4.82	315196	7.21	144775	9.40
GP29644-LB10	239662	3.04	261676	4.25	362317	4.82	307491	7.21	141637	9.40
ZZZZZZ	219648	3.04	237969	4.25	333293	4.82	289778	7.21	126156	9.40
ZZZZZZ	242434	3.04	262868	4.25	363897	4.82	313968	7.21	145038	9.39
JD11554-2R	223451	3.04	253976	4.25	350754	4.82	306696	7.21	138750	9.40
JD11554-3R	236532	3.04	259478	4.26	358583	4.82	312658	7.21	143586	9.40
JD11554-6R ^c	237592	3.04	264620	4.25	363695	4.82	315227	7.21	142743	9.40
GP29644-LS10	198625	3.04	206606	4.25	299275	4.82	283952	7.21	121758	9.40

- IS 1 = Tert Butyl Alcohol-D9
- IS 2 = Pentafluorobenzene
- IS 3 = 1,4-Difluorobenzene
- IS 4 = Chlorobenzene-D5
- IS 5 = 1,4-Dichlorobenzene-d4

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Dilution required due to sample matrix (turbidity).

6.7.1

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Surrogate Recovery Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Method: SW846 8260C	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD11554-2R	L324301.D	83	91	100	93
JD11554-3R	L324302.D	83	93	100	93
JD11554-6R	L324303.D	83	93	101	94
GP29644-LB10	L324297.D	83	91	103	93
GP29644-LS10	L324304.D	86	86	90	96
JD11776-2AMS	L324293.D	84	86	92	97
JD11776-2AMSD	L324294.D	85	86	91	97
VL9628-BS	L324285.D	83	84	91	98
VL9628-MB	L324287.D	82	93	101	94

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	64-135%
S3 = Toluene-D8	76-117%
S4 = 4-Bromofluorobenzene	72-122%

Initial Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICC9594
 Lab FileID: L323422.D

Response Factor Report GCMSL

Method : C:\MSDCHEM\1\METHODS\ML9594.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

Calibration Files

8 =L323420.D 0.5 =L323416.D 4 =L323419.D 50 =L323422.D
 100 =L323423.D 1 =L323417.D 200 =L323424.D 20 =L323421.D
 2 =L323418.D 0.2 =L323415.D = =

Compound

Compound	8	0.5	4	50	100	1	200	20	2	0.2	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----												
2) 1,4-dioxane	0.090	0.070	0.082	0.096	0.094	0.095	0.093	0.089	0.091	0.089	0.089	9.23
3) ethanol	0.119	0.133	0.118	0.126	0.121	0.127	0.099	0.122	0.133	0.115	0.121	8.08
4) tertiary butyl alcohol	1.185	1.292	1.131	1.265	1.227	1.361	1.197	1.199	1.378	1.248	1.248	6.64
5) I pentafluorobenzene -----ISTD-----												
6) dichlorodifluoromethane	0.940	0.891	0.866	1.077	1.099	0.768	1.001	1.008	0.800	0.834	0.928	12.41
7) chloromethane	0.789	0.928	0.729	0.864	0.836	0.662	0.741	0.830	0.733	0.790	0.790	10.39
8) vinyl chloride	0.738	0.598	0.695	0.801	0.787	0.622	0.700	0.774	0.686	0.764	0.717	9.64
9) bromomethane	0.222	0.200	0.207	0.228		0.174	0.211	0.230		0.210	0.210	9.24
10) chloroethane	0.405	0.387	0.348	0.401	0.386	0.318	0.327	0.386	0.358	0.368	0.368	8.61
11) vinyl bromide	0.246	0.208	0.200	0.271	0.273	0.216	0.247	0.264	0.235	0.240	0.240	11.43
12) trichlorofluoromethane	0.907	0.806	0.816	0.967	0.944	0.792	0.838	0.932	0.814	0.797	0.861	7.93
13) ethyl ether	0.309	0.231	0.296	0.332	0.317	0.289	0.294	0.307	0.295	0.297	0.297	9.47
14) acrolein	0.122	0.117	0.149	0.143	0.132	0.133	0.139	0.106		0.130	0.130	10.88
15) freon 113	0.348	0.322	0.330	0.363	0.355	0.309	0.326	0.348	0.350	0.339	0.339	5.30
16) 1,1-dichloroethene	0.447	0.341	0.387	0.444	0.431	0.433	0.390	0.440	0.433	0.401	0.415	8.26
17) acetone	0.077	0.072	0.071	0.077	0.072	0.072	0.065	0.073	0.084	0.074	0.074	7.00
18) acetonitrile	0.061	0.078	0.056	0.064	0.061	0.068	0.056	0.062	0.059	0.063	0.063	10.74
19) iodomethane *This compound fails the initial calibration criteria.	0.077	0.028	0.347	0.384		0.412	0.192			0.240	0.240	68.63
20) iso-butyl alcohol	0.045	0.044	0.049	0.044	0.050	0.041	0.048	0.047		0.046	0.046	6.50
21) carbon disulfide	1.089	1.316	0.978	1.130	1.084	1.143	1.002	1.084	1.111	1.104	1.104	8.75
22) methylene chloride	0.470	0.442	0.422	0.484	0.470	0.467	0.436	0.464	0.461	0.457	0.457	4.33
23) methyl acetate												

6.9.1
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Initial Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICC9594
 Lab FileID: L323422.D

	0.137	0.125	0.138	0.134	0.102	0.122	0.137	0.120	0.127	9.81	
24)	methyl tert butyl ether										
	1.646	1.558	1.493	1.696	1.585	1.605	1.412	1.626	1.581	1.611	5.06
25)	trans-1,2-dichloroethene										
	0.467	0.464	0.401	0.456	0.438	0.456	0.397	0.450	0.430	0.432	5.62
26)	hexane										
	0.716	0.759	0.700	0.773	0.757	0.727	0.705	0.723	0.741	0.755	3.38
27)	di-isopropyl ether										
	1.967	1.732	1.794	1.900	1.775	1.910	1.568	1.880	1.872	1.799	6.27
28)	ethyl tert-butyl ether										
	1.755	1.582	1.616	1.796	1.698	1.742	1.544	1.741	1.689	1.847	5.64
29)	2-butanone										
	0.092	0.081	0.083	0.097	0.094	0.085	0.086	0.092	0.083	0.088	6.65
30)	1,1-dichloroethane										
	0.978	0.800	0.864	0.937	0.853	0.911	0.788	0.917	0.886	0.997	7.75
31)	chloroprene										
	0.831	0.832	0.768	0.862	0.837	0.832	0.763	0.850	0.811	0.889	4.69
32)	acrylonitrile										
	0.287	0.207	0.244	0.305	0.301	0.328	0.281	0.290	0.283	0.281	12.68
33)	vinyl acetate										
	0.126	0.110	0.136	0.134	0.105	0.124	0.128	0.129	0.124	8.96	
34)	ethyl acetate										
	0.133	0.127	0.140	0.131	0.102	0.123	0.121	0.135	0.126	9.35	
35)	2,2-dichloropropane										
	0.763	0.772	0.700	0.725	0.700	0.772	0.633	0.716	0.746	0.760	6.01
36)	cis-1,2-dichloroethene										
	0.522	0.500	0.462	0.511	0.482	0.489	0.440	0.501	0.522	0.578	7.49
37)	propionitrile										
	0.119	0.101	0.105	0.117	0.108	0.117	0.096	0.113	0.108	0.109	7.14
38)	methyl acrylate										
	0.107	0.089	0.104	0.099	0.077	0.093	0.105	0.081	0.094	11.90	
39)	bromochloromethane										
	0.229	0.219	0.218	0.232	0.207	0.237	0.191	0.231	0.234	0.222	6.87
40)	tetrahydrofuran										
	0.100	0.094	0.109	0.108	0.096	0.097	0.095	0.104	0.100	5.75	
41)	chloroform										
	0.908	0.903	0.847	0.879	0.841	0.973	0.772	0.854	0.911	0.954	6.67
42)	dibromofluoromethane (s)										
	0.478	0.448	0.469	0.477	0.477	0.461	0.483	0.480	0.451	0.447	3.01
43)	methacrylonitrile										
	0.275	0.232	0.252	0.300	0.294	0.278	0.273	0.279	0.273	0.273	7.50
44)	1,1,1-trichloroethane										
	0.721	0.680	0.683	0.758	0.749	0.687	0.705	0.719	0.686	0.710	4.10
45)	cyclohexane										
	0.689	0.635	0.655	0.697	0.692	0.601	0.622	0.682	0.652	0.791	7.89
46)	1,1-dichloropropene										
	0.667	0.649	0.614	0.657	0.637	0.666	0.587	0.659	0.666	0.678	4.34
47)	carbon tetrachloride										
	0.625	0.620	0.567	0.616	0.597	0.606	0.549	0.595	0.557	0.634	4.98
48)	isopropyl acetate										
	0.141	0.140	0.153	0.148	0.111	0.141	0.146	0.120	0.138	10.46	
49)	tert amyl alcohol										
	0.041	0.036	0.044	0.041	0.042	0.036	0.041	0.043	0.041	6.94	
50) I	1,4-difluorobenzene -----ISTD-----										
51)	1,2-dichloroethane-d4 (s)										
	0.393	0.375	0.390	0.364	0.353	0.382	0.344	0.387	0.371	0.393	4.60
52)	tert-amyl methyl ether										
	0.957	0.956	0.940	0.916	0.863	0.998	0.757	0.911	0.939	0.948	7.27
53)	2,2,4-trimethylpentane										

Initial Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICC9594
 Lab FileID: L323422.D

	0.828	0.873	0.800	0.803	0.769	0.901	0.668	0.795	0.832	0.849	0.812	7.87
54)	n-butyl alcohol											
	0.018	0.013	0.015	0.019	0.018	0.016	0.016	0.018	0.015		0.017	12.04
55)	benzene											
	1.176	1.121	1.115	1.112	1.057	1.184	0.913	1.114	1.176	1.344	1.131	9.60
56)	heptane											
	0.203	0.199	0.192	0.205	0.205	0.193	0.187	0.198	0.208	0.245	0.203	7.88
57)	1,2-dichloroethane											
	0.483	0.543	0.463	0.451	0.427	0.510	0.381	0.449	0.493	0.678	0.488	16.54
58)	trichloroethene											
	0.297	0.269	0.273	0.301	0.298	0.292	0.271	0.293	0.299	0.326	0.292	5.87
59)	ethyl acrylate											
	0.555	0.445	0.473	0.574	0.548	0.498	0.489	0.548	0.507		0.515	8.40
60)	2-nitropropane											
	0.151		0.137	0.165	0.164	0.146	0.153	0.147	0.136		0.150	7.21
61)	2-chloroethyl vinyl ether											
	0.246	0.212	0.222	0.243	0.226	0.229	0.192	0.240	0.232	0.201	0.224	7.94
62)	methyl methacrylate											
	0.097		0.092	0.104	0.099	0.083	0.091	0.102	0.076		0.093	10.56
63)	1,2-dichloropropane											
	0.327	0.275	0.291	0.315	0.302	0.314	0.268	0.309	0.320	0.371	0.309	9.37
64)	methylcyclohexane											
	0.474	0.432	0.461	0.494	0.481	0.522	0.431	0.476	0.496	0.465	0.473	5.89
65)	dibromomethane											
	0.199	0.178	0.172	0.193	0.187	0.205	0.173	0.183	0.196	0.284	0.197	16.48
66)	bromodichloromethane											
	0.418	0.390	0.390	0.434	0.425	0.450	0.395	0.418	0.419	0.473	0.421	6.32
67)	cis-1,3-dichloropropene											
	0.519	0.454	0.467	0.516	0.503	0.522	0.458	0.501	0.492		0.492	5.36
68)	epichlorohydrin											
	0.053		0.048	0.054	0.053	0.051	0.048	0.053	0.053		0.052	4.94
69)	4-methyl-2-pentanone											
	0.198	0.167	0.179	0.191	0.178	0.175	0.154	0.186	0.183	0.143	0.175	9.51
70)	3-methyl-1-butanol											
	0.017	0.011	0.015	0.018	0.017	0.015	0.014	0.017	0.016		0.015	12.09
71)	I chlorobenzene-d5 -----ISTD-----											
72)	toluene-d8 (s)											
	1.304	1.367	1.327	1.240	1.197	1.351	1.197	1.278	1.363	1.367	1.299	5.23
73)	toluene											
	0.804	0.838	0.756	0.784	0.739	0.851	0.667	0.778	0.821	1.007	0.805	11.06
74)	trans-1,3-dichloropropene											
	0.538	0.450	0.495	0.547	0.515	0.497	0.475	0.522	0.548	0.614	0.520	8.80
75)	ethyl methacrylate											
	0.535	0.435	0.476	0.561	0.509	0.483	0.464	0.537	0.524		0.503	8.11
76)	1,1,2-trichloroethane											
	0.287	0.259	0.271	0.281	0.265	0.275	0.243	0.268	0.281		0.270	4.95
77)	2-hexanone											
	0.220	0.191	0.195	0.213	0.191	0.203	0.165	0.215	0.214	0.132	0.194	14.00
78)	tetrachloroethene											
	0.335	0.313	0.315	0.336	0.320	0.343	0.297	0.322	0.361	0.303	0.324	5.94
79)	1,3-dichloropropane											
	0.556	0.537	0.524	0.540	0.493	0.571	0.446	0.534	0.599	0.570	0.537	8.03
80)	butyl acetate											
	0.340	0.281	0.322	0.345	0.320	0.314	0.295	0.333	0.329		0.320	6.50
81)	dibromochloromethane											
	0.341	0.344	0.325	0.345	0.325	0.349	0.304	0.333	0.351		0.335	4.56
82)	1,2-dibromoethane											
	0.478	0.513	0.462	0.487	0.456	0.431	0.420	0.466	0.472		0.465	6.00
83)	n-butyl ether											

Initial Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICC9594
 Lab FileID: L323422.D

	1.426	1.298	1.328	1.434	1.310	1.355	1.129	1.404	1.451	1.393	1.353	7.04
84)	chlorobenzene											
	0.831	0.822	0.784	0.842	0.803	0.803	0.723	0.813	0.859	0.969	0.825	7.60
85)	1,1,1,2-tetrachloroethane											
	0.301	0.232	0.281	0.291	0.269	0.289	0.242	0.293	0.309		0.279	9.42
86)	ethylbenzene											
	1.534	1.498	1.426	1.450	1.301	1.499	1.108	1.483	1.649	1.560	1.451	10.39
87)	m,p-xylene											
	0.560	0.525	0.533	0.550	0.502	0.555	0.440	0.546	0.592	0.563	0.537	7.77
88)	o-xylene											
	0.566	0.528	0.522	0.564	0.518	0.545	0.463	0.558	0.600	0.591	0.545	7.34
89)	butyl acrylate											
	0.828		0.762	0.920	0.856	0.666	0.779	0.849	0.780		0.805	9.48
90)	styrene											
	0.948	0.846	0.864	0.931	0.842	0.909	0.733	0.927	0.927	0.928	0.886	7.42
91)	bromoform											
	0.251	0.216	0.220	0.252	0.239	0.235	0.223	0.231	0.241		0.234	5.52
92)	isopropylbenzene											
	1.483	1.524	1.388	1.468	1.341	1.496	1.161	1.443	1.556	1.564	1.442	8.38
93)	cis-1,4-dichloro-2-butene											
	0.159	0.165	0.148	0.176	0.170	0.140	0.161	0.161	0.159		0.160	6.73
94) I	1,4-dichlorobenzene-d -----ISTD-----											
95)	4-bromofluorobenzene (s)											
	1.140	1.133	1.139	1.180	1.192	1.137	1.205	1.132	1.143	1.130	1.153	2.42
96)	bromobenzene											
	0.836	0.800	0.744	0.868	0.841	0.762	0.771	0.801	0.783	0.674	0.788	7.05
97)	1,1,1,2-tetrachloroethane											
	1.128	1.042	1.062	1.223	1.209	1.088	1.119	1.129	1.133	1.286	1.142	6.65
98)	trans-1,4-dichloro-2-butene											
	0.337		0.330	0.390	0.393	0.255	0.368	0.349	0.308		0.341	13.37
99)	1,2,3-trichloropropane											
	0.336	0.416	0.296	0.334	0.325	0.357	0.295	0.316	0.345		0.336	10.93
100)	n-propylbenzene											
	3.965	3.763	3.680	3.986	3.784	3.775	3.309	3.887	4.039	4.050	3.824	5.79
101)	2-chlorotoluene											
	0.767	0.663	0.709	0.806	0.776	0.784	0.722	0.747	0.804	0.790	0.757	6.13
102)	4-chlorotoluene											
	0.752	0.639	0.657	0.764	0.751	0.721	0.697	0.731	0.759		0.719	6.33
103)	1,3,5-trimethylbenzene											
	2.717	2.565	2.486	2.799	2.667	2.730	2.390	2.680	2.834	2.615	2.648	5.21
104)	tert-butylbenzene											
	2.295	2.146	2.153	2.392	2.359	2.229	2.124	2.300	2.360	2.159	2.252	4.51
105)	1,2,4-trimethylbenzene											
	2.791	2.600	2.521	2.826	2.687	2.660	2.384	2.716	2.809	2.882	2.687	5.71
106)	sec-butylbenzene											
	3.344	3.333	3.149	3.469	3.365	3.217	2.968	3.291	3.414	3.769	3.332	6.31
107)	1,3-dichlorobenzene											
	1.449	1.454	1.354	1.534	1.479	1.459	1.367	1.454	1.512	1.617	1.468	5.22
108)	p-isopropyltoluene											
	2.777	2.444	2.536	2.768	2.629	2.577	2.320	2.664	2.785	2.655	2.615	5.80
109)	1,4-dichlorobenzene											
	1.396	1.232	1.292	1.457	1.417	1.489	1.321	1.363	1.502	1.710	1.418	9.47
110)	1,2-dichlorobenzene											
	1.372	1.278	1.277	1.442	1.382	1.357	1.261	1.360	1.364	1.357	1.345	4.19
111)	n-butylbenzene											
	1.327	0.955	1.207	1.466	1.460	1.136	1.355	1.343	1.231		1.276	12.78
112)	1,2-dibromo-3-chloropropane											
	0.253		0.241	0.299	0.313	0.220	0.313	0.259	0.226		0.265	14.35
113)	1,3,5-trichlorobenzene											

Initial Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICC9594
 Lab FileID: L323422.D

	0.972	0.842	0.884	1.111	1.109	0.983	1.063	1.004	0.922	0.926	0.982	9.36
114)	1,2,4-trichlorobenzene											
	0.845	0.780	0.744	0.968	1.002	0.745	0.961	0.857	0.839	0.781	0.852	11.16
115)	hexachlorobutadiene											
	0.378	0.282	0.350	0.414	0.410	0.328	0.388	0.379	0.362		0.365	11.40
116)	naphthalene											
	2.456		2.128	2.918	2.874	1.957	2.614	2.640	2.132		2.465	14.60
117)	1,2,3-trichlorobenzene											
	0.769	0.748	0.711	0.876	0.875	0.670	0.832	0.797	0.720		0.777	9.39
118)	hexachloroethane											
	0.468	0.313	0.426	0.529	0.542	0.454	0.518	0.476	0.442		0.463	14.92
119)	benzyl chloride											
	1.823	1.809	1.572	2.124	2.138	1.698	1.992	1.865	1.751	1.786	1.856	9.75
120)	2-ethylhexyl acrylate *This compounds fails the initial calibration criteria.											
			0.529	0.604		0.645	0.251				0.507	34.96
121)	2-methylnaphthalene											
	0.493		1.071	1.235		1.295	0.753				0.969	35.03
	----- Linear regression ----- Coefficient = 0.9973											
	Response Ratio = -0.08147 + 1.31148 *A											
122)	bis(chloromethyl)ether											
											0.000	-1.00
123)	ethylenimine											
											0.000	-1.00

 (#) = Out of Range ### Number of calibration levels exceeded format ###

ML9594.M Thu Jul 30 14:26:41 2020 1

Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323427.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL9594\L323427.D Vial: 18
 Acq On : 30 Jul 2020 2:32 am Operator: brittink
 Sample : ICV9594-50 Inst : GCMSL
 Misc : MS44477,VL9594,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9594.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Jul 30 14:22:23 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	96	0.00	3.04
2	1,4-dioxane	0.089	0.096	-7.9	96	0.00	5.24
3	ethanol	0.121	0.134	-10.7	102	0.00	2.47
4 M	tertiary butyl alcohol	1.248	1.273	-2.0	96	0.00	3.09
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	4.25
6	dichlorodifluoromethane	0.928	0.775	16.5	74	0.00	1.63
7	chloromethane	0.790	0.788	0.3	94	0.00	1.80
8	vinyl chloride	0.717	0.748	-4.3	97	0.00	1.87
9	bromomethane	0.210	0.240	-14.3	120	0.00	2.11
10	chloroethane	0.368	0.379	-3.0	98	0.00	2.20
11	vinyl bromide	0.240	0.287	-19.6	110	0.00	2.33
12	trichlorofluoromethane	0.861	0.934	-8.5	100	0.00	2.38
13	ethyl ether	0.297	0.347	-16.8	108	0.00	2.56
14	acrolein	0.130	0.133	-2.3	93	0.00	2.66
15	freon 113	0.339	0.392	-15.6	112	0.00	2.73
16	1,1-dichloroethene	0.415	0.435	-4.8	101	0.00	2.74
17	acetone	0.074	0.073	1.4	98	0.00	2.75
18	acetonitrile	0.063	0.057	9.5	93	0.00	2.94
19	iodomethane	0.240	0.197	17.9	59	0.00	2.85
20	iso-butyl alcohol	0.046	0.046	0.0	98	0.00	4.39
21	carbon disulfide	1.104	1.410	-27.7	129	0.00	2.91
22	methylene chloride	0.457	0.481	-5.3	103	0.00	3.07
23	methyl acetate	0.127	0.130	-2.4	97	0.00	2.95
24	methyl tert butyl ether	1.581	1.612	-1.9	99	0.00	3.23
25	trans-1,2-dichloroethene	0.439	0.440	-0.2	100	0.00	3.25
26	hexane	0.736	0.834	-13.3	112	0.00	3.42
27	di-isopropyl ether	1.820	1.788	1.8	97	0.00	3.53
28	ethyl tert-butyl ether	1.701	1.747	-2.7	101	0.00	3.78
29	2-butanone	0.088	0.097	-10.2	103	0.00	3.90
30 M	1,1-dichloroethane	0.893	0.917	-2.7	101	0.00	3.54
31	chloroprene	0.828	0.873	-5.4	105	0.00	3.59
32	acrylonitrile	0.281	0.316	-12.5	107	0.00	3.21
33	vinyl acetate	0.124	0.125	-0.8	95	0.00	3.51
34	ethyl acetate	0.126	0.126	0.0	93	0.00	3.91
35	2,2-dichloropropane	0.729	0.702	3.7	100	0.00	3.94
36	cis-1,2-dichloroethene	0.501	0.497	0.8	101	0.00	3.92
37	propionitrile	0.109	0.115	-5.5	102	0.00	3.95
38	methyl acrylate	0.094	0.107	-13.8	106	0.00	3.95
39	bromochloromethane	0.222	0.239	-7.7	106	0.00	4.09
40	tetrahydrofuran	0.100	0.101	-1.0	96	0.00	4.10
41	chloroform	0.884	0.867	1.9	102	0.00	4.15

6.9.2
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Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323427.D

42	S	dibromofluoromethane (s)	0.467	0.477	-2.1	104	0.00	4.26
43		methacrylonitrile	0.273	0.298	-9.2	103	0.00	4.05
44		1,1,1-trichloroethane	0.710	0.745	-4.9	102	0.00	4.29
45		cyclohexane	0.672	0.757	-12.6	112	0.00	4.34
46		1,1-dichloropropene	0.648	0.662	-2.2	104	0.00	4.39
47		carbon tetrachloride	0.597	0.616	-3.2	104	0.00	4.40
48		isopropyl acetate	0.138	0.143	-3.6	97	0.00	4.51
49		tert amyl alcohol	0.041	0.042	-2.4	99	0.00	4.49
50	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	4.81
51	S	1,2-dichloroethane-d4 (s)	0.375	0.359	4.3	102	0.00	4.51
52		tert-amyl methyl ether	0.918	0.864	5.9	98	0.00	4.60
53		2,2,4-trimethylpentane	0.812	0.849	-4.6	110	0.00	4.60
54		n-butyl alcohol	0.017	0.018	-5.9	97	0.00	4.87
55	M	benzene	1.131	1.124	0.6	105	0.00	4.54
56		heptane	0.203	0.206	-1.5	104	0.00	4.71
57		1,2-dichloroethane	0.488	0.453	7.2	104	0.00	4.56
58		trichloroethene	0.292	0.302	-3.4	104	0.00	5.00
59		ethyl acrylate	0.515	0.571	-10.9	103	0.00	5.02
60		2-nitropropane	0.150	0.161	-7.3	101	0.00	5.56
61		2-chloroethyl vinyl ether	0.224	0.234	-4.5	100	0.00	5.59
62		methyl methacrylate	0.093	0.101	-8.6	100	0.00	5.20
63		1,2-dichloropropane	0.309	0.301	2.6	99	0.00	5.20
64		methylcyclohexane	0.473	0.482	-1.9	101	0.00	5.19
65		dibromomethane	0.197	0.184	6.6	99	0.00	5.27
66		bromodichloromethane	0.421	0.415	1.4	99	0.00	5.39
67		cis-1,3-dichloropropene	0.492	0.506	-2.8	102	0.00	5.73
68		epichlorohydrin	0.052	0.052	0.0	100	0.00	5.64
69		4-methyl-2-pentanone	0.175	0.183	-4.6	100	0.00	5.83
70		3-methyl-1-butanol	0.015	0.015	0.0	92	0.00	5.85
71	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	7.20
72	S	toluene-d8 (s)	1.299	1.219	6.2	103	0.00	5.96
73		toluene	0.805	0.768	4.6	102	0.00	6.01
74		trans-1,3-dichloropropene	0.520	0.540	-3.8	103	0.00	6.18
75		ethyl methacrylate	0.503	0.545	-8.3	101	0.00	6.20
76		1,1,2-trichloroethane	0.270	0.270	0.0	100	0.00	6.36
77		2-hexanone	0.194	0.200	-3.1	98	0.00	6.52
78		tetrachloroethene	0.324	0.339	-4.6	105	0.00	6.45
79		1,3-dichloropropane	0.537	0.523	2.6	101	0.00	6.50
80		butyl acetate	0.320	0.325	-1.6	98	0.00	6.60
81		dibromochloromethane	0.335	0.345	-3.0	104	0.00	6.69
82		1,2-dibromoethane	0.465	0.483	-3.9	103	0.00	6.80
83		n-butyl ether	1.353	1.458	-7.8	106	0.00	7.27
84		chlorobenzene	0.825	0.834	-1.1	103	0.00	7.23
85		1,1,1,2-tetrachloroethane	0.279	0.287	-2.9	103	0.00	7.30
86		ethylbenzene	1.451	1.414	2.5	102	0.00	7.31
87		m,p-xylene	0.537	0.536	0.2	102	0.00	7.42
88		o-xylene	0.545	0.555	-1.8	103	0.00	7.77
89		butyl acrylate	0.805	0.881	-9.4	100	0.00	7.69
90		styrene	0.886	0.904	-2.0	101	0.00	7.79
91		bromoform	0.234	0.256	-9.4	106	0.00	7.97
92		isopropylbenzene	1.442	1.419	1.6	101	0.00	8.11
93		cis-1,4-dichloro-2-butene	0.160	0.178	-11.2	106	0.00	8.16
94	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	9.39
95	S	4-bromofluorobenzene (s)	1.153	1.166	-1.1	102	0.00	8.28
96		bromobenzene	0.788	0.860	-9.1	102	0.00	8.42
97		1,1,2,2-tetrachloroethane	1.142	1.166	-2.1	98	0.00	8.39
98		trans-1,4-dichloro-2-bute	0.341	0.397	-16.4	105	0.00	8.43

Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323427.D

99	1,2,3-trichloropropane	0.336	0.322	4.2	99	0.00	8.46
100	n-propylbenzene	3.824	3.990	-4.3	103	0.00	8.50
101	2-chlorotoluene	0.757	0.788	-4.1	101	0.00	8.60
102	4-chlorotoluene	0.719	0.772	-7.4	104	0.00	8.71
103	1,3,5-trimethylbenzene	2.648	2.759	-4.2	101	0.00	8.67
104	tert-butylbenzene	2.252	2.479	-10.1	107	0.00	8.98
105	1,2,4-trimethylbenzene	2.687	2.763	-2.8	101	0.00	9.03
106	sec-butylbenzene	3.332	3.399	-2.0	101	0.00	9.20
107	1,3-dichlorobenzene	1.468	1.506	-2.6	101	0.00	9.32
108	p-isopropyltoluene	2.615	2.750	-5.2	102	0.00	9.34
109	1,4-dichlorobenzene	1.418	1.442	-1.7	102	0.00	9.42
110	1,2-dichlorobenzene	1.345	1.422	-5.7	102	0.00	9.77
111	n-butylbenzene	1.276	1.438	-12.7	101	0.00	9.74
112	1,2-dibromo-3-chloropropa	0.265	0.282	-6.4	97	0.00	10.54
113	1,3,5-trichlorobenzene	0.982	1.130	-15.1	105	0.00	10.73
114	1,2,4-trichlorobenzene	0.852	0.943	-10.7	100	0.00	11.35
115	hexachlorobutadiene	0.365	0.391	-7.1	97	0.00	11.50
116	naphthalene	2.465	2.824	-14.6	100	0.00	11.62
117	1,2,3-trichlorobenzene	0.777	0.848	-9.1	100	0.00	11.84
118	hexachloroethane	0.463	0.524	-13.2	102	0.00	10.04
119	benzyl chloride	1.856	1.576	15.1	76	0.00	9.53
120	2-ethylhexyl acrylate	0.507	0.517	-2.0	101	0.00	11.53

		True	Calc.	% Drift			
121	2-methylnaphthalene	25.000	23.292	6.8	102	0.00	12.75
		AvgRF	CCRF	% Dev			
122	bis(chloromethyl)ether			NA			
123	ethylenimine			NA			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 L323422.D ML9594.M Thu Jul 30 14:26:20 2020 1

6.9.2
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Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323428.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL9594\L323428.D Vial: 19
 Acq On : 30 Jul 2020 2:59 am Operator: brittank
 Sample : ICV9594-50 Inst : GCMSL
 Misc : MS44477,VL9594,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9594.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Jul 30 12:59:50 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	112	0.00	3.03
2	1,4-dioxane			-----NA-----			
3	ethanol			-----NA-----			
4 M	tertiary butyl alcohol			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	124	0.00	4.25
6	dichlorodifluoromethane			-----NA-----			
7	chloromethane			-----NA-----			
8	vinyl chloride			-----NA-----			
9	bromomethane			-----NA-----			
10	chloroethane			-----NA-----			
11	vinyl bromide			-----NA-----			
12	trichlorofluoromethane			-----NA-----			
13	ethyl ether			-----NA-----			
14	acrolein			-----NA-----			
15	freon 113			-----NA-----			
16	1,1-dichloroethene			-----NA-----			
17	acetone			-----NA-----			
18	acetonitrile	0.063	0.060	4.8	115	0.00	2.94
19	iodomethane			-----NA-----			
20	iso-butyl alcohol			-----NA-----			
21	carbon disulfide			-----NA-----			
22	methylene chloride			-----NA-----			
23	methyl acetate			-----NA-----			
24	methyl tert butyl ether			-----NA-----			
25	trans-1,2-dichloroethene			-----NA-----			
26	hexane			-----NA-----			
27	di-isopropyl ether			-----NA-----			
28	ethyl tert-butyl ether			-----NA-----			
29	2-butanone			-----NA-----			
30 M	1,1-dichloroethane			-----NA-----			
31	chloroprene			-----NA-----			
32	acrylonitrile	0.281	0.284	-1.1	115	0.00	3.21
33	vinyl acetate			-----NA-----			
34	ethyl acetate			-----NA-----			
35	2,2-dichloropropane			-----NA-----			
36	cis-1,2-dichloroethene			-----NA-----			
37	propionitrile			-----NA-----			
38	methyl acrylate			-----NA-----			
39	bromochloromethane			-----NA-----			
40	tetrahydrofuran			-----NA-----			
41	chloroform			-----NA-----			

Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323428.D

42	S	dibromofluoromethane (s)	0.467	0.465	0.4	121	0.00	4.26
43		methacrylonitrile						
44		1,1,1-trichloroethane						
45		cyclohexane						
46		1,1-dichloropropene						
47		carbon tetrachloride						
48		isopropyl acetate						
49		tert amyl alcohol						
50	I	1,4-difluorobenzene	1.000	1.000	0.0	119	0.00	4.81
51	S	1,2-dichloroethane-d4 (s)	0.375	0.384	-2.4	125	0.00	4.51
52		tert-amyl methyl ether						
53		2,2,4-trimethylpentane						
54		n-butyl alcohol						
55	M	benzene						
56		heptane						
57		1,2-dichloroethane						
58		trichloroethene						
59		ethyl acrylate						
60		2-nitropropane						
61		2-chloroethyl vinyl ether						
62		methyl methacrylate						
63		1,2-dichloropropane						
64		methylcyclohexane						
65		dibromomethane						
66		bromodichloromethane						
67		cis-1,3-dichloropropene						
68		epichlorohydrin						
69		4-methyl-2-pentanone						
70		3-methyl-1-butanol						
71	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	7.20
72	S	toluene-d8 (s)	1.299	1.355	-4.3	121	0.00	5.95
73		toluene						
74		trans-1,3-dichloropropene						
75		ethyl methacrylate						
76		1,1,2-trichloroethane						
77		2-hexanone						
78		tetrachloroethene	0.324	0.346	-6.8	114	0.00	6.45
79		1,3-dichloropropane						
80		butyl acetate						
81		dibromochloromethane						
82		1,2-dibromoethane						
83		n-butyl ether						
84		chlorobenzene						
85		1,1,1,2-tetrachloroethane						
86		ethylbenzene						
87		m,p-xylene						
88		o-xylene						
89		butyl acrylate						
90		styrene						
91		bromoform						
92		isopropylbenzene						
93		cis-1,4-dichloro-2-butene						
94	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	119	0.00	9.39
95	S	4-bromofluorobenzene (s)	1.153	1.129	2.1	114	0.00	8.28
96		bromobenzene						
97		1,1,2,2-tetrachloroethane						
98		trans-1,4-dichloro-2-bute						

Initial Calibration Verification

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9594-ICV9594
 Lab FileID: L323428.D

99	1,2,3-trichloropropane	-----NA-----
100	n-propylbenzene	-----NA-----
101	2-chlorotoluene	-----NA-----
102	4-chlorotoluene	-----NA-----
103	1,3,5-trimethylbenzene	-----NA-----
104	tert-butylbenzene	-----NA-----
105	1,2,4-trimethylbenzene	-----NA-----
106	sec-butylbenzene	-----NA-----
107	1,3-dichlorobenzene	-----NA-----
108	p-isopropyltoluene	-----NA-----
109	1,4-dichlorobenzene	-----NA-----
110	1,2-dichlorobenzene	-----NA-----
111	n-butylbenzene	-----NA-----
112	1,2-dibromo-3-chloropropa	-----NA-----
113	1,3,5-trichlorobenzene	-----NA-----
114	1,2,4-trichlorobenzene	-----NA-----
115	hexachlorobutadiene	-----NA-----
116	naphthalene	-----NA-----
117	1,2,3-trichlorobenzene	-----NA-----
118	hexachloroethane	-----NA-----
119	benzyl chloride	-----NA-----
120	2-ethylhexyl acrylate	-----NA-----
----- True Calc. % Drift -----		
121	2-methylnaphthalene	-----NA-----
----- AvgRF CCRF % Dev -----		
122	bis(chloromethyl)ether	-----NA-----
123	ethylenimine	-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 L323422.D ML9594.M Thu Jul 30 14:08:10 2020 1

6.9.3
 6

Continuing Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9628-CC9594
 Lab FileID: L324284.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...vl9628-rush\l324284.d Vial: 4
 Acq On : 28 Aug 2020 8:43 am Operator: edwardd
 Sample : cc9594-20 Inst : GCMSL
 Misc : MS45140,VL9628,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9594.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Jul 30 14:22:23 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	3.04
2	1,4-dioxane	0.089	0.099	-11.2	120	0.00	5.25
3	ethanol	0.121	0.136	-12.4	121	0.00	2.47
4 M	tertiary butyl alcohol	1.248	1.214	2.7	109	0.00	3.09
5 I	pentafluorobenzene	1.000	1.000	0.0	124	0.00	4.25
6	dichlorodifluoromethane	0.928	0.826	11.0	102	0.00	1.63
7	chloromethane	0.790	0.773	2.2	116	0.00	1.80
8	vinyl chloride	0.717	0.729	-1.7	117	0.00	1.87
9	bromomethane	0.210	0.128	39.0#	75	0.00	2.12
10	chloroethane	0.368	0.350	4.9	113	0.00	2.20
11	vinyl bromide	0.240	0.411	-71.2#	193	0.00	2.33
12	trichlorofluoromethane	0.861	0.823	4.4	110	0.00	2.38
13	ethyl ether	0.297	0.295	0.7	119	0.00	2.56
14	acrolein	0.130	0.128	1.5	114	0.00	2.66
15	freon 113	0.339	0.339	0.0	121	0.00	2.73
16	1,1-dichloroethene	0.415	0.401	3.4	113	0.00	2.74
17	acetone	0.074	0.074	0.0	126	0.00	2.75
18	acetonitrile	0.063	0.060	4.8	121	0.00	2.94
19	iodomethane	0.240	0.117	51.2#	76	0.00	2.85
20	iso-butyl alcohol	0.046	0.044	4.3	113	0.00	4.40
21	carbon disulfide	1.104	1.197	-8.4	137	0.00	2.91
22	methylene chloride	0.457	0.436	4.6	117	0.00	3.07
23	methyl acetate	0.127	0.124	2.4	112	0.00	2.95
24	methyl tert butyl ether	1.581	1.464	7.4	112	0.00	3.23
25	trans-1,2-dichloroethene	0.439	0.426	3.0	118	0.00	3.25
26	hexane	0.736	0.734	0.3	126	0.00	3.43
27	di-isopropyl ether	1.820	1.766	3.0	117	0.00	3.53
28	ethyl tert-butyl ether	1.701	1.628	4.3	116	0.00	3.78
29	2-butanone	0.088	0.091	-3.4	122	0.00	3.90
30 M	1,1-dichloroethane	0.893	0.830	7.1	113	0.00	3.54
31	chloroprene	0.828	0.782	5.6	114	0.00	3.59
32	acrylonitrile	0.281	0.304	-8.2	130	0.00	3.21
33	vinyl acetate	0.124	0.121	2.4	118	0.00	3.52
34	ethyl acetate	0.126	0.127	-0.8	130	0.00	3.91
35	2,2-dichloropropane	0.729	0.660	9.5	115	0.00	3.94
36	cis-1,2-dichloroethene	0.501	0.454	9.4	113	0.00	3.93
37	propionitrile	0.109	0.111	-1.8	123	0.00	3.95
38	methyl acrylate	0.094	0.103	-9.6	122	0.00	3.95
39	bromochloromethane	0.222	0.218	1.8	117	0.00	4.10
40	tetrahydrofuran	0.100	0.103	-3.0	135	0.00	4.11
41	chloroform	0.884	0.797	9.8	116	0.00	4.15

Continuing Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9628-CC9594
 Lab FileID: L324284.D

42	S	dibromofluoromethane (s)	0.467	0.390	16.5	101	0.00	4.26
43		methacrylonitrile	0.273	0.276	-1.1	123	0.00	4.05
44		1,1,1-trichloroethane	0.710	0.642	9.6	111	0.00	4.29
45		cyclohexane	0.672	0.608	9.5	111	0.00	4.35
46		1,1-dichloropropene	0.648	0.595	8.2	112	0.00	4.39
47		carbon tetrachloride	0.597	0.530	11.2	111	0.00	4.40
48		isopropyl acetate	0.138	0.129	6.5	110	0.00	4.51
49		tert amyl alcohol	0.041	0.039	4.9	118	0.00	4.49
50	I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	4.81
51	S	1,2-dichloroethane-d4 (s)	0.375	0.326	13.1	94	0.00	4.51
52		tert-amyl methyl ether	0.918	0.960	-4.6	117	0.00	4.60
53		2,2,4-trimethylpentane	0.812	0.877	-8.0	123	0.00	4.60
54		n-butyl alcohol	0.017	0.019	-11.8	115	0.00	4.87
55	M	benzene	1.131	1.183	-4.6	118	0.00	4.54
56		heptane	0.203	0.210	-3.4	118	0.00	4.72
57		1,2-dichloroethane	0.488	0.432	11.5	107	0.00	4.56
58		trichloroethene	0.292	0.311	-6.5	118	0.00	5.01
59		ethyl acrylate	0.515	0.594	-15.3	120	0.00	5.03
60		2-nitropropane	0.150	0.137	8.7	104	0.00	5.56
61		2-chloroethyl vinyl ether	0.224	0.261	-16.5	121	0.00	5.59
62		methyl methacrylate	0.093	0.114	-22.6#	123	0.00	5.21
63		1,2-dichloropropane	0.309	0.329	-6.5	118	0.00	5.21
64		methylcyclohexane	0.473	0.523	-10.6	122	0.00	5.20
65		dibromomethane	0.197	0.191	3.0	116	0.00	5.28
66		bromodichloromethane	0.421	0.411	2.4	109	0.00	5.40
67		cis-1,3-dichloropropene	0.492	0.521	-5.9	116	0.00	5.74
68		epichlorohydrin	0.052	0.057	-9.6	119	0.00	5.64
69		4-methyl-2-pentanone	0.175	0.198	-13.1	118	0.00	5.83
70		3-methyl-1-butanol	0.015	0.016	-6.7	104	0.00	5.85
71	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	7.21
72	S	toluene-d8 (s)	1.299	1.244	4.2	109	0.00	5.96
73		toluene	0.805	0.806	-0.1	116	0.00	6.01
74		trans-1,3-dichloropropene	0.520	0.527	-1.3	113	0.00	6.18
75		ethyl methacrylate	0.503	0.575	-14.3	119	0.00	6.20
76		1,1,2-trichloroethane	0.270	0.280	-3.7	116	0.00	6.36
77		2-hexanone	0.194	0.224	-15.5	116	0.00	6.52
78		tetrachloroethene	0.324	0.376	-16.0	130	0.00	6.45
79		1,3-dichloropropane	0.537	0.548	-2.0	114	0.00	6.50
80		butyl acetate	0.320	0.353	-10.3	118	0.00	6.61
81		dibromochloromethane	0.335	0.342	-2.1	115	0.00	6.69
82		1,2-dibromoethane	0.465	0.383	17.6	92	0.00	6.80
83		n-butyl ether	1.353	1.601	-18.3	127	0.00	7.28
84		chlorobenzene	0.825	0.866	-5.0	119	0.00	7.23
85		1,1,1,2-tetrachloroethane	0.279	0.292	-4.7	111	0.00	7.30
86		ethylbenzene	1.451	1.532	-5.6	115	0.00	7.31
87		m,p-xylene	0.537	0.577	-7.4	118	0.00	7.42
88		o-xylene	0.545	0.586	-7.5	117	0.00	7.78
89		butyl acrylate	0.805	0.900	-11.8	118	0.00	7.70
90		styrene	0.886	0.972	-9.7	117	0.00	7.79
91		bromoform	0.234	0.256	-9.4	124	0.00	7.97
92		isopropylbenzene	1.442	1.559	-8.1	120	0.00	8.11
93		cis-1,4-dichloro-2-butene	0.160	0.154	3.8	107	0.00	8.16
94	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	9.40
95	S	4-bromofluorobenzene (s)	1.153	1.107	4.0	112	0.00	8.28
96		bromobenzene	0.788	0.845	-7.2	121	0.00	8.43
97		1,1,2,2-tetrachloroethane	1.142	1.129	1.1	115	0.00	8.40
98		trans-1,4-dichloro-2-bute	0.341	0.362	-6.2	119	0.00	8.43

Continuing Calibration Summary

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: VL9628-CC9594
 Lab FileID: L324284.D

99	1,2,3-trichloropropane	0.336	0.319	5.1	116	0.00	8.46
100	n-propylbenzene	3.824	3.974	-3.9	117	0.00	8.51
101	2-chlorotoluene	0.757	0.774	-2.2	119	0.00	8.60
102	4-chlorotoluene	0.719	0.780	-8.5	123	0.00	8.72
103	1,3,5-trimethylbenzene	2.648	2.721	-2.8	116	0.00	8.68
104	tert-butylbenzene	2.252	2.380	-5.7	119	0.00	8.98
105	1,2,4-trimethylbenzene	2.687	2.779	-3.4	117	0.00	9.04
106	sec-butylbenzene	3.332	3.429	-2.9	120	0.00	9.20
107	1,3-dichlorobenzene	1.468	1.558	-6.1	123	0.00	9.32
108	p-isopropyltoluene	2.615	2.818	-7.8	121	0.00	9.34
109	1,4-dichlorobenzene	1.418	1.436	-1.3	121	0.00	9.42
110	1,2-dichlorobenzene	1.345	1.431	-6.4	121	0.00	9.77
111	n-butylbenzene	1.276	1.352	-6.0	115	0.00	9.74
112	1,2-dibromo-3-chloropropa	0.265	0.289	-9.1	128	0.00	10.55
113	1,3,5-trichlorobenzene	0.982	1.077	-9.7	123	0.00	10.73
114	1,2,4-trichlorobenzene	0.852	0.940	-10.3	126	0.00	11.36
115	hexachlorobutadiene	0.365	0.406	-11.2	123	0.00	11.50
116	naphthalene	2.465	2.835	-15.0	123	0.00	11.62
117	1,2,3-trichlorobenzene	0.777	0.857	-10.3	123	0.00	11.84
118	hexachloroethane	0.463	0.428	7.6	103	0.00	10.04
119	benzyl chloride	1.856	1.924	-3.7	118	0.00	9.53
120	2-ethylhexyl acrylate	0.507	0.285	43.8#	130	0.00	11.53
----- True Calc. % Drift -----							
121	2-methylnaphthalene	10.000	9.727	2.7	132	0.00	12.75
----- AvgRF CCRF % Dev -----							
122	bis(chloromethyl)ether					NA	
123	ethylenimine					NA	

(#) = Out of Range
 L323421.D ML9594.M

SPCC's out = 0 CCC's out = 0
 Fri Aug 28 14:19:54 2020

Run Sequence Report

Job Number: JD11554R
Account: LBGNJ WSP USA
Project: Orchard School Soil Remediation, Ridgewood, NJ

Run ID: VL9594	Method: SW846 8260C	Instrument ID: GCMSL
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VL9594-BFB	L323414.D	07/29/20 20:19	n/a	BFB Tune
VL9594-IC9594	L323415.D	07/29/20 21:05	n/a	Initial cal 0.2
VL9594-IC9594	L323416.D	07/29/20 21:32	n/a	Initial cal 0.5
VL9594-IC9594	L323417.D	07/29/20 22:00	n/a	Initial cal 1
VL9594-IC9594	L323418.D	07/29/20 22:27	n/a	Initial cal 2
VL9594-IC9594	L323419.D	07/29/20 22:54	n/a	Initial cal 4
VL9594-IC9594	L323420.D	07/29/20 23:21	n/a	Initial cal 8
VL9594-IC9594	L323421.D	07/29/20 23:49	n/a	Initial cal 20
VL9594-ICC9594	L323422.D	07/30/20 00:16	n/a	Initial cal 50
VL9594-IC9594	L323423.D	07/30/20 00:43	n/a	Initial cal 100
VL9594-IC9594	L323424.D	07/30/20 01:10	n/a	Initial cal 200
VL9594-ICV9594	L323427.D	07/30/20 02:32	n/a	Initial cal verification 50
VL9594-ICV9594	L323428.D	07/30/20 02:59	n/a	Initial cal verification 50

6.10.1

6

Run Sequence Report

Job Number: JD11554R
 Account: LBGNJ WSP USA
 Project: Orchard School Soil Remediation, Ridgewood, NJ

Run ID: VL9628	Method: SW846 8260C	Instrument ID: GCMSL
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VL9628-BFB	L324284.D	08/28/20 08:43	n/a	BFB Tune
VL9628-CC9594	L324284.D	08/28/20 08:43	n/a	Continuing cal 20
VL9628-BS	L324285.D	08/28/20 09:15	n/a	Blank Spike
VL9628-MB	L324287.D	08/28/20 10:10	n/a	Method Blank
GP29594-LB7	L324288.D	08/28/20 10:42	GP29594	Leachate Blank
GP29505-LB13	L324289.D	08/28/20 11:09	GP29505	Leachate Blank
JD11776-2A	L324290.D	08/28/20 11:36	GP29594	(used for QC only; not part of job JD11554R)
ZZZZZZ	L324291.D	08/28/20 12:04	GP29505	(unrelated sample)
ZZZZZZ	L324292.D	08/28/20 12:31	GP29505	(unrelated sample)
JD11776-2AMS	L324293.D	08/28/20 12:58	n/a	Matrix Spike
JD11776-2AMSD	L324294.D	08/28/20 13:26	n/a	Matrix Spike Duplicate
GP29645-LB11	L324296.D	08/28/20 14:20	GP29645	Leachate Blank
GP29644-LB10	L324297.D	08/28/20 14:48	GP29644	Leachate Blank
ZZZZZZ	L324298.D	08/28/20 15:16	GP29645	(unrelated sample)
ZZZZZZ	L324299.D	08/28/20 15:43	GP29645	(unrelated sample)
JD11554-2R	L324301.D	08/28/20 16:38	GP29644	I13 (12)
JD11554-3R	L324302.D	08/28/20 17:05	GP29644	I13 (13)
JD11554-6R	L324303.D	08/28/20 17:33	GP29644	I13 (16)
GP29644-LS10	L324304.D	08/28/20 18:00	GP29644	Leachate Spike

6.10.2
6

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
 Data File : L324301.D
 Acq On : 28 Aug 2020 4:38 pm
 Operator : edwardd
 Sample : JD11554-2R
 Misc : MS45444,VL9628,5,,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 28 16:54:13 2020
 Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.040	65	223451	500.00	ug/L	0.00
5) pentafluorobenzene	4.253	168	253976	50.00	ug/L	0.00
50) 1,4-difluorobenzene	4.818	114	350754	50.00	ug/L	0.00
71) chlorobenzene-d5	7.205	117	306696	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	9.397	152	138750	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	4.260	113	98775	41.62	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	83.24%
51) 1,2-dichloroethane-d4 (s)	4.510	65	119987	45.58	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	91.16%
72) toluene-d8 (s)	5.960	98	400268	50.23	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.46%
95) 4-bromofluorobenzene (s)	8.284	95	148787	46.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.00%
Target Compounds						
22) methylene chloride	3.069	84	1608	0.69	ug/L	82
41) chloroform	4.147	83	2307	0.51	ug/L	76
55) benzene	4.542	78	4843	0.61	ug/L	96
116) naphthalene	11.621	128	7616	1.11	ug/L	87

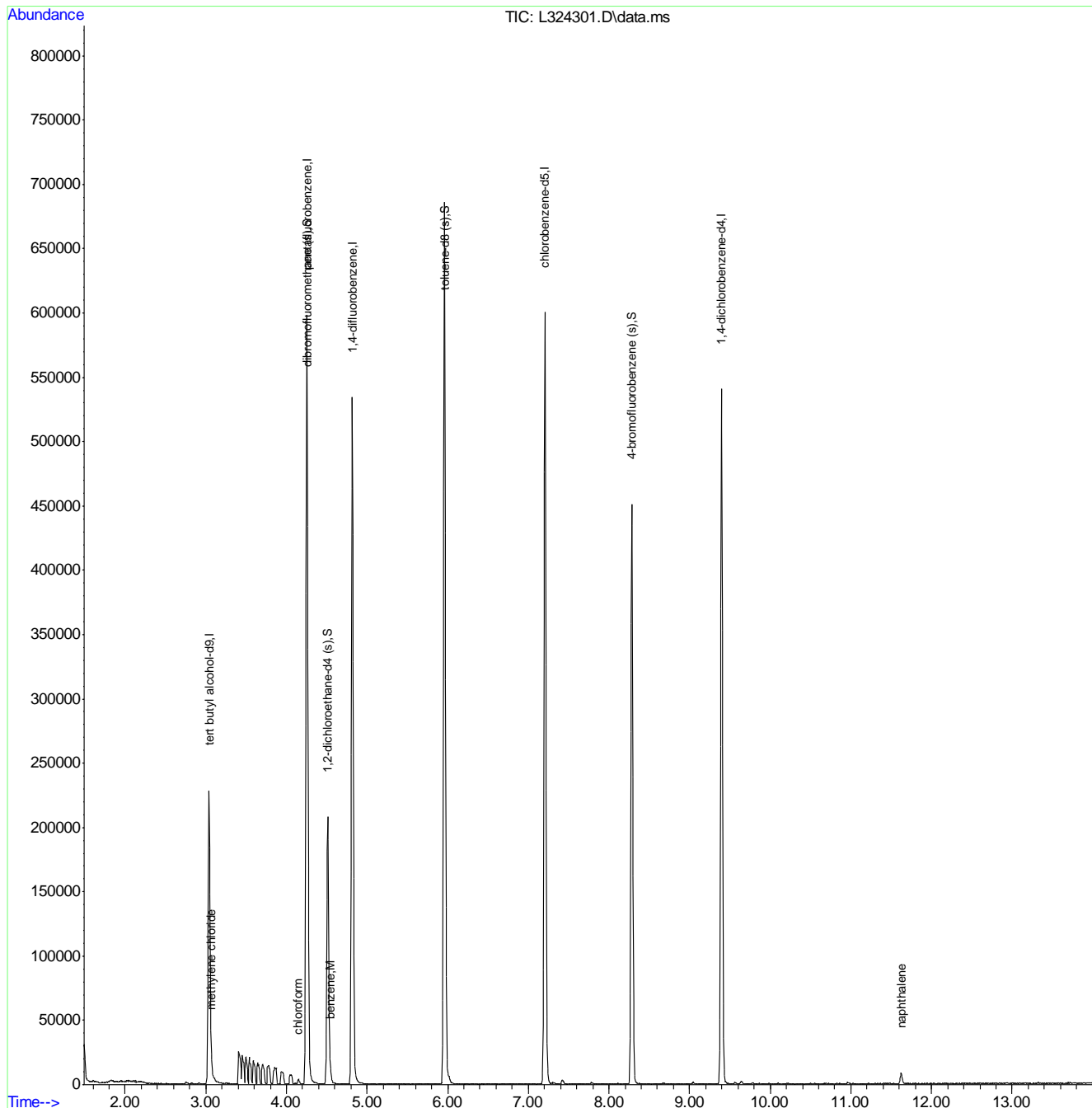
(#) = qualifier out of range (m) = manual integration (+) = signals summed

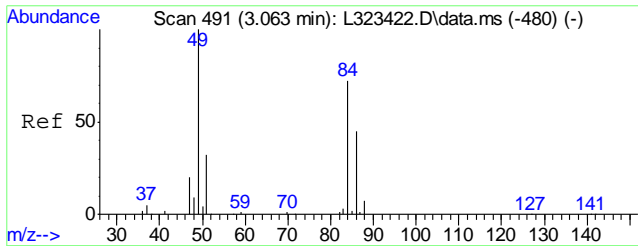
7.1.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
 Data File : L324301.D
 Acq On : 28 Aug 2020 4:38 pm
 Operator : edwardd
 Sample : JD11554-2R
 Misc : MS45444,VL9628,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

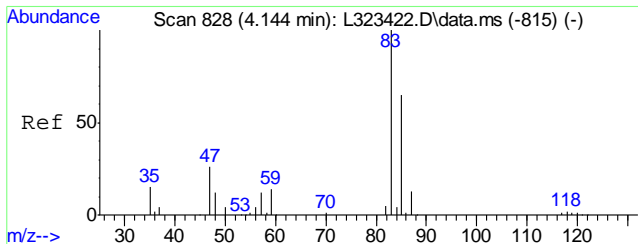
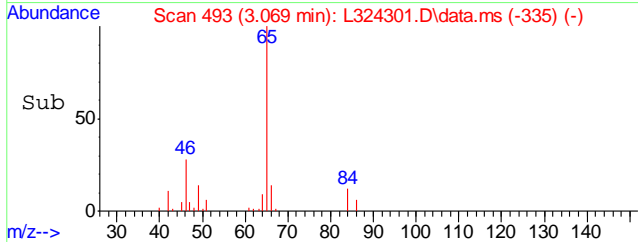
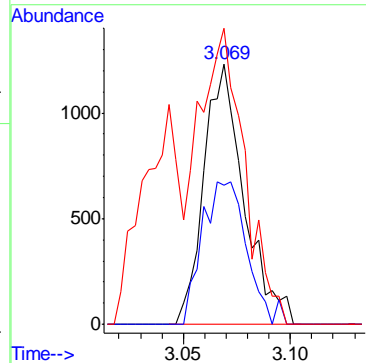
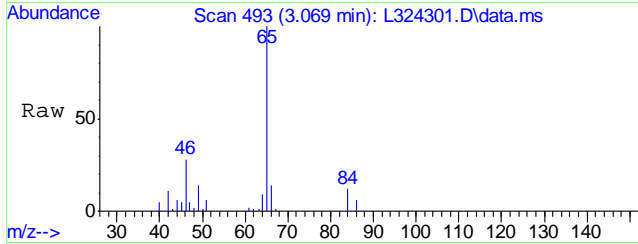
Quant Time: Aug 28 16:54:13 2020
 Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration





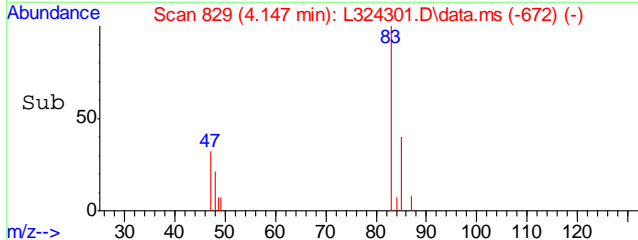
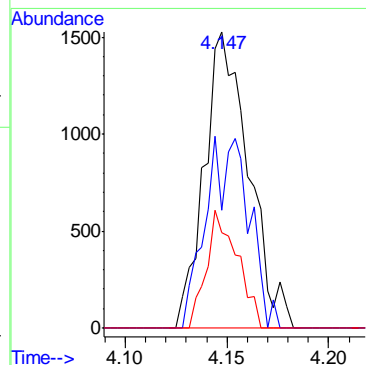
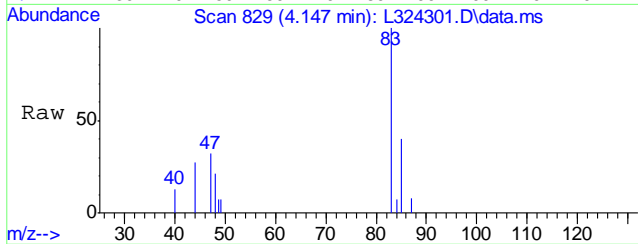
#22
 methylene chloride
 Concen: 0.69 ug/L
 RT: 3.069 min Scan# 493
 Delta R.T. 0.006 min
 Lab File: L324301.D
 Acq: 28 Aug 2020 4:38 pm

Tgt Ion	Resp	Lower	Upper
84	1608		
84	100		
86	53.4	32.2	92.2
49	113.7	108.4	168.4

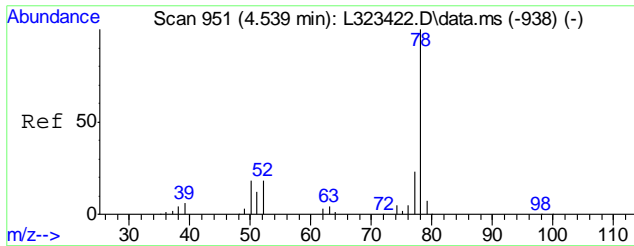


#41
 chloroform
 Concen: 0.51 ug/L
 RT: 4.147 min Scan# 829
 Delta R.T. 0.003 min
 Lab File: L324301.D
 Acq: 28 Aug 2020 4:38 pm

Tgt Ion	Resp	Lower	Upper
83	2307		
83	100		
85	39.6	35.2	95.2
47	32.1	0.0	58.8

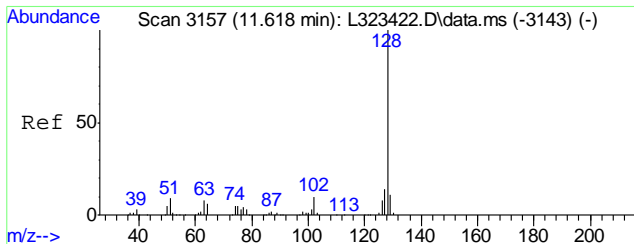
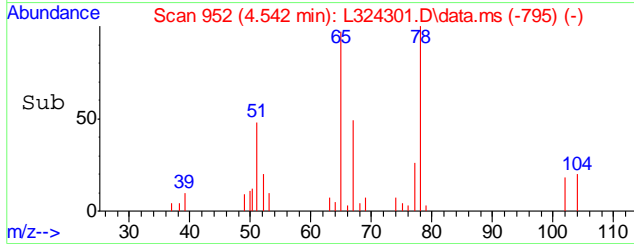
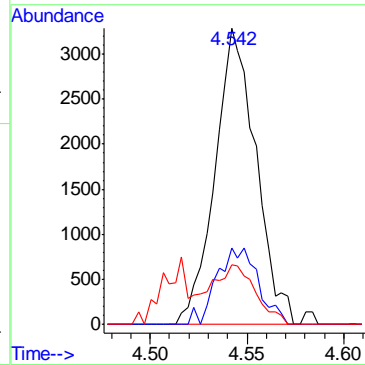
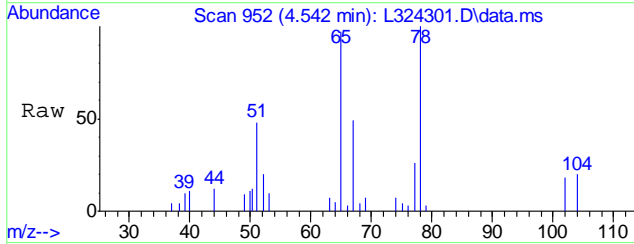


7.11
7



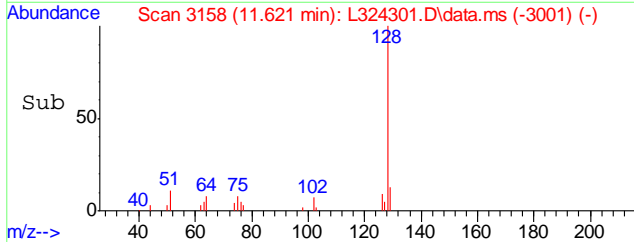
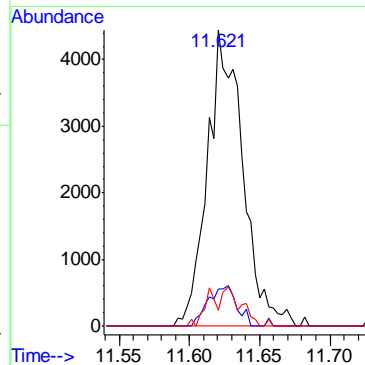
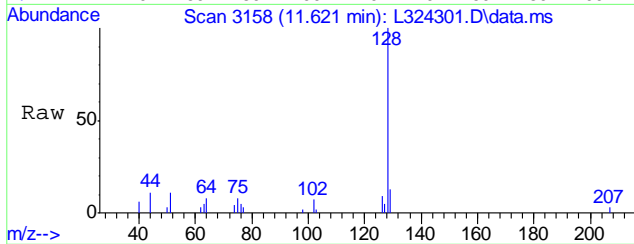
#55
benzene
Concen: 0.61 ug/L
RT: 4.542 min Scan# 952
Delta R.T. 0.003 min
Lab File: L324301.D
Acq: 28 Aug 2020 4:38 pm

Tgt Ion	Resp	Lower	Upper
78	4843	100	
77	25.7	0.0	53.4
52	20.2	0.0	48.4



#116
naphthalene
Concen: 1.11 ug/L
RT: 11.621 min Scan# 3158
Delta R.T. 0.003 min
Lab File: L324301.D
Acq: 28 Aug 2020 4:38 pm

Tgt Ion	Resp	Lower	Upper
128	7616	100	
129	12.5	0.0	40.9
127	5.5	0.0	43.7



7.1.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
 Data File : L324302.D
 Acq On : 28 Aug 2020 5:05 pm
 Operator : edwardd
 Sample : JD11554-3R
 Misc : MS45444,VL9628,5,,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 28 17:22:05 2020
 Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.044	65	236532	500.00	ug/L	0.00
5) pentafluorobenzene	4.257	168	259478	50.00	ug/L	0.00
50) 1,4-difluorobenzene	4.821	114	358583	50.00	ug/L	0.00
71) chlorobenzene-d5	7.209	117	312658	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	9.400	152	143586	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	4.263	113	100480	41.44	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	82.88%
51) 1,2-dichloroethane-d4 (s)	4.517	65	125351	46.58	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	93.16%
72) toluene-d8 (s)	5.961	98	405885	49.96	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.92%
95) 4-bromofluorobenzene (s)	8.287	95	154457	46.64	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.28%

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

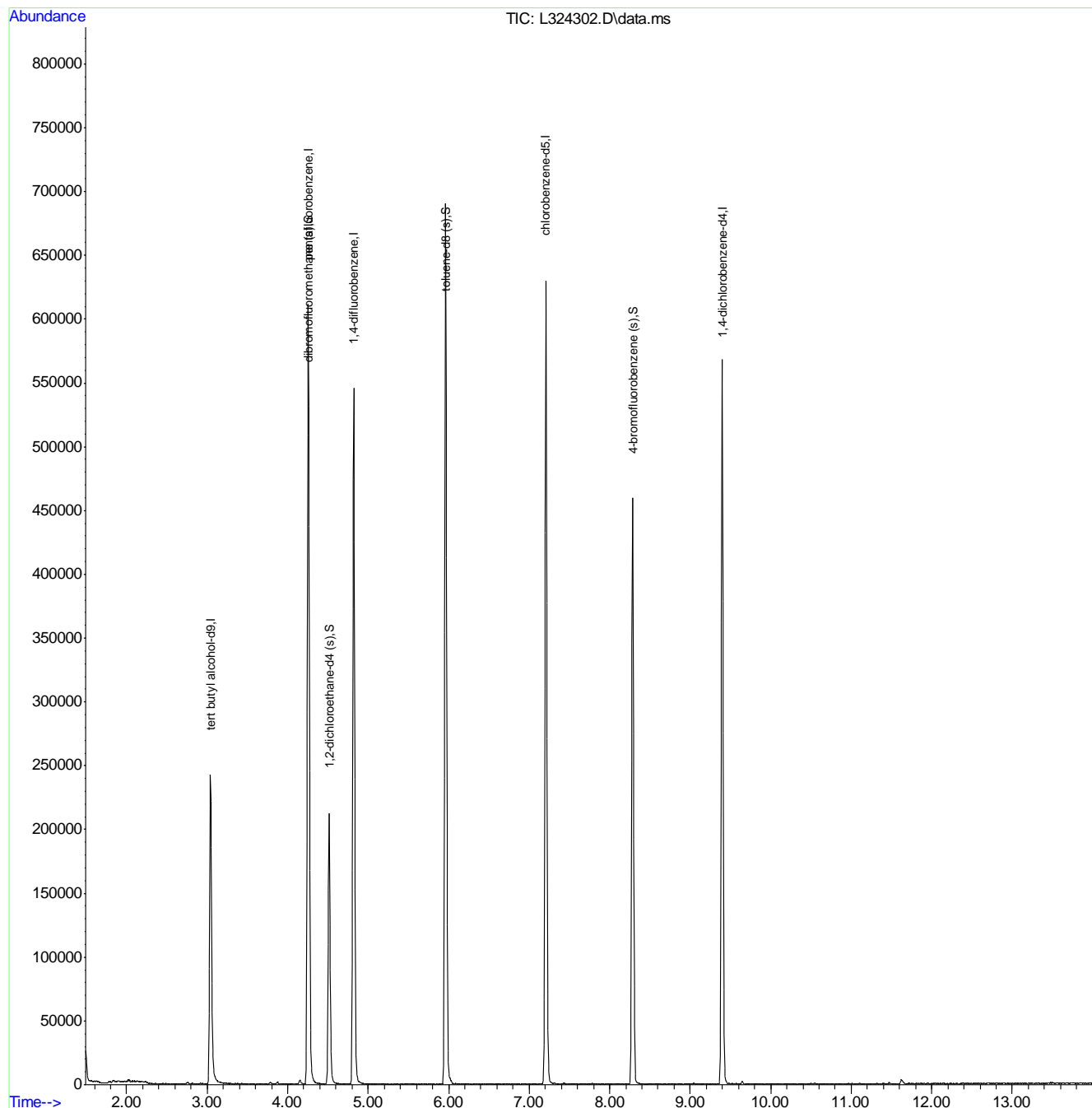
7.12
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
 Data File : L324302.D
 Acq On : 28 Aug 2020 5:05 pm
 Operator : edwardd
 Sample : JD11554-3R
 Misc : MS45444,VL9628,5,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 28 17:22:05 2020
 Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
 Data File : L324303.D
 Acq On : 28 Aug 2020 5:33 pm
 Operator : edwardd
 Sample : JD11554-6R
 Misc : MS45444,VL9628,5,,,,,2.5
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 28 17:47:51 2020
 Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

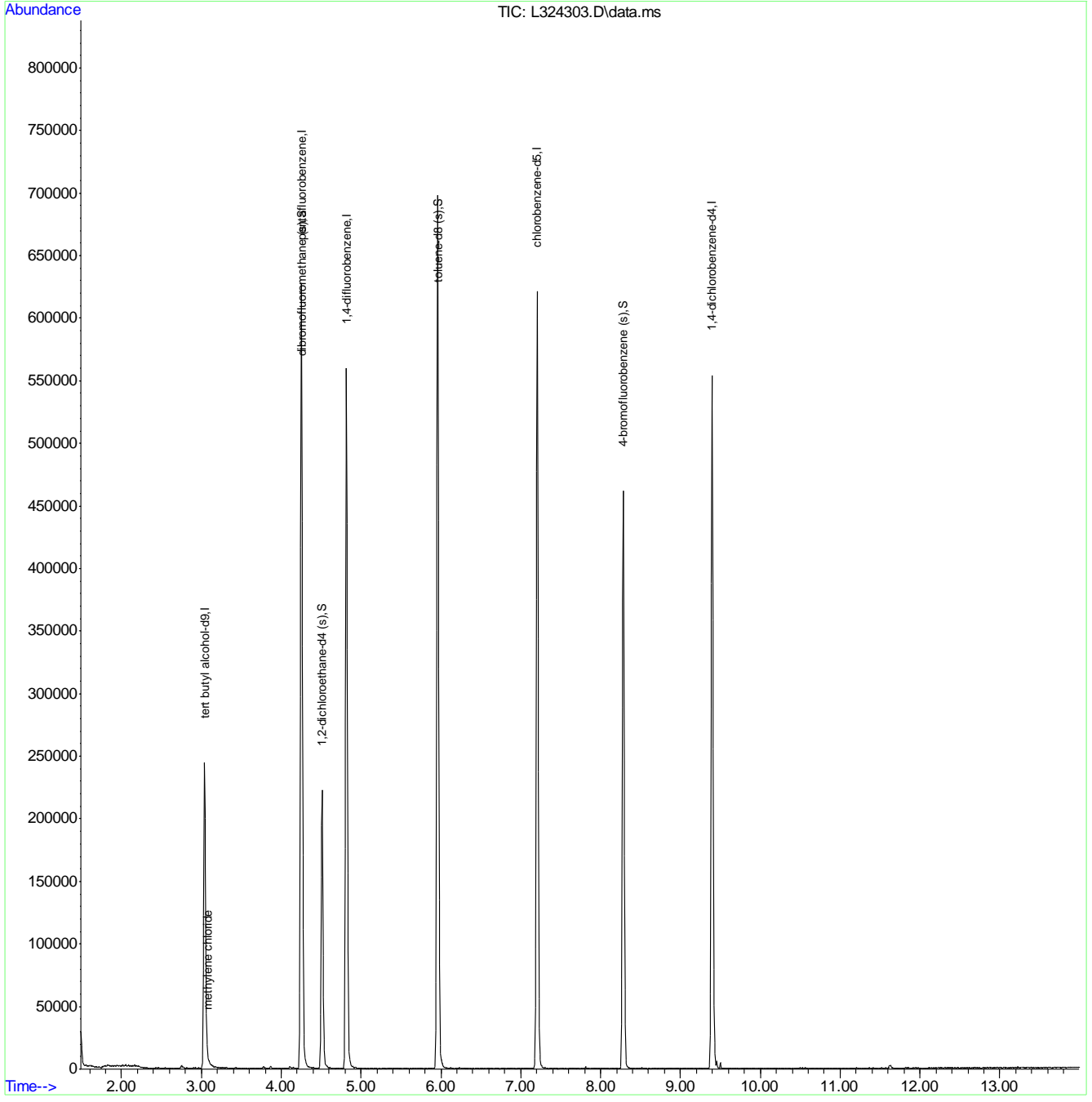
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.040	65	237592	500.00	ug/L	0.00
5) pentafluorobenzene	4.253	168	264620	50.00	ug/L	0.00
50) 1,4-difluorobenzene	4.818	114	363695	50.00	ug/L	0.00
71) chlorobenzene-d5	7.205	117	315227	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	9.397	152	142743	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	4.260	113	102660	41.52	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	83.04%
51) 1,2-dichloroethane-d4 (s)	4.513	65	126867	46.48	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	92.96%
72) toluene-d8 (s)	5.960	98	414322	50.59	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.18%
95) 4-bromofluorobenzene (s)	8.284	95	154589	46.96	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.92%
Target Compounds						
22) methylene chloride	3.079	84	561	0.23	ug/L	Qvalue # 27

(#) = qualifier out of range (m) = manual integration (+) = signals summed

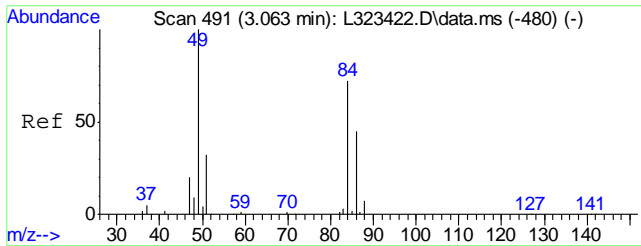
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9628\
Data File : L324303.D
Acq On : 28 Aug 2020 5:33 pm
Operator : edwardd
Sample : JD11554-6R
Misc : MS45444,VL9628,5,,,2.5
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 28 17:47:51 2020
Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 14:22:23 2020
Response via : Initial Calibration

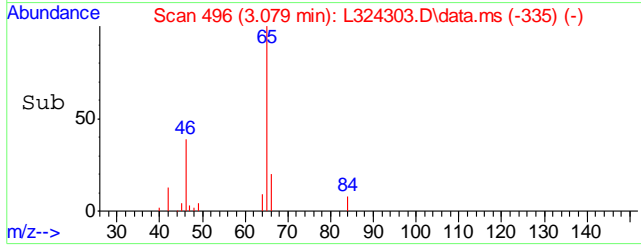
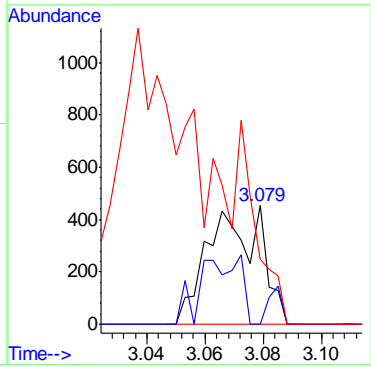
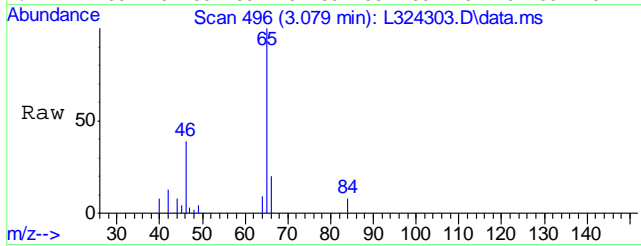


7.1.3
7



#22
 methylene chloride
 Concen: 0.23 ug/L
 RT: 3.079 min Scan# 496
 Delta R.T. 0.016 min
 Lab File: L324303.D
 Acq: 28 Aug 2020 5:33 pm

Tgt Ion	Resp	Lower	Upper
84	100		
86	0.0	32.2	92.2#
49	54.6	108.4	168.4#



7.1.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA-SVOA\Aug-2020\8-28\vl9628-rush\
 Data File : l324287.d
 Acq On : 28 Aug 2020 10:10 am
 Operator : edwardd
 Sample : mb Inst : GCMSL
 Misc : MS37437,VL9628,5,,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Results File: ML9594.RES
 Quant Time: Aug 28 14:25:02 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.040	65	244901	500.00	ug/L	0.00
5) pentafluorobenzene	4.253	168	269964	50.00	ug/L	0.00
50) 1,4-difluorobenzene	4.818	114	366013	50.00	ug/L	0.00
71) chlorobenzene-d5	7.209	117	314155	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	9.397	152	144072	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	4.263	113	104033	41.24	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	82.48%
51) 1,2-dichloroethane-d4 (s)	4.513	65	127497	46.41	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	92.82%
72) toluene-d8 (s)	5.960	98	413298	50.63	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.26%
95) 4-bromofluorobenzene (s)	8.284	95	155495	46.80	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.60%
Target Compounds						
116) naphthalene	11.627	128	5590	0.79	ug/L	92
117) 1,2,3-trichlorobenzene	11.849	180	568	0.25	ug/L	78
121) 2-methylnaphthalene	12.760	142	383	3.21	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

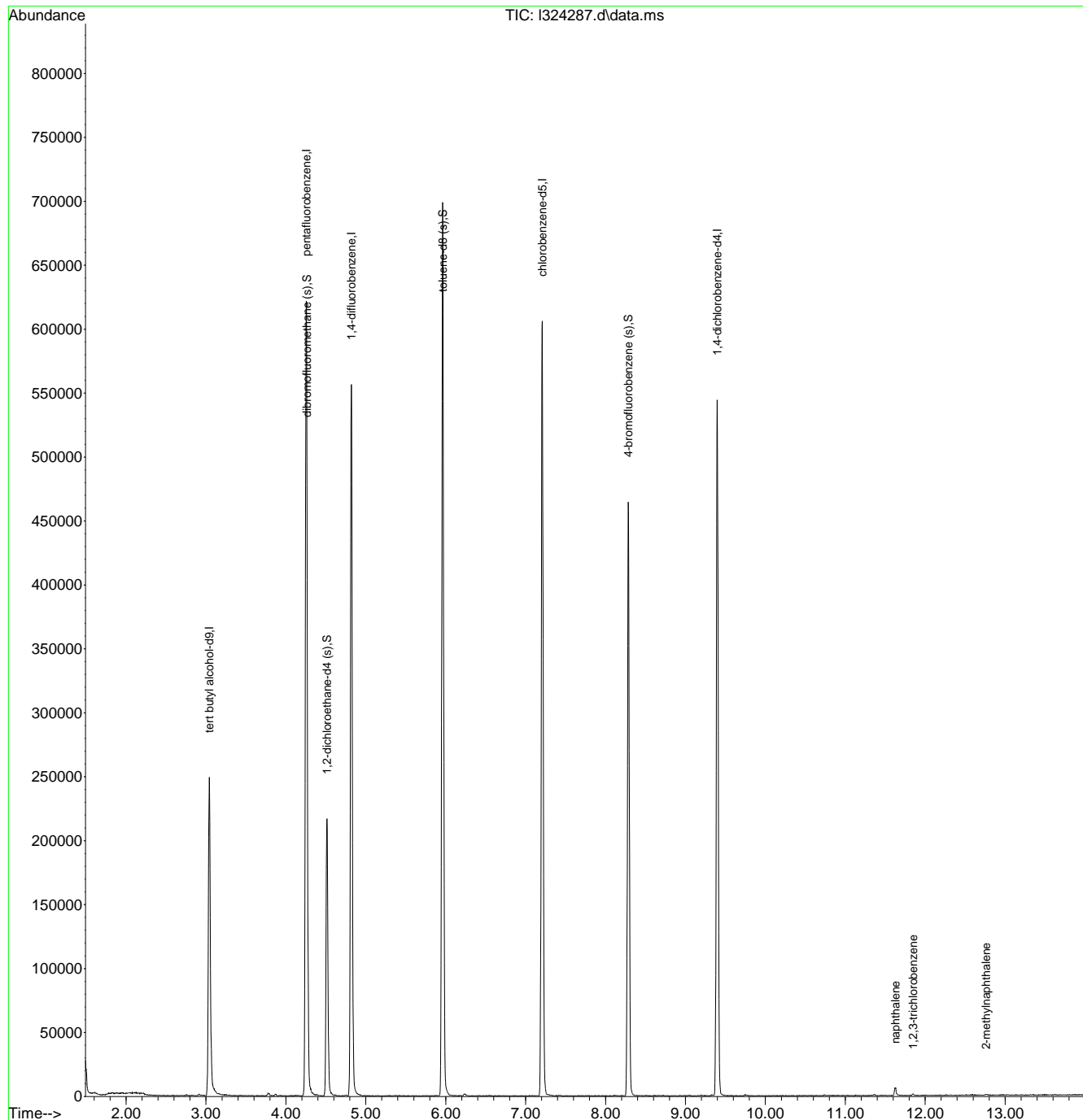
7.2.1
7



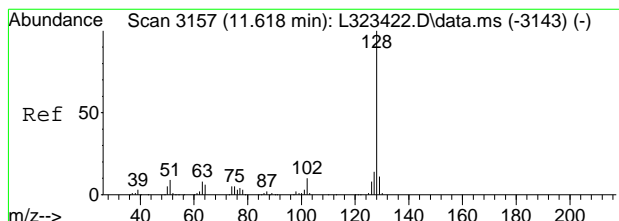
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA-SVOA\Aug-2020\8-28\vl9628-rush\
 Data File : l324287.d
 Acq On : 28 Aug 2020 10:10 am
 Operator : edwardd
 Sample : mb Inst : GCMSL
 Misc : MS37437,VL9628,5,,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9594.M
 Quant Results File: ML9594.RES
 Quant Time: Aug 28 14:25:02 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Jul 30 14:22:23 2020
 Response via : Initial Calibration

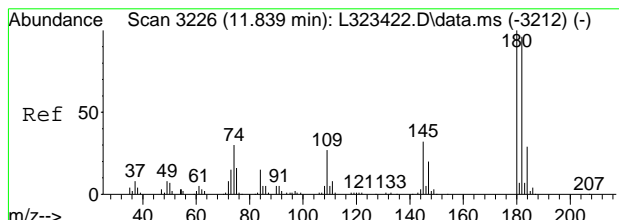
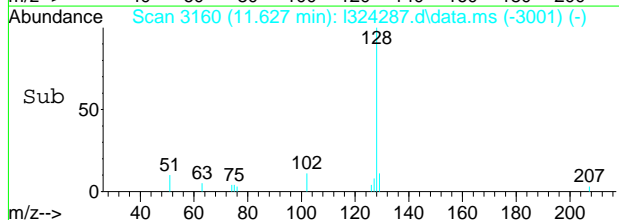
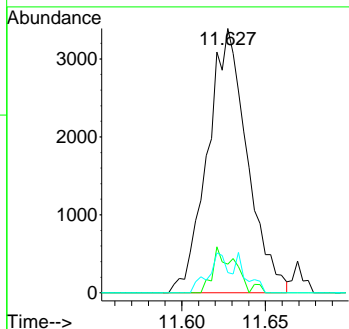
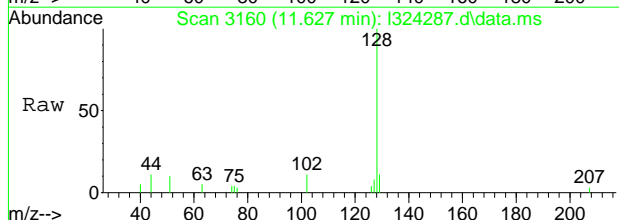


7.2.1
7



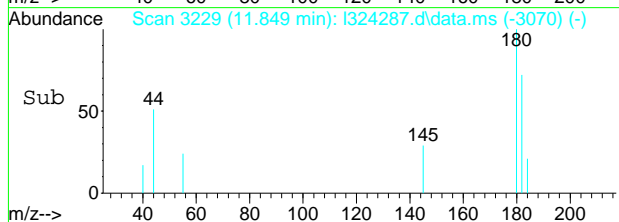
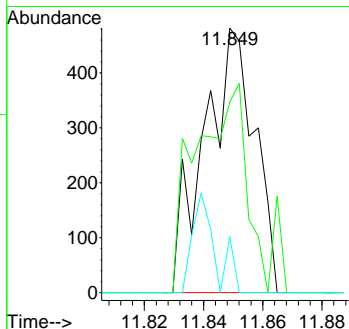
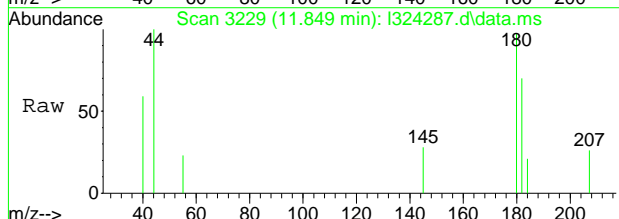
#116
 naphthalene
 Concen: 0.79 ug/L
 RT: 11.627 min Scan# 3160
 Delta R.T. 0.009 min
 Lab File: 1324287.d
 Acq: 28 Aug 2020 10:10 am

Tgt Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	40.9
127	7.6	0.0	43.7

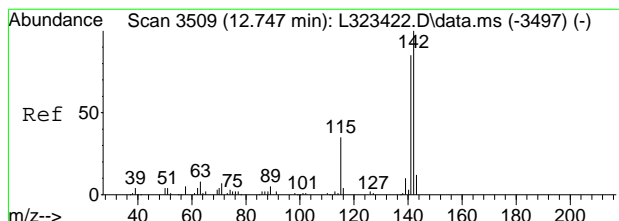


#117
 1,2,3-trichlorobenzene
 Concen: 0.25 ug/L
 RT: 11.849 min Scan# 3229
 Delta R.T. 0.010 min
 Lab File: 1324287.d
 Acq: 28 Aug 2020 10:10 am

Tgt Ion	Ratio	Lower	Upper
180	100		
182	72.0	66.0	126.0
184	21.2	0.0	59.4

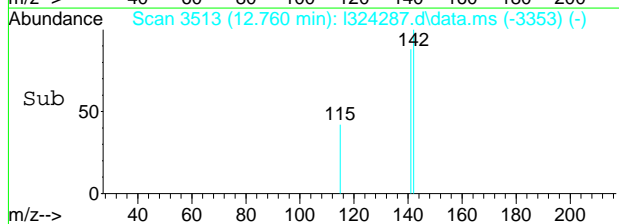
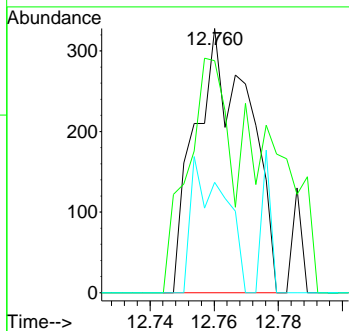
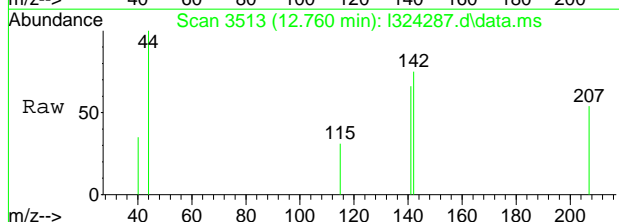


7.2.1
7



#121
 2-methylnaphthalene
 Concen: 3.21 ug/L
 RT: 12.760 min Scan# 3513
 Delta R.T. 0.013 min
 Lab File: 1324287.d
 Acq: 28 Aug 2020 10:10 am

Tgt Ion	Resp	Lower	Upper
142	383		
141	87.8	65.2	105.2
115	41.8	14.6	54.6



7.2.1
7

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JD11554R
Account: LBGNJ WSP USA
Project: Orchard School Soil Remediation, Ridgewood, NJ

Sample: JD11554-2 Analyzed: 18-AUG-20 by BG Method: SM2540 G 18TH ED MOD
ClientID: I13 (12)

Wet Weight (Total)	29.67	g
Tare Weight	20.06	g
Dry Weight (Total)	29.35	g
Solids, Percent	96.7	%

Sample: JD11554-3 Analyzed: 18-AUG-20 by BG Method: SM2540 G 18TH ED MOD
ClientID: I13 (13)

Wet Weight (Total)	37.56	g
Tare Weight	27.95	g
Dry Weight (Total)	37.19	g
Solids, Percent	96.1	%

Sample: JD11554-6 Analyzed: 18-AUG-20 by BG Method: SM2540 G 18TH ED MOD
ClientID: I13 (16)

Wet Weight (Total)	27.34	g
Tare Weight	18.54	g
Dry Weight (Total)	26.98	g
Solids, Percent	95.9	%

8.1
8